Two-Day International Conference on

DREAMSCAPE FOR EDUCATION: EXPLORING INNOVATIONS ACROSS ALL FRONTIERS

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MADURAI

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Editors

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MESSAGE

Greetings, esteemed educators, researchers, and fellow dreamers of a transformed educational landscape!

The 17th and 18th of May 2024 marked a momentous occasion – the Dreamscape for Education: Exploring Innovations Across All Frontiers Conference. This gathering served as a powerful testament to our collective commitment to pushing the boundaries of education and fostering a future brimming with innovative learning experiences. The theme, "Dreamscape for Education: Exploring Innovations Across All Frontiers," resonated throughout the conference, igniting thought-provoking discussions and sparking a vibrant exchange of ideas. We delved into the limitless possibilities that arise when education and technology converge, exploring cutting-edge tools, methodologies, and pedagogical approaches.

The true magic, however, lay in the collaborative spirit that permeated the conference. Educators from diverse backgrounds shared their experiences and expertise, researchers unveiled groundbreaking discoveries, and innovators showcased their visions for the future of learning. This collective exchange of knowledge and perspectives was undoubtedly the most enriching aspect of the Dreamscape for Education Conference. As we move forward, let us carry the spirit of this conference into our classrooms, research endeavors, and innovative projects. The edited proceedings you hold in your hands serve as a valuable resource, capturing the essence of the conference and offering a springboard for continued exploration.

Let us not stop here. Let us use this knowledge to transform the educational landscape, creating a dreamscape where every learner has the opportunity to flourish and reach their full potential. Remember, the future of education is not something to be predicted; it's something to be created, and we, the collective minds gathered here, have the power to make it a reality.

Together, let's keep the dream alive!

Dr. S. Prakash
Principal
Director of the Conference

PREFACE

The landscape of education is in a constant state of flux. New technologies emerge at lightning speed, pedagogical approaches are continuously refined, and the needs of learners evolve alongside a rapidly changing world. The Dreamscape for Education: Exploring Innovations Across All Frontiers Conference, held on May 17th and 18th, 2024, served as a vibrant forum to navigate these changing tides and chart a course for the future of learning.

This edited volume represents a culmination of the collective wisdom and innovative spirit that permeated the conference. Within its pages, you'll find a rich tapestry of research findings, practical applications, and thought-provoking ideas, all united by the theme "Dreamscape for Education: Exploring Innovations Across All Frontiers." The diverse contributions within reflect the multifaceted nature of educational advancement, showcasing approaches that range from the cutting-edge to the time-tested. The chapters delve into a variety of topics critical to the future of education. You'll encounter discussions on harnessing the transformative power of technology in the classroom, innovative pedagogical strategies that cater to diverse learning styles, and the evolving needs of learners in a globalized and technologically driven world.

This edited book aspires to be more than simply a record of the conference; it aims to serve as a catalyst for continued discussion, collaboration, and the implementation of the groundbreaking ideas presented. We believe that the true power of the Dreamscape for Education Conference lies in its ability to inspire action and ignite a passion for educational innovation. Join us as we embark on this ongoing journey of discovery. May this volume serve as a valuable resource for educators, researchers, and all those who share a commitment to transforming the educational landscape. Here's to fostering a dreamscape where every learner has the opportunity to thrive and reach their full potential.

Happy exploring!

The Editors

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MOOCs: SUSTAINABLE LEARNING THROUGH TECHNOLOGY

Juli Saikia
Research Scholar, Department of Education
Tezpur University (Central), Assam, India

Dr. R.D. Padmavathy
Assistant Professor, Department of Education
Tezpur University (Central), Assam, India

Abstract

The amalgamation of Sustainable Education Models with the incorporation of technology, especially through Massive Open Online Courses (MOOCs), has become a focal area of investigation in the quest for a more impactful and sustainable educational landscape. This research aims to clarify the mutually beneficial link between technology and sustainable education approaches, with a focus on MOOCs as enhancers of learning. The combination of MOOCs and Education for Sustainable Development (ESD) and immersive Place-Based Learning through virtual exploration of local ecosystems are tangible examples of this synergy, as is the dynamic Skills-Based Learning that is enabled by interactive simulations and cooperative problem-solving exercises. The discussion goes beyond just sharing content; it also covers the various advantages that MOOC platforms provide as well as approaches to overcome barriers to long-term learning. Through disentangling this complex interplay, the study aims to tackle the need to overcome obstacles and open the door to a more effective, environmentally responsible, and inclusive paradigm for education.

Keywords: *Massive Open Online Courses (MOOCs), Sustainability, Models.*

Introduction

As we confront the problems of the twenty-first century, enhancing the results of learning demands the integration of innovative technology and sustainable practices. Massive Open Online Courses (MOOCs) have paved the way for the development of transformative models in the ever-evolving educational landscape. These models are the result of the convergence of innovative pedagogy, sustainability, and technological integration. The worldwide effort to support inclusive, egalitarian, and environmentally friendly learning environments gives rise to the necessity for sustainable education models. This introduction delves deeply into the field of sustainable education models and looks at the crucial part MOOCs will play in bringing about an educational future that is more diverse, engaging, and environmentally conscientious.

Several sustainable education models have been established because of keeping with the necessity to take social, economic, and environmental concerns into account for long-term success. The five fundamental pillars of sustainable education—environmental sustainability, social equity and inclusivity, economic viability, cultural relevance and understanding, and the crucial role of technology as an accelerator—underpin our investigation.

Sustainable Education Models

Sustainable education models offer frameworks for integrating the environmental, social, and economic foundations of sustainability into all aspects of education. Beyond simply dispensing sustainability knowledge, they work to cultivate critical thinkers, problem solvers,

and active participants in building a more sustainable future (UNESCO, 2014). In addition to imparting the necessary knowledge, these models assist teachers in cultivating the values and skills required for responsible citizenship in a world full of complex concerns.

Recognized Sustainable Education Models with its Emphasis and Approach

To support long-term viability taking social, economic, and environmental factors into account several well-known sustainable education models are adopted. Each sustainable education model's focus and methodology work distinct from one another. They are briefly discussed below

Education for Sustainable Development (ESD): This model is **s**upported by UNESCO; ESD is a comprehensive framework that includes pedagogical approaches, curriculum integration, and school operations (UNESCO, 2014). To address global issues like pollution, poverty, and climate change, it places a high priority on critical thinking, teamwork, and action-oriented learning (Biesta, 2012).

Transformative Learning: This model aims to empower people to become change agents by questioning accepted social and environmental norms (Mezirow, 2003). Transformative learning encourages changes in viewpoints and values to advance social and environmental justice through inquiry, ethical reflection, and discussion (Sterling, 2014).

Place-Based Education: According to Sobel (2004), this model highlights the links between education and the neighbourhood and community. Pupils investigate regional ecological, social, and cultural concerns; they frequently take part in community initiatives and cultivate a sense of environmental stewardship and accountability (Gruenewald, 2003).

The Whole-School Method: This model promotes sustainable school operations, community partnerships, and a school culture that values environmental and social responsibility, acknowledging that sustainability education should permeate all facets of school life (UNESCO, 2017). Beyond the classroom, these comprehensive methods guarantee that sustainability principles are consistently reinforced.

Skills-Based Approach: According to Sterling (2010), this model aims to give students the particular skills they need to live sustainably. These abilities, which are developed through project-based learning and active learning experiences targeted at tackling real-world sustainability challenges, include critical thinking, problem-solving, decision-making, collaboration, and communication (UNESCO, 2017).

It's important to note that these models are not mutually exclusive and can be combined or adapted to create a customized approach suitable for the specific context and needs of each school or community (UNESCO, 2014). Selecting the right model depends on factors like the educational level, available resources, and desired learning outcomes. By embracing sustainable education models, educators can empower students to not only understand the challenges of the future but also contribute to building a more just, sustainable, and thriving world for generations to come.

Five Foundations Pillars of Sustainable Education: Exposing a Comprehensive Method

Beyond just imparting knowledge, sustainable education enables people to make positive contributions to the survival of our planet and its inhabitants. It takes a holistic approach and

the ability to see beyond one narrow lens to fully comprehend this complex idea. Here, we look at five essential sustainable education pillars:

Environmental Sustainability: This pillar reduces resource consumption and promotes environmental consciousness by incorporating eco-friendly practices into education. Imagine composting initiatives, waste reduction efforts, and the adoption of renewable energy sources by schools (Barth & Filho, 2012). These concrete steps not only lessen their negative effects on the environment but also give students practical teaching experiences.

Social Equity and Inclusivity: This pillar promotes educational equity by tearing down obstacles and guaranteeing that every student has an equal chance at success. This means that in schools, diversity should be celebrated, accessibility for underserved communities should be promoted, and socioeconomic disparities should be addressed (Adams, 2014). All students benefit from inclusive education by feeling like they belong and can realize their full potential.

Economic Viability: This model places a premium on economic sustainability, aiming for economical methods and the best possible distribution of resources. This could entail investigating different funding models like scholarships or public-private partnerships, as well as utilizing technology to expedite administrative procedures (Ballantine & Gewin, 2019). Sustainable education models become more financially resilient and accessible to a larger audience by guaranteeing responsible resource management.

Cultural Relevance and Understanding: According to this model, giving students access to a variety of cultural viewpoints enhances their educational experience. This pillar emphasizes how important it is to value indigenous knowledge systems, accept cultural differences, and celebrate the diversity of humanity (Aikenhead, 2006). To prepare students for a society that is becoming more and more globalized, culturally relevant education promotes tolerance, understanding, and a more connected worldview.

Technology as an Accelerator: Making use of platforms such as Massive Open Online Courses (MOOCs) increases access to high-quality education, improves learning with interactive tools, and brings education into line with current trends (Bates, 2015). But it's critical to close the digital divide and guarantee that every student has fair access to technology.

These five pillars provide an overview of the diverse aspects of sustainable education. By giving each of these elements top priority, we can develop all-encompassing learning environments that enable people to develop into responsible citizens, critical thinkers, and change agents in a world full of complicated problems.

Fundamental Concepts Regarding Sustainable Education Models and Technology Integration:

Models of sustainable education are strategies and structures that support long-term sustainability while taking social, economic, and environmental aspects into account. It's critical to match technological advancements with sustainable principles when incorporating them into the classroom.

The following are some essential ideas about technology integration and sustainable education models:

Access to Education: Technology has the potential to significantly increase educational accessibility. Physical barriers can be removed by using online courses, digital resources, and virtual classrooms to provide people from different places with access to high-quality education.

Minimizing Environmental Impact: One of the main goals of sustainable education models is to reduce environmental impact. This can be facilitated by technology, which can lessen the need for tangible resources like paper and make energy-efficient options like e-books and online tests possible.

Inclusive Learning: By offering individualized learning opportunities, technology integration can promote inclusive education. Helpful tools and adaptive technologies meet a range of learning requirements, making education available to students of all skill levels.

Collaborative Learning: Through the use of digital tools, educators and students can work together to create shared learning experiences and a sense of community. This cooperative method emphasizes social engagement, which is in line with sustainable education principles.

Professional Development: Educators must continue their professional development to implement sustainable education. Technology can provide webinars, online courses, and other resources to assist educators in keeping abreast of the most recent developments in both technology and pedagogy.

Adaptable Learning Environments: Thanks to technology, students can learn in a way that suits them best and at their own speed. This flexibility supports a more successful and efficient learning process by meeting individual needs and adding to a sustainable model.

Data-Informed Decision Making: Technology gives us the means to gather and examine student performance data. By using this information, educators can make more informed decisions that will enhance the efficiency of their resource allocation and teaching strategies.

Lifelong Learning: The value of lifelong learning is acknowledged by sustainable education models. Technology provides platforms for professional development and skill enhancement throughout one's career, supporting lifelong learning beyond formal education.

Sustainable Education Models and Massive Open Online Courses for Improved Education

Sustainable education models and Massive Open Online Courses (MOOCs) have the potential to work together to provide education that goes beyond knowledge acquisition, goes beyond simple knowledge acquisition, and equips citizens to create a prosperous future (UNESCO, 2014). This conceptual research explores this rich field, revealing how MOOC platforms' wide reach and dynamic nature can be used to reimaging and magnify sustainable education frameworks such as Place-Based Learning and Education for Sustainable Development (ESD) (Barth & Filho, 2012; Sobel, 2004).

With the democratizing influence of MOOCs, picture classrooms without walls that transcend locational limits and socioeconomic divides (Bates, 2015). Now, bring the transformative principles of sustainability into these digital environments / virtual spaces. Through collaborative projects and community engagement, courses will not only teach environmental consciousness but also provide learners with the tools they need to become change agents (Sterling, 2014). Imagine social justice platforms that celebrate the diversity of cultures in the virtual classroom and guarantee that all students have equal access to high-quality education (Adams, 2014).

This represents the unrealized potential of MOOCs and sustainable education models working together. In this future, education will go beyond dry lectures and textbooks to include collaborative problem-solving and real-world experiences, bringing education in line with the opportunities and challenges of a sustainable future (Sterling, 2010). According to this vision,

students take an active role in creating a world that is more fair, just, and environmentally conscious rather than merely being passive consumers of knowledge (Biesta, 2012). So come along on this journey to explore this dynamic synergy's unexplored territory. We open the door to a future where education inspires, empowers, and equips everyone to create a better, more sustainable tomorrow by recognizing the mutually reinforcing potential of MOOCs and sustainable education models.

Concrete Instances to Demonstrate this Synergy:

ESD and MOOCs: Picture a MOOC devoted to renewable energy sources, where participants from all over the world can access state-of-the-art information and work together virtually to design and implement renewable energy solutions in their local communities (Barth & Filho, 2012).

Place-Based Learning and MOOCs: Imagine a MOOC that explores local ecosystems. Students will learn about the distinctive biodiversity of their areas, make connections with local experts, and collaborate to co-create virtual nature trails or conservation projects. This will instill a sense of stewardship and responsibility for their surroundings (Sobel, 2004).

Skills-Based Learning and MOOCs: Envision a MOOC where students improve their critical thinking and problem-solving abilities for sustainability through interactive simulations, real-world sustainability challenges, and cooperative solution development.

MOOCs and Skills-Based Learning: Imagine a massively open online course (MOOC) that focuses on critical thinking and problem-solving techniques for sustainability. Students take part in interactive simulations, address actual sustainability issues, and work together to find solutions, all while refining the abilities necessary to deal with the complexity of a changing world (Sterling, 2010).

Delivery of content is just one aspect of this synergy. MOOC platforms provide certain benefits.

Scalability: MOOCs can offer learners, regardless of location or socioeconomic background, sustainable education opportunities that go far beyond traditional classroom walls (Bates, 2015).

Interactivity: In the virtual classroom, lively discussion boards, group projects, and peer-to-peer learning environments encourage involvement and a feeling of belonging.

Accessibility: By removing obstacles to education, open-source materials and adaptable scheduling techniques foster inclusivity and guarantee that no one is left behind.

In order to reveal this synergy, obstacles must be overcome:

- Digital divide: Inclusivity and equitable participation are severely hampered by unequal access to technology and internet connectivity.
- Quality assurance: Careful planning and continuous assessment are necessary to maintain excellent instructional materials and captivating learning opportunities within the MOOC format.
- Accreditation and assessment: Including genuine and significant assessment procedures in MOOCs while acknowledging prior knowledge and learning is still a challenging but essential component.
- The possibilities for sustainable education models and MOOCs to collaborate are enormous, despite these obstacles.

- By combining the advantages of both, we can design adaptable, stimulating, and powerful learning environments that enable people to develop into critical thinkers, responsible citizens, and change agents in a society that faces many difficult issues. This is about more than just education; it's about revealing a future in which knowledge creates the foundation for a prosperous and sustainable society.

Conclusion

In conclusion, a promising route to improved learning in the twenty-first century is revealed by the investigation of the synergy between Sustainable Education Models and the integration of technology, particularly through Massive Open Online Courses (MOOCs). Educational institutions can create a comprehensive and lasting learning experience by implementing well-known sustainable education models that incorporate the five fundamental pillars of environmental sustainability, social equity and inclusivity, economic viability, cultural relevance and understanding, and technology as an accelerator. Empirical examples of this synergy's transformative potential include the combination of MOOCs and Education for Sustainable Development (ESD), Place-Based Learning, and Skills-Based Learning. Furthermore, MOOC platforms' scalability, interactivity, and accessibility help to break down barriers to education by providing learners all over the world with access to sustainable education opportunities. The blending of technology and sustainable education models, particularly through MOOCs, appears as a ray of hope and innovation for the future of education as we work to create a more equitable, ecologically responsible, and successful educational paradigm.

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RUSA AND EQUITY IN HIGHER EDUCATION: CHALLENGES AND OPPORTUNITIES

Dr. S. Saradha
Assistant Professor
St. Justin's College of Education
Madurai

Abstract

In India's higher education scene, RUSA (Rashtriya Uchchatar Shiksha Abhiyan) aims to improve the quality and relevance of education across institutions. However, achieving equity in participation and access remains a significant challenge. This abstract examines the opportunities and problems related to fairness in higher education under RUSA. It explores how access is impacted by socioeconomic inequality, regional imbalances, and cultural diversity, and how RUSA's policy framework addresses these issues through inclusivity-promoting programmes such as outreach to marginalized populations, mentorship programmes, and scholarships. The effectiveness of these measures in reducing disparities and fostering equity is critically evaluated, considering obstacles like affordability, infrastructure, and educational preparedness. Despite challenges, the transformative potential of RUSA in expanding access and enhancing opportunities for underprivileged groups is highlighted. The abstract emphasizes the importance of innovative strategies, stakeholder collaboration, and evidence-based interventions in advancing equity goals, aiming to stimulate dialogue on how RUSA can promote equity in higher education and offer insights into future policy directions.

Keywords: *RUSA, Higher Education, Equity, Challenges and Opportunities*

Introduction

The Rashtriya Uchchatar Shiksha Abhiyan, or RUSA, is a key programme in India's higher education system that has the potential to completely transform the country's postsecondary education system in terms of both quality and accessibility. Its lofty mandate includes the critical requirement of equity, which states that all prospective students must have equal access to educational opportunities regardless of their socioeconomic status or place of residence. However, there are many different obstacles to overcome on the path to fairness in higher education because of ingrained inequalities and structural impediments. This introduction lays the groundwork for a thorough examination of the opportunities and difficulties related to equality under RUSA, shedding light on the subtleties and complexity that influence the quest for inclusivity in India's varied educational landscape.

Understanding Equity in Higher Education

Defining Equity: Conceptual Structure and Fundamental Ideas More than just equality, equity in higher education includes justice and fairness in the distribution of educational opportunities and resources. This section explores the essential concepts of equity, including justice, fairness, and inclusivity, by delving into many meanings and conceptualizations of the term.

Dimensions of Inequity: Cultural diversity, regional imbalances, and socioeconomic disparities The issues surrounding equity in higher education are complex and frequently involve the intersections of socioeconomic class, geography, and cultural background. This

article looks at the various aspects of inequality, illuminating how things like poverty, the gap between rural and urban areas, and cultural barriers impede fair access to and involvement in higher education.

The Role of RUSA in Promoting Equity

RUSA's Mandate: Equity as a Fundamental Base The goal of the Rashtriya Uchchatar Shiksha Abhiyan (RUSA) was to improve higher education's accessibility and quality throughout India. The promotion of equity, which guarantees that all societal segments, regardless of background, have equal opportunity to pursue higher education, is fundamental to RUSA's objective. This section examines how fairness is ingrained in RUSA's founding ideals and goals, emphasising its importance as a central tenet of the programme.

Policy Initiatives: Affirmative action, outreach initiatives, and scholarships RUSA carries out several legislative projects designed to promote fairness in higher education. These include of outreach programmes to underserved communities, affirmative action policies to encourage the inclusion of underrepresented groups, and scholarship programmes aimed at students from economically poor backgrounds. An overview of the main RUSA policy interventions that particularly address equity issues is given in this paragraph, along with an explanation of how these actions help to increase access and lessen inequality in higher education.

Targeted Interventions: Meeting the Particular Needs of Underrepresented Groups Understanding the particular difficulties marginalised groups confront, RUSA carries out focused interventions to meet their particular requirements. These interventions, which range from building support networks for students living in remote locations to offering financial aid to students from underprivileged families, are meant to level the playing field and provide equal chances for everyone. The effectiveness of such focused initiatives in closing equity gaps and creating inclusive higher education environments is examined in this section.

Challenges Confronting Equity in RUSA Implementation

Affordability and Accessibility: Financial Difficulties in Pursuing Higher Education One of the biggest obstacles to advancing equity under RUSA is the continued existence of financial hurdles that prevent some students, especially those from economically disadvantaged backgrounds, from attending higher education. Even with fee exemptions and scholarship programmes, many students are still prevented from pursuing higher education due to financial limitations. This section explores methods to lessen the financial load on students and their families as well as the intricacies surrounding affordability difficulties. It also looks at how adequate financial support programmes.

Infrastructure Deficits: Barriers to Equitable Educational Opportunities Enough facilities and infrastructure in educational institutions are necessary for equitable access to high-quality education. However, a lot of institutions struggle with infrastructure deficiencies that make it difficult to provide high-quality education, particularly those in rural and isolated locations. Students from marginalised backgrounds are disproportionately affected by these deficiencies, which range from inadequate classrooms and laboratories to inadequate library resources. This subsection looks at the problems caused by inadequate infrastructure and talks about ways to overcome the infrastructure gap so that every student has equal access to learning opportunities.

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Educational Preparedness: Resolving Academic Readiness Inequalities Under RUSA, disparities in educational readiness represent a major barrier to equity in higher education. Students from marginalised groups frequently experience educational difficulties as a result of socioeconomic limitations, low teacher quality, and inadequate school facilities. Consequently, disparities in learning outcomes may worsen as a result of their varied degrees of academic preparedness when they enrol in higher education. This section addresses measures meant to improve academic support systems and level the playing field for all students, regardless of background, as well as the difficulties in correcting gaps in educational preparedness.

Assessing the Efficacy of Equity Measures under RUSA

Impact Evaluation: Advancements in Accessible Higher Education An extensive analysis of the measures' effects on advancing inclusive higher education is necessary to determine the efficacy of equity initiatives put in place under RUSA. This section delves into the methods employed to assess the effectiveness of equity programmes. These methods encompass qualitative metrics like student satisfaction and perceptions of inclusivity, in addition to quantitative indicators like academic performance, retention rates, and enrollment rates. Policymakers and stakeholders can learn more about the efficacy of equality measures and pinpoint areas for improvement by carefully evaluating the data that is already available and carrying out impact evaluations.

Success Stories: Case Studies of Equity Initiatives with Successful Results Success examples amidst the obstacles demonstrate the revolutionary potential of equitable programmes under RUSA. Case studies of organisations or areas where equity initiatives have improved access and participation and created an inclusive learning atmosphere are provided in this subsection. Through the analysis of these triumphs, policymakers can pinpoint optimal approaches and duplicate efficacious tactics in alternative settings, so augmenting the influence of equitable interventions throughout the higher education terrain.

Lessons Learned: Perspectives on Improving Efficiency and Sustainability Improving the efficacy and long-term viability of equitable measures under RUSA requires learning from both achievements and setbacks. The main conclusions drawn from impact assessments, case studies, and stakeholder discussions are summarised in this part, providing insight into the elements that influence the success or failure of equity projects. Through the identification of obstacles, snags, and opportunities for enhancement, policymakers can hone current tactics and create more focused and enduring methods to advancing equity in higher education under RUSA.

Future Directions and Recommendations

Policy Reforms: Enhancing the Equity Clauses in the RUSA Framework policy changes must be made to fortify the framework's equality provisions as RUSA develops. The following subsection delineates particular policy suggestions aimed at augmenting equity in higher education. These suggestions encompass the enlargement of scholarship initiatives aimed at underprivileged communities, the execution of affirmative action policies to foster diversity and inclusivity, and the distribution of funds for resolving infrastructure deficiencies in underprivileged areas. RUSA can more effectively carry out its mission of ensuring that

everyone has equitable access to high-quality higher education by integrating equity considerations into the creation and execution of policies.

Institutional Capacity Building: Giving Universities the Tools to Encourage Inclusivity Under RUSA, increasing colleges' ability to foster inclusivity is crucial to improving fairness in higher education. The methods for building institutional capacity are covered in this part. These methods include adopting inclusive pedagogical approaches, establishing support services for underprivileged students, and offering diversity and inclusion-focused faculty development programmes. RUSA can enable universities to provide inclusive learning environments that meet the different needs of all students and promote equitable access and participation by investing in the capacity building of these institutions.

Collaborative Partnerships: Involving Stakeholders for Collective Action: Lastly, to advance equity in higher education under RUSA, it is critical to cultivate collaborative partnerships among stakeholders. To promote collective action towards equality goals, this subsection highlights the significance of collaboration between government agencies, academic institutions, civil society organisations, and other important stakeholders. Through collaborative discourse, exchange of optimal methodologies, and group resource mobilisation, stakeholders may enhance the efficacy of equity campaigns and establish a more unified and well-coordinated strategy for advancing equity in higher education. Employing cooperative partnerships, RUSA can effectively and sustainably solve equity concerns by utilising the knowledge and assets of a wide range of stakeholders, thereby fulfilling its objective of providing inclusive and equitable higher education for all.

Conclusion

In summary, the Rashtriya Uchchatar Shiksha Abhiyan (RUSA)'s pursuit of equity in higher education is an essential requirement for India's educational advancement. RUSA has achieved notable progress in increasing accessibility, encouraging inclusivity, and reducing disparities in the higher education sector, despite the obstacles and difficulties that come with advancing equity. RUSA has worked to establish a more equitable learning environment where every aspirant learner, regardless of background or circumstance, has the opportunity to realise their full potential through targeted policy interventions, institutional reforms, and cooperative collaborations.

But achieving justice in higher education is a continuous process that calls for cooperation, creativity, and persistent dedication. It is critical to build on prior successes and tackle enduring issues with fresh vigour and resolve as RUSA continues to change. This calls for a multimodal strategy that includes institutional capacity building, regulatory reforms, and cooperative partnerships to achieve equality goals and establish a more inclusive ecosystem for higher education.

To fulfil its objective of advancing equity and social justice in higher education and thereby assisting in the general growth and prosperity of the country, RUSA can better utilise the combined efforts and knowledge of stakeholders from the public and private sectors as well as from academia and civil society. RUSA can work as a catalyst for revolutionary change by fostering a common vision, coordinating efforts, and maintaining a steadfast commitment. This will enable people, communities, and the country as a whole to prosper in a world that is becoming more linked and dynamic.

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ADVANCING EDUCATION THROUGH COMPETENCY-BASED TEACHING: A PARADIGM SHIFT IN LEARNING

Mr. J.T.Augustin Jebakumar
Ph.D Research Scholar
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai – 600 097.

Dr. P. Subramanian
Assistant Professor
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai – 600 097.

Abstract

In recent years, competency-based teaching has emerged as a transformative approach to education, shifting the focus from seat time to mastery of essential skills and knowledge. This article examines the principles, benefits, challenges, and implications of competency-based teaching in the modern educational landscape. By exploring the key components of this approach and its potential impact on student learning outcomes, we aim to provide insights into how competency-based teaching can advance education and better prepare students for success in an ever-changing world.

***Keyword**: Competency-based Teaching, Modern Educational Landscape, Advanced Education, Learning Outcomes, Transformative Approach*

Introduction

The traditional model of education, with its rigid structures and one-size-fits-all approach, has long been criticized for failing to meet the diverse needs of today's learners. In response to these shortcomings, competency-based teaching has gained traction as a student-centred approach that emphasizes mastery of specific skills and knowledge. This article explores the principles, benefits, challenges, and implications of competency-based teaching, shedding light on its potential to revolutionize education and unlock the full potential of every student.

Principles of Competency-based Teaching:

At the heart of competency-based teaching lie several core principles:

1. **Personalization**: One of the fundamental principles of competency-based teaching is personalization. Recognizing that each student learns differently, this approach allows for customized learning experiences tailored to individual strengths, weaknesses, and interests.
2. **Flexibility**: Competency-based teaching offers flexibility in both pace and path. Students have the freedom to progress at their speed, allowing for deeper understanding and retention of concepts. Additionally, they can choose alternative pathways to demonstrate mastery, whether through projects, presentations, or assessments.

3. **Mastery Learning**: Mastery learning lies at the heart of competency-based teaching. Rather than moving on to new material regardless of understanding, students are encouraged to master each concept before advancing. This ensures a solid foundation upon which to build further knowledge and skills.
4. **Continuous Feedback and Assessment:** Regular feedback and assessment are integral components of competency-based teaching. Teachers provide ongoing guidance and support to help students identify areas for improvement and celebrate their successes along the way.

Benefits of Competency-based Teaching:

Competency-based teaching offers numerous benefits, including:

Customized Learning: Providing personalized learning experiences that cater to individual student needs and preferences.

Higher Retention Rates: Promoting deeper understanding and retention of concepts by emphasizing mastery over time.

Preparation for the Real World: Equipping students with the skills and competencies needed to succeed in an increasingly complex and dynamic world.

Closing Achievement Gaps: Narrowing achievement gaps by providing targeted support to students who may be struggling.

Challenges and Considerations:

While competency-based teaching holds great promise, it also presents several challenges, including:

Implementation: Requiring significant time, resources, and support to effectively implement at scale.

Assessment: Ensuring accurate measurement and assessment of competencies in a way that is fair, valid, and reliable.

Teacher Training: Providing professional development and support to educators to effectively implement competency-based teaching practices.

Policy and System Alignment: Addressing policy and system-level barriers to enable widespread adoption and sustainability of competency-based teaching.

Implications for Practice and Policy:

To realize the full potential of competency-based teaching, educators, policymakers, and stakeholders must collaborate to:

Invest in Professional Development: Providing educators with the training and support needed to effectively implement competency-based teaching practices.

Reimagine Assessment: Rethinking traditional assessment methods to align with the principles of competency-based teaching and promote authentic learning experiences.

Foster Innovation: Encouraging innovation and experimentation in teaching and learning to continually improve and refine competency-based approaches.

Promote Equity: Ensuring that competency-based teaching practices are equitable and accessible to all students, regardless of background or circumstance.

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Conclusion

Competency-based teaching represents a paradigm shift in education, offering a promising pathway to more personalized, equitable, and effective learning experiences for all students. By embracing the principles of competency-based teaching and addressing the challenges and considerations associated with its implementation, educators and policymakers can work together to advance education and empower students to succeed in the 21st century and beyond.

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COMPETENCY-BASED EDUCATION AND EVALUATION: A NECESSARY CHANGE IN ACCORDANCE WITH NATIONAL EDUCATION POLICY (NEP) 2020

Dr. K. Sudhakar
Principal, Vadaranyam College of Education
Tiruvallur district, Tamil Nadu

Abstract

The National Education Policy (NEP) 2020 prioritises competency-based education, a student-centred approach to learning that emphasises the acquisition of skills and knowledge rather than the rote memorising of information and exam performance. The NEP 2020 advocates for a transition from a summative evaluation system that predominantly evaluates memorising abilities to a more frequent and formative approach that emphasises competency-based learning. The NEP 2020 also highlights the need to grasp concepts, hone analytical abilities, and foster critical thinking. It encourages pupils to acquire a more profound understanding of things, fostering a love for learning rather than solely striving for high grades. The NEP 2020 acknowledges the significance of technology in facilitating competency-based education. It promotes the utilisation of educational technology to improve learning experiences and offer personalised learning opportunities through data-driven intervention. Proficiency-based evaluation involves the use of many approaches, including observation, self-assessment, interviews, and performance indicators, to collect evidence of an individual's proficiency levels. Teachers can evaluate students using a variety of methods, including written tests (including multiple choice and open-ended questions), assessments of project outcomes, interviews, and observations conducted during classroom or practical activities.

Keywords: *Competency-based Education, Competency-based Evaluation, National Education Policy, Assessment.*

Competency-based Education and Assessment: A Necessary change in Accordance with National Education Policy (NEP) 2020

Competency-based education (CBE) is an instructional method that emphasises the acquisition and exhibition of certain skills, knowledge, abilities, and dispositions rather than depending only on repetitive memorization. The main objective of assessment is to facilitate and expedite the process of learning. According to NEP in paragraph 4.34, the objective of assessment should change from focusing mostly on testing memorising abilities through summative assessments to a more frequent, formative, and competency-based approach that encourages learning and development in students. Furthermore, it assesses advanced cognitive abilities, such as analysis, critical thinking, and conceptual clarity. Competency-based assessments (CBA) are specifically developed to evaluate a learner's knowledge, abilities, and values in a particular topic or field. The purpose of these evaluations is to offer a thorough and unbiased evaluation of the learner's competency level and their capability to complete different tasks. The enhancement of competency-based assessment at every level is with the overarching objective of advancing high-quality education and skills to enhance the employability of the country's workforce.

The adoption of competency-based Assessment education has become inevitable due to the demands of the workplace. The nature of occupational abilities has transitioned from predominantly regular duties to cognitive ones, with the recent emergence of AI technology significantly expediting this movement. CBA aims to provide an environment where learners

may confidently demonstrate their learning achievements without fear or comparison. When using CBA, we are not required to assign a pass or fail grade to a student, which is different from typical assessment methods. Certain individuals may require additional opportunities and assistance. Performance evaluation should prioritise creating occasions for individuals to showcase their knowledge and learning to foster comprehensive development. An extensive ecosystem will be established to ensure that every student receives ongoing support and is adequately prepared for assessments as needed.

Competency-based Education

Competency-based learning, also known as competency-based education (CBE), is an educational method that assesses learning based on the skills and competencies that students acquire, rather than the amount of time they spend in the classroom. Learners progress at a personalised pace. Competency-based education entails reorganising the educational structure to correspond with students' immediate growth, providing them with the essential skills to excel in a dynamic and competitive economy.

This learning modality brings about a substantial change in the culture, structure, and teaching methods of educational institutions. It prioritises the success of every student and eliminates the drawbacks of the conventional approach. Competency-based education fosters more fairness and equality among pupils. It promotes a more profound acquisition of knowledge and establishes a trajectory for ongoing enhancement.

Characteristics of Competency-based Learning

The attributes of competency-based education, commonly referred to as CBE, can be categorised as follows:

Goals: This technique utilises a professional methodology to establish competencies that are both practical and useful in real-life circumstances. Focusing on the acquisition of theoretical knowledge from textbooks and the actual application of skills in real-world circumstances.

Approach for Obtaining the Knowledge: Competency-based education (CBE) focuses on achieving specific outcomes. This approach defines the necessary skills to be acquired within a specified timeframe. A specific portion of the educational programme has been completed during this period.

Teaching Methodology: Competency-based learning employs teaching approaches that prioritise the needs and abilities of the students. Its primary emphasis is on the attainment of each student. Individual variations are considered. The issues faced by children are tackled by addressing the concerns related to the social dimension of education. The primary modalities of instruction in competency-based education are simulations, portfolios, case studies, presentations, and projects. These techniques improve a student's ability to cultivate self-reliance. It facilitates the cultivation of a resilient mindset.

Student Evaluation: Evaluations are performed to assess if students' advancement corresponds to the predetermined learning outcomes of the competency-based education (CBE) model. The evaluation encompasses assessments based on both objective criteria and performance evaluations. Objective assessments consist of multiple-choice questions (MCQs), oral question-and-answer sessions, and written solutions to short-answer questions. This is based on the knowledge that the learner has obtained thus far.

Principles of Competency-based Learning:

Competency-based education is centred around the needs of individual learners, allowing them to gain relevant knowledge and vital skills at their own speed. Furthermore, it involves using cooperative learning techniques, which allow students to gain knowledge together as a group. The approach enables their learning without any time constraints.

The CBE approach is characterised by its result-oriented nature, where outcomes are clearly and transparently established from the beginning. As a result, tools and assessments are developed to enhance the targeted outcomes. Educators evaluate the possible risks associated with this educational procedure and formulate appropriate tactics to diminish or eradicate them.

Differentiation refers to the process of distinguishing or identifying the unique characteristics or qualities of something or someone. This entails instructive methods to address the comprehensive requirements of every learner. An effective method to achieve distinction is through the identification and modification of educational methodologies. It is appropriate for enabling communication, executing interventions, and offering assistance to students. It can be accomplished using the following methods:

Actions taken to address a problem or improve a situation. : It entails guiding students through feedback. Engaging in this activity may enhance their understanding and attainment of the intended proficiencies.

Evaluation: Pupils are provided with learning assessments and materials that are customised to the competencies they have effectively attained.

Selection of educational pursuit: Students select materials based on their personal preferences and inclinations.

Association: Students are granted access to online training materials in groups according to their affiliation with the pertinent programme.

Tailored Communication: Educators ought to partake in informal dialogues with students concerning their scholastic advancement. It is customised to fulfil specific requirements.

Arguments for and Against Competency-based Learning: Pros and Cons of Competency-based Learning are as follows:

The benefits are:

- The CBE model is effective in reducing both inefficiency and the time necessary for the learning process. This is because the system is equipped with an extensive array of support systems and exceptionally efficient assessment forms. Access to the learning outcomes is convenient for all students. This contributes to improved academic precision and student achievement.
- One of the main benefits of competency-based learning is its intrinsic adaptability. It provides advantages for pupils who possess diverse levels of literacy, knowledge, and attitudes.
- Implementing clear and specific learning objectives right from the outset. This will enhance students' understanding of the sequential processes required to attain the required skills.

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- Providing students with constructive feedback promotes their advancement in achieving their goals. Competency-based education and development places a high value on the holistic development of students. While acquiring new information and skills, students also develop the capacity to implement their existing knowledge and abilities in practical scenarios.
- Teachers clarify intricate ideas for students by providing concrete examples from the real world in situations where they struggle with understanding. This empowers students to proficiently implement the information that they have acquired.

Drawbacks

- Identifying and reaching a consensus on the most crucial competencies, as well as determining the most appropriate method for evaluating them, is a challenging task.
- Assisting students with learning-specific difficulties might provide challenges.

Key Tenets of Competency-Based Education

1. **Prioritising Re-equity above all else:** Equity is a core principle of competency-based education. Equity does not imply providing the same content or attention to every learner. Instead, it pertains to providing each student with the necessary resources to achieve the same ultimate objective. Equity facilitates the elimination of any inherent prejudice or favouritism in the process of acquiring knowledge.
   Students receive personalised instruction and guidance according to their strengths and weaknesses, ensuring equal opportunities for achievement. The influence of social status, culture, language, or household income on achievement is eliminated. CBL fosters an inclusive culture that promotes the comfort and respect of all students.
2. **Classes prioritise the development of measurable competencies** that contribute to the acquisition of life skills. Before instruction, it is crucial to establish clear and explicit competencies that serve as learning objectives for every individual learner. Competencies prioritise the practical and real-time comprehension of a student in a certain area rather than solely assessing their theoretical knowledge. These competencies typically rely on:
   - The capacity to utilise acquired information purposefully to address significant problems and obstacles.
   - Gaining comprehension of essential principles.
   - Mastery of pertinent abilities.

To assess the outcomes, school leadership must establish clear definitions of capabilities beforehand. Collaboration is necessary for this task. To determine mastery, you might gather input on competencies from the entire faculty to generate new ideas about the necessary skills.

3. **Transparency facilitates learners in assuming ownership**. The teaching-learning process necessitates addressing a crucial inquiry: What is the ultimate objective for every student in a certain class? Everyone should be familiar with the answer to this question. Both parents and students need to have a comprehensive understanding of the learning objectives established for the class and the institute. Before commencing the

class, learners in a competency-based education system possess comprehension of the following three elements:

- What is the definition of mastery?
- What is the mandatory knowledge they must acquire?
- What will be the method of assessment?

When learners possess a clear understanding of the ultimate objective, they will assume greater accountability for their education. For example, a pupil comprehends the necessity of utilising their knowledge of mathematics and employing it to successfully finish the job. Once the student comprehends the connection, they can progress in the class, thereby assuming greater responsibility for their education. When confronted with a problem or a lack of expertise in completing the project, individuals will come to the realisation that they require assistance. Clearly defined objectives and results enable learners to assume greater accountability for their educational trajectories, thus enhancing their ability to become more proficient learners both presently and in the long run.

4. **Teachers evaluate students to determine their level of mastery and to track their progress and development**. Assessments vary in terms of their types and forms. The following are three types of examinations that are particularly valuable for competency-based education:

   Valid Evaluations: Encouraging pupils to utilise their knowledge and employ it in practical scenarios is an excellent method to demonstrate their expertise. Additionally, learners acquire essential abilities that will be necessary for their future endeavours. Authentic assessments encompass tasks such as utilising one's proficiency in English to compose a CV or an application letter for employment or employing mathematical comprehension to approximate the total expenses for a vacation.

   Formative assessments: These assessments enable teachers to ascertain the current stage of each student's learning and make any required adjustments to their teaching. Formative assessments enable teachers to make real-time adjustments by explicitly highlighting the specific areas in which students need to develop.

   Evaluation of Digital Content: Utilising technology in the classroom helps streamline the evaluation process. Several software packages provide progress reporting and evaluation features that enable teachers to accurately determine the current stage of each student's learning journey.

5. **Students' progress when they exhibit proficiency**: Through the utilisation of data-driven reporting and frequent assessments, the faculty has a comprehensive understanding of the specific position of each student within the learning trajectory. If learners exhibit a comprehensive comprehension of the topic, showcase their acquisition of crucial abilities, and demonstrate their capacity to apply that comprehension, it is logical to infer that they can progress.

Strategies for Implementing NEP Assessment and Examination Reform Proposals:

Effective implementation strategies involving coordinated efforts from national and state-level organisations, including Rashtriya Mulyankan Kendra/PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), NCERT,

SCERTs/SIEs, CBSE, and other Boards of Assessments (BoAs), are imperative for the transformation of assessment for student development. The following are examples of implementation strategies:

- Development of evaluation procedures and novel assessment patterns encompassing both formative and summative evaluations across various educational stages.
- Establishing an educational environment that promotes the use of formative and adaptive assessments as a means to enhance learning and refine teaching and learning procedures.
- Enhancing the capabilities of educators to implement "assessment for learning" and "assessment as learning" practices at the elementary level. To accomplish this, manuals/handbooks and training modules must be developed for offline, online, and blended modalities.
- Redesign the holistic report card for school-based assessment to inform parents of their child's progress as determined by the schools.
- Establishment by all states and territories of an IT-based monitoring system to monitor the progress of students in grades one through twelve.
- Formulate standardised protocols, benchmarks, and directives about evaluation and assessment in secondary education that are consistent with the NCF-2020 and applicable to all Boards of Assessment (BoAs).

As a critical component of the education system, competency-based education is emphasised in India's National Education Policy (NEP) 2020. The fundamental components of CBE that are understood are as follows:

Keep in Mind Learning Outcomes: The foundation of competency-based education is the establishment of unambiguous and precise learning objectives that govern the progress of students. The intended purpose of these outcomes is to provide quantifiable evidence of the knowledge, skills, and abilities that are anticipated to be obtained by the students.

Curriculum Flexibility and Customisation: The NEP advocates for curriculum flexibility to accommodate the varied learning requirements of students. It promotes individualised learning trajectories, permitting students to advance at their discretion while guaranteeing their mastery of the necessary proficiencies before advancing to the subsequent tier.

Competency-Based Assessments and Current Proficiency: It is imperative to evaluate students' pre-existing knowledge and skills about the learning outcomes before commencing a new unit or topic. This can be achieved by implementing entry-level assessments that include measurable competency criteria. It will facilitate the identification of their initial stages of development and tailor their educational trajectories accordingly. Traditional exams, which solely demanded verbatim memorization, have been superseded by competency-based assessments. These evaluations concentrate on assessing students' comprehension and application of concepts, higher-order thinking, and skills through a variety of non-textbook-based assessment methods.

Ongoing and All-encompassing Assessment: The NEP espouses the implementation of an ongoing and all-encompassing evaluation framework, in which evaluation is not confined to a solitary culminating examination. On the contrary, incorporating periodic evaluations such as mind maps, open-ended questions, and examinations into the learning process serves to track

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students' advancement and deliver prompt criticism to facilitate growth. The fundamental distinctions between the two assessment methods are as follows: summative assessment evaluates students' performance, knowledge, and retention of information. FA assists instructors in determining whether or not classes, lectures, assignments, and lectures provide students with the necessary structure to comprehend and retain information.

Harmonisation of Co-Curricular Competencies: The concurrent development of academic and co-curricular competencies, including but not limited to critical thinking, problem-solving, communication, creativity, and collaboration. The significance of instilling life skills—including but not limited to adaptability, resilience, emotional intelligence, and ethics—to equip students for practical obstacles and achievements outside of the educational sphere is acknowledged by the NEP. In STEM education, for instance, the learning outcomes are twenty-first-century competencies.

Multi-Disciplinary Approach: The policy promotes the integration of diverse academic disciplines, dismantling conventional subject compartmentalization, and fostering cross-disciplinary comprehension and practical implementation of information. The NEP 2020 acknowledges the significance of technology integration in facilitating competency-based education. It supports the implementation of educational technology to personalise learning opportunities and enhance learning experiences, for instance through data-driven interventions.

Teacher Training and Professional Development: The effective implementation of competency-based education is heavily reliant on the assistance of educators. The policy prioritises the provision of suitable training and ongoing professional development (CPD) opportunities for educators to establish classrooms and assessments that are centred around the needs and interests of students. It is imperative to acknowledge that the execution of competency-based education may differ among educational establishments and states, given their prerogative to modify the principles to suit their particular circumstances and requirements.

Parent and community engagement: Educational institutions are required to devise strategies in collaboration with faculty members to effectively involve parents and the local community in endorsing competency-based learning initiatives. By subsequently conveying the advantages and objectives of this methodology, we could effectively engage all three parties involved in the educational journey.

Conclusion

An immediate imperative exists for an educational paradigm transition from conventional rote memorization to competency-based education (CBE) and competency-based assessment (CBA), which foster the comprehensive development of children. To accomplish this, assessment instruments would need to be realigned to incorporate learning outcomes, capabilities, and dispositions. As a result of the emergence of technologies, artificial intelligence (AI) tools, and a redefinition of work centred around higher-order cognitive tasks rather than routine duties, this transition in assessment methods has become an imperative and unavoidable necessity. The focus of competency-based education is on the subject matter expertise of each student. There is an emphasis on students' grades. Conversely, alternative instructional frameworks assess the proficiency of pupils in summative abilities

through their exposure to content-specific skills or concepts. Establishing a culture of inclusion and fairness, the CBE model prepares students for life after school. More schools and districts are implementing competency-based education at a more in-depth level each year, and the majority of states have made preliminary or substantial policy adjustments to accommodate competency-based education innovations.

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MIDBRAIN ACTIVATION TRAINING

Vidhi Tiwari
Teacher L.B.,
Government Middle School Village- Agrikala
Sankul- Dashrangpur, Block- Kawardham
District- Kabeerdham (Chhattisgarh)

Abstract

Naturally every person has six senses. But a person generally uses only 5 senses in his life and does not use the 6th sense. When a person's sixth sense becomes active through yoga, meditation or any special training, then his ability to see and understand increases.

This training, made up of both meditation and science, develops the mental and intellectual abilities of children, which increases their ability to think and understand. In this training, daily activities like brain games, brain dance, music, meditation, puzzles etc. are done.

Introdution

what is midbrain activation

There are three parts of our brain right brain, left brain; and the part connecting both is called inter brain or mid brain.

Most of us use the left brain, while the right brain is rarely used. Even a person rich in versatility uses only a small part of his brain in life, that too only the left brain - which is of logical ability. The right brain which is full of creative power is hardly used.

If the bridge between the two half-brains becomes active, then the child becomes an all-rounder, his IQ and EQ both grow together.

Left brain is very important for school studies, logical thinking and memorization. But right brain is essential for inventive thinking and creativity.

The ability of learning will increase, even after a time, they can easily identify any color, word by touching it with their middle brain even with eyes closed.

Methodology

Mid Brain Activation is an exclusive technique developed in conjunction with 'Meditation + Science'.

By which the child's brain is first brought to the stage of alpha wave. In this situation, the mid-brain starts working as a bridge between the conscious and subconscious mind. Then a specific type of brain-webs, specific sound waves are heard, which activates the neuron cells of the mid-brain.

By activating the mid-brain, the art of memory, concentration, visualization, imagination, creativity, and quick reading gets awakened.

All the senses simultaneously feel the object and start giving information to the brain.

The whole process is based on a scientific method which is made easy and interesting by music, dance, brain gym exercises, puzzles and various games.

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Children are taught step by step brain exercises, brain gym, dance, puzzles, games, yoga and meditation to get them in a calm and relaxed mood.

Time

This training will be done for the children of primary and secondary level in a total of 30 hours as per the following timings.

First week - 2.5 hours a day.

From week 2 to week 12 - 2 hours one day per week. In five steps-

Step 1 - 30 minutes of dance

Step 2 - 30 Minute Brain Game

Step 3 – Surya Namaskar for 25 minutes

Step 4 – 5 Minute Meditation

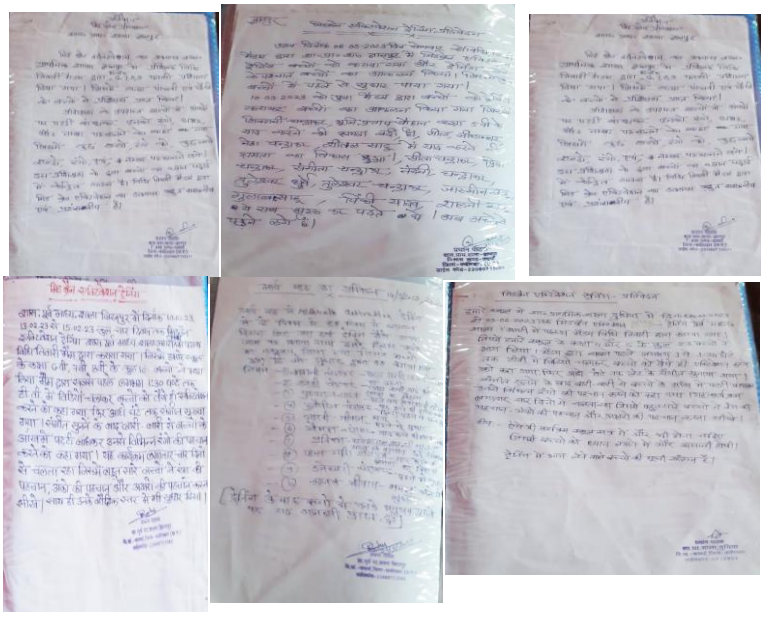
Step 5 - 30 minutes of music

After 12 weeks, children will be given a brief form of this training so that they can practice it at home.

Profit

- Memory power notably increases.
- There is an increase in concentration and confidence.
- The ability to read and learn increases.
- Children get emotionally balanced and stable.
- Childrens' sixth sense becomes active.
- Children become able to read and recognize objects even with closed eyes.
- Children's right and left brains get balanced
- Children develop their ability to make the most of all their senses.

Data collection method



Improve word reading

Data collection method

Aansadhsacdbsanc,

Data collection		**Primary and Middle School report**			
Date	**Student name**	**Class**	**School nam**	**Pre training report**	**Post Training report**
27.2.23	Sumit Chandrakar	4	Ps /Parakhandsara	Found stuck reading	Started studying well
6.3 23	Sita	3,4,5	Ps/ Gyanpur	It took time to remember	Improvement found
	Neha Chandrakar		,	,,	,,
	Shital		,,	,,	,,
	Nelamber		,,	,,	,,
24.3.23	Priya chandrakar	3,4,5	Ps/Gyanpur	Number of readers stuck	Found improvement in reading
	Sangita chandrakar		,,	,,	,,
	Tuleshver		,,	,,	,,
	Gulab sahu		,,	,,	‘’
	Jashmin sahu		,,	,,	‘’
	Nandnee		,,	,,	‘’
23.3.23	Beemshing	3,4,5	Ps /Biranpur	Can’t understand math	Improve math
	Sameer		,,	Number of readers stuck	Found improvement in reading
	Meera		,,	,,	,,
	Pushpa		,,	,,	,,
	Umeshwari		,,	,,	,,
	Puja		,,	,,	,,
23.3.23	Pratigya	8	Ms /Biranpur	Lack of vocabulary	Got knowledge of word recognition
	Ragni Chandrakar	6,7,8	,,	Trouble remembering	Memorized faster
	Janki		,,	,,	
	Pushpraj yadav		,,	,,	,,
	Dulourin chandrakar		,,	,,	,,
	Aarti shrivash		,,	,,	,,
10.1.24	Kritika yadav	7	Govt svami aatmannd hindi scl bemetra	It took time to read the word	Improve word readingImprove word reading

	Chanda verma	7	,,	No word recognition	Improve word recognition
29.2.24	Hemant kumar	8	Ms /kuwa	Inability to read,lack of confidence	Improvereading and gain confidence
	Tarun Dheneshvery	6	,,	Number of readers stuck	Improve reading
	Shukhbati		,,	,,	,,
29.2.24	Hani	4	Ps/Ka rhi	Number of readers stuck	Improve reading
	Khemin		,,	,,	,,
	Binde		,,	,,	,,
	Baby	5	,,	Read very slowly	Improve reading
	Lalita	,,	,,	,,	,,
	Muskan	3		No word recognition	Improve word recognition
	Chandni	,,		,,	,,
	Dhermraj	,,		,,	,,
29.2.24	Tarun	6	Ms / karhi	Number of readers stuck	Improve reading
	Dhaneshvri			,,	
	Shukhbati			,,	
	Kushi	7	,,	No word recognition	Improve word recognition
	Bhagirathi	8	,,	,,	
9..2.24	Nidhi	5	Ps/ kuwa	It took time to read the word	
	Uma		,,	,,	,,
	Aarti			,,	,,
	Jiya			,,	,,
	Pratigya			,,	,,

Analysis

On the basis of the report card obtained from the analysis, it can be said that this training develops the abilities of the children. I have done this work on a total of 600 children in which good results have been seen for all.

Discussion

After all, how can we make this training interesting by using Culture Policy Yoga Magic Box Brain Game Discussion

Culture

If we talk about culture, we have tried to include the folk dances of our state or other states as well so that children can add culture to their education along with their daily routine.

Yoga

Surya Namaskar has been added to Yoga, which helps in the brain development of children along with exercise

Magical Box

A new enthusiasm can be seen in the Magical Box by connecting it with this training. Children started doing colors and puzzles in the Magical Box while playing with blindfolds, then along with making the Magical Box interesting, All children will show enthusiasm which will help in learning along with knowledge.

Brain Games

Along with physical activities, brain exercise is also important. With the help of memory games, children's concentration, confidence and visualization power increases

Helpful in problem solving

Memory matching game. With help, children also develop skills like problem solving, patience and teamwork. This is confirmed by a research published on the website of NCBI National Center of Biotechnology Information.

Meditation and Music

If we can engage children in meditation even for 5 minutes every day, then it will be the best way to keep the mind calm and concentration will increase.
In this way, music also works to make children creative.

This research It is also said that along with this, the speed of learning increases, the focus in work increases

It is helpful in improving our mood and removing stress

So, if this training is added to Backless D on Saturday If it is conducted one day every week, the child will be successful in increasing his understanding through sports, culture, art, puzzles, meditation, music and yoga. Attahiya training can prove to be very good if it is added to the curriculum.

Conclusion

If I come to the conclusion then I find that daily brain game meditation yoga music is not only helpful in increasing the intellectual capacity of children but also in entertainment due to which children learn alphabets and studies through games and also get connected with culture. is helpful for them in developing a more

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PERSONALISED LEARNING STRATEGY AND STUDENT CENTERED APPROACH

Dr. S. Bella Wiselet
Assistant Professor (c)
Department of Education (ITEP), NITPY, Karaikal

Abstract

The purpose of this paper is to suggest personalized learning strategy as one of the useful teaching methods that can be attempted in imparting knowledge to the students. Basically teaching must include two major components sending and receiving information. Ultimately, a teacher tries his best to impart knowledge as the way he understood it. So, any communication methods that serve this purpose without destroying the objective could be considered as innovative methods of teaching. The use of innovative methods in educational institutions has the potential not only to improve education, but also to empower people, strengthen governance and galvanize the effort to achieve the human development goal for the country.

The Concept of Personalized Learning

The term personalized learning, or personalization, refers to a diverse variety of educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students. Personalized learning is generally seen as an alternative to so-called "one-size-fits-all" approaches to schooling in which teachers may, for example, provide all students in a given course with the same type of instruction, the same assignments, and the same assessments with little variation or modification from student to student. Personalized learning may also be called student-centered learning, since the general goal is to make individual learning needs the primary consideration in important educational and instructional decisions, rather than what might be preferred, more convenient, or logistically easier for teachers and schools.

The term *personalized learning* has become more widely used by online schools and companies selling online learning programs. In some schools, however, personalized learning many take the form of "learning," or the practice of using both online and in-person learning experiences when teaching students. When investigating or reporting on personalized learning, it is important to determine precisely how the term is being used in a specific context.

Personalized learning is intended to facilitate the academic success of each student by first determining the learning needs, interests, and aspirations of individual students, and then providing learning experiences that are customized to a greater or lesser extent for each student. To accomplish this goal, schools, teachers, guidance counselors, and other educational specialists may employ a wide variety of educational methods, from intentionally cultivating strong and trusting student-adult relationships to modifying assignments and instructional strategies in the classroom to entirely redesigning the ways in which students are grouped and taught in a school.

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A Student-Cantered Approach in the Classroom

(SCL) is a teaching method that focuses on creating connections with students' interests and the things they learn in school. The ultimate goal is to make the educational process more meaningful to students. The best way to do that is by framing lessons in terms of their interests; thus encouraging them to engage more in the material and therefore learn better.

The shift toward giving students more decision-making roles can look very different. But generally, they'll all have similar characteristics such as small groups, discussion, and more student-cantered activities.

A great example of a student-cantered approach in the classroom is letting students determine the final results of a project or assignment. Instead of dictating to the students what the final project should be, the teacher provides parameters and allows the student to base their final work around their topic interests.

SCL may seem to remove the teacher from the centre of the classroom; but really, the teachers role couldn't be denied and it is really instrumental for its success. The approach relies on students working toward their own autonomy that would support learning at a pace they are comfortable with.

Benefits of SCL

One of the major benefits of the SCL approach is that it presents more decision-making opportunities to students which would let them take a more one hand approach to their education. Students learn to set their own goals then assess and determine how to achieve them. This allows students to acquire important and useful skills like analytical thinking, problem-solving, creativity, and leadership.

In addition, students engage better and are more motivated in their learning in a student cantered classroom environment. This not only helps them academically but also improves relationships between students and educators.

Lastly, student-cantered learning offers greater flexibility for small groups or virtual learning, which has become even more important in the past few years. SCL techniques can always be incorporated gradually, making it easier for both students and educators to have the time they need to adapt.

The following representative examples will help illustrate the concept. Schools and educators might personalize learning for students by:

1 **Smaller Learning Communities:** Reconfiguring the operational and educational structure of a large school so that students are organized into smaller groups and paired with a consistent team of teachers who get to know the students and their learning needs well. While this strategy takes a wide variety of forms from school to school, a few of the most common approaches are "smaller learning communities," teaming, themed-based academies, or "schools-within-a-school", an approach that involves the creation of distinct academic programs, or "schools," within the operational structure of larger school.

2 **Differentiated Learning**: Eliminating the practice of grouping students into different academic "tracks" or tiered course levels based on their perceived ability or past academic performance a practice called "heterogeneous grouping" or "mixed-ability grouping," in which students of various ability levels are enrolled in the same course or program. In these cases, as well as in other educational settings, teachers may employ a variety of

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personalized instructional and academic support strategies generally called differentiation, differentiated learning, or differentiated instruction.

3 **Self-Design Learning Experiences:** Schools may create or offer students a variety of learning pathways, i.e., a wider and more diverse selection of learning experiences. Common examples include career-related internships that allow students to satisfy school graduation requirements or meet state-required learning standards; dual-enrollment experiences that allow students to take courses at alternate institutions, such as colleges or universities, while also earning academic credit at their home school; or independent-study projects, which allow students to self-design learning experiences in collaboration with a teacher, mentor, or advisor.

4 **Student Portfolios:** Students may create and maintain personal learning plans, which describe their academic, collegiate, and career goals, while mapping out the educational decisions they need to make to achieve their goals, or portfolios, which are a cumulative record of a student's academic work and accomplishments. Teachers, advisors, and educational specialists may use these plans and portfolios to guide how they teach and support specific students.

5 **Student Advisories:** Replacing more traditional homeroom periods or study halls with advisories time in the school day for educators to meet with small groups of students and advise them on academic, social, and postsecondary-planning issues. Students may also be paired with advisors, adult mentors, or peer mentors who meet regularly with students over the course of several months, a year, or multiple years to help them acclimate to a school, navigate educational options, or plan for higher education and careers after graduation.

6 **Alternate Methods:** Using alternative educational approaches and instructional methods such as authentic learning, blended learning, community-based learning, or project-based learning, to name just a few that may give students more personal choice in their education and more opportunities pursue learning experiences that reflect their personal interests, career aspirations, or cultural heritage. Increasingly, a variety of digital and online learning options are being used to personalize learning for students.

7 **Student Voice:** Increasing the level of choice and personal responsibility students have in the instructional process. The concept of "student voice" refers to the values, opinions, beliefs, perspectives, and cultural backgrounds of individual students and groups of students in a school, and to instructional approaches and techniques that are based on student choices, interests, passions, and ambitions. As an alternative to more traditional forms of instruction in which teachers may make unilateral decisions with little or no input from students, introducing more student voice into the learning process in one way to personalize learning.

Conclusion

In the new paradigm of learning, the role of student is more important than teachers. The concepts of paperless and pen less classroom are emerging as an alternative to the old teaching learning method. Nowadays there is democratization of knowledge and the role of the teacher is changing to that of facilitator. There is a need to have interactive teaching and this changing role of education is inevitable with the application of different learning strategies. To conclude, by providing opportunities for the students with personalized learning experiences, the teacher

can ensure them to incorporate self-study into their busy lives, accelerating their progress and guaranteeing better results.

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EMERGING TRENDS OF INDIA'S TRAVEL AND TOURISM MARKET

Dr. K. Saraswathi
Assistant Professor, Department of History and TTM
Ethiraj College for Women (Autonomous), Chennai

Abstract

India's tourism industry will grow to a trillion dollar economy and could create nearly 400 million jobs. Date led tourism is the key driver growth. India plans to promote sustainable and green tourism practices. India turns into a global tourism hub as the foreign tourists seek India and spend twenty six times more than any domestic tourist. By 2022, Indian tourism industry has contributed around 190 billion to the GDP. It has generated employment for about 37.2 million people in India. Even though it has suffered a setback in 2019 due to COVID, it revived itself in 2022 and has become a global trend again. Youth population is contributing significantly in the growth of tourism industry as they play an inevitable role in MICE as well as adventure tourism. Development of Artificial intelligence further boosted the tourism industry.

Setback for Tourism Industry during COVID and its Revival

Indian tourism industry has suffered a huge setback during COVID and it took nearly two years to revive itself after adopting itself to a new normal. Be it aviation or hospitality, transportation, tour operators or eateries, all activities has been adversely affected.. India has been no exception. The decline in tourist arrivals or movements in India started in February 2020 itself. The tourism industry as compared to the other important industries of a country is highly affected due to the internal and external shocks. In the past few months, the drastic outbreak of the novel coronavirus has caused great losses to the tourism industry. The Indian tourism industry accounted for 9.2% of India's GDP in 2018 and braced 42.673 million jobs, 8.1% of its total employment. The Indian tourism and hospitality industry is now gawking at a likely job loss of around 38 million. The governments across the world are trying to woo back visitors from domestic and international markets. Travel and tourism companies will have to recuperate the trust and confidence of people in the recovery period to travel again after the pandemic.

He rapid blowout of the coronavirus pandemic froze domestic as well as international activities. Countries around the world continued to impose restrictions on travel as apart to hold the spread of the virus. The tourism industry around the world is getting jammed, but it is more severe in the countries which receive a large number of religious and pilgrimage tourism. India is one of them.

The travel and tourism companies in India are dealing with the miserable journey of canceled bookings from travelers which have led to a "complete paralysis" in the market. The situation was worse between the period February 2020-to-late March 2020. With the impose on travel bans internationally, the airlines and railways came to a standstill as the crisis has hit its nerve centers.

Indian association of tour operators has estimated that the hotel, aviation, and travel sector collectively may acquire a loss of about □85 billion due to the restrictions imposed on travel

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and tourism. However, domestic transport was started early with some regulations, the aviation sector had to wait for a long time to resume its operations.

During the lockdown period, India had canceled travel to over 80 countries, due to which the international flights were being suspended. The domestic flights were operational with regulations. The Indian domestic travelers and FTAs witnessed a significant decline in 2020. India's foreign tourists (FTA) arrival stood at 10.9 million and the foreign exchange earnings stood at Rs 210,971 crore during 2019. The states which accounted for most of it were Maharashtra, Tamil Nadu, Uttar Pradesh, and Delhi for about 60% of FTAs. Along with this, the cancellation of various events, functions, and festivities caused a great job loss to many organizers and companies.

Role of Youth Population in Tourism Industry

Youth Population of India who seeks new adventures and experiences play a pivotal role in Indian tourism industry. Boom in tourism industry is mainly because of the interests of youth population who indulge themselves in multiple tourism and seek new places in every weekend. India's total travel expenditure is set to touch $410 billion in 2030, according to "How India Travels", the report by Booking.com and McKinsey. In 2019, when the tourism industry, worldwide, had its best year, before Covid-19 hit, India's total travel expenditure was just $150 billion. India's youth will be another factor that will make the country irresistible for global tourism players. India's median age is 28.2 years, more than 10 years younger than that of major economies. According to the UN World Tourism Organization, India is one of the top three fastest growing outbound tourism markets. In the last decade youth travel has witnessed huge growth and has been established as a specialized niche segment. India has majority of young population, which makes it important to know about the domestic tourism destinations preferred by the youth. This study focuses on the factors influencing the youths' tourist destination selection.

Development in Infrastructure

India has already made a place on world's tourism map because of its great potential to attract tourists to the diversity of its tourist sites spread all over the country. It is also known that we still lay behind our other neighbouring countries like China, Singapore, Malaysia and Thailand. India's consistent improvement in infrastructure paves way for the development in the tourism industry. The number of airports has been increased and the transport facilities have been improvised. India has an excellent road transport facilities when in it comes to Tourist spots. The number of Metros has also been increased in the busy cities which further facilitates tourism related activities. The tourism industry is widely regarded as having the ability to generate high levels of economic output with relatively lesser levels of capital investment. The potential and benefits of the tourism sector become more relevant especially for developing economies like India, where capital availability is scarce and need for economic and employment generation activity is high. With a mere 0.4% share of international tourist arrivals and a large volume of domestic travellers – mainly in the religion/ pilgrimage segment – the sector still accounts for 5.6% of GDP while providing direct employment to 20 million people. However, compared to global averages, the industry has not scaled up to its full potential. Geographical smaller countries have managed successfully to generate much higher

levels of revenue from this industry. This is borne out by the fact that globally, the industry contributes approximately 11.6% to the GDP.

Delhi, the capital of India, has its origin from 1450 B.C. and has been in continuous existence for over a thousand years now. It is a site of many historic capital cities, traces of ten of which survive even today. The city is significant for the role it has played throughout history, having been the centre of an empire for the majority of this millennium. It is an important city in the Indian subcontinent and comparisons have often been made to other great cities of the world. However, very few cities carry with them, to such an extent, the weight of several layers of continuous history. In spite of this rich and diverse cultural heritage, Delhi is used only as a gateway for travelling to Jaipur, Agra and other cities of tourist interest. Though, Delhi has the highest number of tourist arrivals, it is only used as entry point to the country.

Entrepreneurship in Tourism Industry

Tourism entrepreneurship is the process of identifying, evaluating, and exploiting opportunities to create new tourism businesses or to introduce new products, services, or practices into existing tourism businesses. It is an exciting realm where individuals with a passion for travel and a knack for business come together to create and manage ventures within the tourism industry. It involves identifying opportunities and developing innovative ideas to meet the needs and desires of travellers. It is an amalgamation of adventure, hospitality, and entrepreneurship to craft unique experiences.The tourism industry witnessed a huge number of innovative enterprises in the last two decades. Tourism entrepreneurship inherently involves taking calculated risks. Entrepreneurs are willing to step outside their comfort zones, invest their resources, and navigate uncertainties to pursue their ventures. An illustrative example is the launch of adventure tourism businesses in remote and challenging locations. These entrepreneurs take the risk of establishing operations in unexplored territories, offering activities like mountaineering, extreme sports, or wilderness expeditions, knowing that the thrill-seeking segment of tourists will seek out these unique and adventurous experiences. Tourism entrepreneurship places a significant emphasis on social responsibility. Entrepreneurs strive to create businesses that not only generate economic benefits but also contribute positively to local communities, cultures, and environments. For instance, community-based tourism initiatives empower residents by involving them in tourism activities, preserving their cultural heritage, and sharing economic benefits. By doing so, entrepreneurs foster sustainable development and create a sense of pride and ownership among the local population. Computerised bookings and travel packages offered by a single company enable the tourists to expand their area of interests and encourage them to spend more to gain a new set of experiences. This has significantly improvised the scope of the industry. Enterprises such as make my trip is creating a positive impact on Indian people by encouraging them to indulge themselves in domestic as well as international tourism. Tourism entrepreneurs understand the value of collaboration and networking. They actively engage with stakeholders, including other entrepreneurs, industry professionals, local communities, and government agencies. By building strong partnerships, entrepreneurs can access resources, share knowledge, and create synergistic opportunities. An example is the establishment of destination marketing organizations (DMOs) where entrepreneurs collaborate and local authorities to collectively promote the destination and attract a larger volume of visitors.

Increase in Hotels and Homestays in India

There is a significant increase in the number of hotels and homestays in India. Over 8 Lakh hotels have been listed in India as International hotels. Over 23, 000 homestays have been created across 940 Indian cities where Indian population have showed a great interest in setting up homestays for international tourists. States like Kerala have shown a significant interest in creating homestays and have been a hub for data led tourism. The hotel industry in **India** is getting ready for significant changes to meet the evolving and dynamic needs of the modern Indian tourist. The travel industry in India is expected to develop at a rate of 11 to 11.5 percent, reaching a staggering $48 billion in 2020. In order to meet the enormous demand for homestays among foreign and domestic travellers, India needs to add 2.5 million rooms to the homestay market. Travel fans are searching for hassle-free, relaxing vacations that include comfort and convenience. People like vacation spots that are both affordable and close to their homes.

Fair Market Play

India is the third-largest civil aviation market in the world as of 2021.Indian aviation industry is expensive similar to that of international hotels in India. It also depends on the demand in the tourism industry. The expenditure of Indian travellers is expected to grow up to Rs. 9.5 lakh crore (US$ 136 billion) by 2021. Due to rise in demand in air travel, India will need 2,380 new commercial airplanes by 2038.When the demand for the sector reduces; there is a significant reduction in the cost of the tickets. However in tourism industry, there was always a demand except for the COVID times.

Emerging Trends

The primary uses of artificial intelligence in the travel industry are for improving operational efficiency and enhancing guest experiences, with techniques like data analysis helping with personalization. Additionally, AI can assist with customer service, like guiding customers through booking processes, and can be used for predictive analysis, helping travel companies to anticipate future demand and adjust pricing accordingly. AI tools will play a pivotal role in the growing tourism industry. The capacity for artificial intelligence to perform tasks that have traditionally required human cognitive function has made it especially useful for those in the travel industry because deploying AI can save businesses time and money while potentially eliminating human error and allowing tasks to be performed quickly, at any time of the day. Most hotels and resorts rely heavily on delivering excellent customer service to build their reputation, and AI technology can assist with this in various ways. For example, artificial intelligence can improve personalization, tailor recommendations, and guarantee fast response times, even without staff. Artificial intelligence has advanced to the point where it is regularly used to assist and communicate with customers, learning from each of these interactions and improving future interactions. Moreover, AI can assist with tasks like data analysis, calculations, and problem-solving, which can be valuable to hotel owners. Aviation and Booking will be advanced from the current position where the Artificial Intelligence plays a key role. There are facilities such as price locking along with insurance assisted bookings. AI also enables personalized shopping along with a flow in accommodations when comes to booking. COVID times further expanded the online market which gave rise to virtual tourism as well.

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Increasing MICE Tourism

In India, MICE tourism has seen a considerable growth in recent years. The exhibition industry is rapidly growing at a rate of more than 8% over the past few years outpacing the GDP growth rate of the country. According to the Ministry of Tourism, India hosted over 6.9 million foreign tourists in 2019 for various events, conferences, and exhibitions. As per ICCA city and country rankings, India with 158 meetings (out of total 13,254 meetings) secured 28th rank. The MICE segment contributes significantly to the overall tourism industry, generating substantial revenue and boosting the local economy. Jio World Convention Center, Biswa Bangla Convention Center, Bharat Mandapam, Yashobhoomi, etc. in India are emerging as major MICE destinations, equipped with state-of-the-art infrastructure and world-class facilities. The recent India G-20 Presidency recorded over 200 meetings across 56 cities, placing India on an international MICE landscape, showcasing robust infrastructure, cultural and national heritage internationally. The Ministry is working to take this momentum forward and place India as one of the leaders in MICE Tourism. The 'National Strategy and Roadmap for MICE Industry' is an appreciative enabling institutional framework that serves as a guiding document for the stakeholders. Additionally, State and city level MICE promotion Bureaus will facilitate the development of MICE industry in India. CII is actively engaging with the government and the industry fraternity to take this initiative forward through active stakeholder consultations and dialogues. The potential for MICE sector growth can be partially attributed to the pandemic that accelerated the adoption of virtual and hybrid events. Even as in-person gatherings resume, the integration of digital elements remains prevalent, allowing wider participation and enhancing the overall event experience. There is a growing emphasis on sustainable practices within the MICE tourism sector. Event organizers and venues are increasingly adopting eco-friendly initiatives, aligning with the global push towards responsible and green tourism. The integration of cutting-edge technologies, such as augmented reality (AR) and virtual reality (VR), has transformed the MICE landscape. These technologies offer immersive experiences, making events more engaging and interactive. Future MICE events will witness a greater focus on customization and personalization, catering to the specific needs and preferences of participants. This trend is expected to enhance attendee satisfaction and overall event success. The future of MICE tourism in India looks promising, driven by several factors. The government's focus on infrastructure development, coupled with the promotion of India as a preferred MICE destination, is expected to attract a larger share of the global business events market. The e-Tourist Visa (e-TV) scheme has streamlined the visa application process for foreign participants, recent PM's call for 'Wed in India' has set the stage for influx of one lakh crore back in the country. Additionally, the emergence of tier-II cities as MICE hubs is diversifying the landscape and creating new opportunities for industry. With a strategic approach and collaborative efforts from stakeholders, MICE tourism is poised to become a driving force for economic growth, knowledge exchange, and cultural integration on a global scale. Meetings, Incentives, Conferences and Exhibitions (MICE) tourism is consistently expanding itself with the significant growth in the IT sector in India. Tourism to European countries, USA and Australia for works related to their jobs such as conferences, meetings is seeing an upsurge in these two decades.

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EMPOWERING TEACHING AND LEARNING THROUGH DIGITAL TECHNOLOGICAL DEVICES - A REVOLUTION IN EDUCATION

Dr. K.P. Shanmuga vadivu
Associate professor of Education
Sri Sarada College of College, Salem.

M. Suganthi
Ph.D Scholar
Sri Sarada College of Education, Salem.

Abstract

The integration of digital technological devices into education is revolutionizing traditional teaching and learning methods, empowering educators and students alike. This paper explores the impact of digital tools such as interactive whiteboards, tablets, educational apps, and virtual reality simulations on the educational landscape. By enhancing student engagement, enabling personalized instruction, and fostering collaboration, these technologies transform classrooms into dynamic centers of interactive learning. We examine how digital devices support teachers in lesson delivery, differentiation, communication, workflow management, and professional development. Additionally, we address challenges such as the digital divide and propose solutions to ensure equitable access. The paper concludes by advocating for a balanced approach that merges digital innovation with the irreplaceable human elements of education, aiming to create inclusive and future-ready learning environments.

Keywords: *Digital Technology in Education, Interactive Learning, Educational Apps*

Introduction

"The future of education is about empowering learners to take ownership of their education. Technology can be a tool for helping students become self-directed learners."

- Sugata Mitra

The world of education has evolved tremendously in this rapid-fire dawn of technological innovation. The use of digital technology devices into educational practices is enhancing, if not redefining, traditional methods of teaching and learning. With the potential to empower teachers and students in previously unheard-of ways, this integration opens up a world of opportunities. Digital tools are changing the dynamics of the classroom and expanding learning beyond its physical boundaries. Examples of these tools include interactive whiteboards, tablets, educational apps, and virtual reality simulations. In this study, we investigate the various ways that digital technology devices affect teaching and learning, looking at how they improve student engagement, allow for more individualized instruction, and foster teamwork. We also discuss the difficulties and factors to be taken into consideration when implementing them into practice, emphasizing methods to maximize their efficiency while addressing issues like equality, accessibility, and digital literacy. Our ultimate goal is to shed light on how digital

technology tools can promote innovation in education and help teachers construct dynamic classrooms that encourage inquiry, creativity, and lifelong learning.

From Chalkboards to Cloud Classrooms

Education has always been associated with rows of desks, a stoic teacher at the chalkboard, and the rhythmic scratching of pencils. But a new dynamic has emerged in the twenty-first century. Because of the revolutionary potential of digital technology, the static, one-size-fits-all method of teaching and learning is quickly changing. With the changing times, classrooms are becoming dynamic centres of interactive learning where students are actively involved in their education rather than just being passive consumers of knowledge.

Digital tools are intense catalysts for transformation, not just extravagant gadgets. Students can be actively engaged with interactive whiteboards, have access to a wide range of knowledge through online resources, and have complex subjects turned into entertaining games with educational apps. With the help of these resources, teachers may design a more engaging, personalized, and creative learning environment that meets the needs of different learning styles, facilitates teamwork, and gives students the tools they need to succeed in an increasingly digital world.

The various ways that digital tools have influenced education are examined in this article. We'll go into particular instances of how technology empowers:

Teachers: Updating their methods, organizing their work more efficiently, promoting continuous professional development.

Students: Developing active and involved education, personalizing their educational path, and growing essential 21st-century competencies.

Unveiling the Powerhouse: Digital Tools Empower Teachers

Digital tools provide educators with a comprehensive toolkit that enhances the way they deliver lessons and manage their classrooms:

1. **Enhanced Lesson Delivery:** Memorization by rote and tedious classroom instruction are things of the past. Teachers can display videos, images, and interactive components that draw learners involved by using interactive whiteboards and projection capabilities to create a visually appealing environment. By turning intangible concepts into real-world experiences, educational software, simulations, and virtual reality encounters further improve learning. By allowing students to interact with 3D representations of chemicals, dissect a frog in a simulated lab setting, or virtually explore ancient civilizations, they can make learning memorable and captivating.
2. **Differentiation and Personalization:** Digital tools have several benefits, one of which is their adaptability to different learning styles and speeds. For instance, adaptive learning platforms are able to determine each student's unique strengths and weaknesses and then modify learning courses accordingly. Personalised materials, practice tasks, and instructional interventions can be given to students in accordance with their individual needs. Instant feedback from online surveys and quizzes enables teachers to pinpoint areas in which pupils require further assistance. With the help of these individualised learning strategies, every kid is given the chance to realise their full potential and no student is left behind.

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3. **Collaboration and Communication:** Digital technologies perform as intermediaries in order to enabling efficient cooperation and exchange of knowledge both within and outside of the classroom. Students can work in real-time on shared documents, take part in online discussions, accomplish assignments that promote critical thinking, communication, and teamwork. Virtual classrooms and collaborative learning platforms, for example, empower students with a globally connected peer network and foster intercultural awareness and global citizenship. Furthermore, social media and online forum discussions can be used for professional development, giving teachers a global network of peers with whom to network, share best practices, and work collaboratively on curriculum development.
4. **Streamlining Workflow:** Instructors often have to spend a lot of time on administrative tasks. Solutions provided by digital tools allow for the efficient use of time and energy to provide more individualised training. While attendance monitoring apps do away with the necessity for human roll calls, online grading systems simplify the process of marking quizzes and assignments. These technologies help teachers be more productive while also freeing up more time for the things that really count: developing rapport with students, giving insightful feedback, and creating a supportive learning environment.
5. **Professional Development: Lifelong Learning for Educators:** Since the nature of education is ever-changing, educators must have access to chances for continuous professional development if they are to stay current with the newest developments and best practices. The use of digital tools makes lifetime learning possible. Teachers can connect with peers for collaborative learning, access a plethora of resources, and take part in virtual conferences at their own pace and convenience through online courses, webinars, and professional learning groups.

From Textbooks to Treasure Troves: A Digital Renaissance in Learning

Envision a classroom that is infinite rather than four walls, with the Great Barrier Reef shimmering on the interactive whiteboard and augmented real ity pyramids rising from students' desks. This is the forefront of an educational revolution driven by digital tools, not a scene out of science fiction.

For generations, textbooks and rote learning have been the mainstays of education. Young minds' innate curiosity was frequently stifled by this one-size-fits-all strategy. However, as digital tools have been more widely used, classrooms are changing to become dynamic learning ecosystems. These are not ornaments; rather, they are catalysts that are causing a revolution in the way that we instruct and acquire knowledge.

1. The Teacher as Alchemist: Transforming Information into Engagement

Educators in this era of digital renaissance are alchemists who turn dry facts into engaging lessons; they are more than just knowledge brokers. Previously seen only in futuristic films, interactive whiteboards are now widely used. Teachers can create multimedia tapestries with these digital canvases by adding interactive components, films, and photos that draw in students. Consider a biology lecture where students interact with 3D models of cells on a screen, or a history lesson where students explore the Colosseum virtually.

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2. The Rise of the Learner: From Passive Consumption to Active Exploration

Empowering learners is the driving force behind the digital revolution, not merely sophisticated tools. Students are becoming active participants in their education rather than only passive consumers of knowledge. Dreadful drills become interesting challenges with the help of educational applications and gamified learning systems. Consider a math programme that use points and badges to reward problem-solving or a language learning app that transforms vocabulary memorization into a treasure hunt.

3. Personalization: A Learning Journey Tailored to Every Student:

Digital technologies are particularly powerful when it comes to meeting specific needs. Analysing students' strengths and shortcomings, adaptive learning platforms create individualised learning routes, much like intelligent tutors. Imagine having a reading programme that, in order to provide targeted support and prevent any student from falling behind, modifies the difficulty level according to the reading level of each student. Students with a sense of agency are better able to learn at their own speed and delve deeper into their own areas of interest thanks to this individualised approach.

4. Collaboration: Beyond the Classroom Walls:

The physical barriers found in classrooms are being destroyed by digital instruments. Students can interact and collaborate with classmates from all around the world through online communities and collaborative tools. Consider a scientific project where students work together to do a virtual experiment on climate change with a class in a different nation. This develops global citizenship and multicultural knowledge in addition to teamwork and communication abilities.

5. The 21st Century Toolkit: Equipping Students for a Digital World:

In today's world, a different set of talents is now required to succeed. Critical thinking, problem-solving, creativity, and digital literacy are now prioritised over rote memorization. Students are given the resources they need by digital technologies to succeed in this new paradigm. Research platforms on the internet impart information literacy, whereas coding schools foster computational thinking.

Beyond the Screen: Embracing the Human Element

There is, however, an important proviso. Digital tools are helpful, but they cannot take the place of interpersonal relationships. The warmth, compassion, and direction of a committed educator are priceless. In education, technology ought to support human interaction rather than take its place.

The Challenges and Solutions: Bridging the Digital Divide

Education's digital revolution is not without its difficulties. High-speed internet and technology are not equally available in every school. Current disparities may get worse as a result of the digital divide. But answers are starting to surface. Projects like community technology centres and mobile learning platforms can close the gap and guarantee that every student has access to the resources they require for success.

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Building a Sustainable Future: Teacher Training and Professional Development

Teachers need constant assistance and training in order to take full advantage of digital tools. In order to enable instructors to incorporate technology into lesson plans with ease and foster an innovative learning environment, educational institutions need to make significant investments in comprehensive professional development programmes.

The Present Technologies and Tools Trending in the Education System.

1. **Learning Management Systems (LMS):** Platforms like Moodle, Canvas, or Google Classroom organize course materials, assignments, and communication in one place,enabling teachers to manage and deliver content efficiently.

Specific ways in which LMSs can be used in teacher education:

Delivery of online courses: LMSs are a crucial technology for delivering online courses.They provide a platform for teachers to upload course materials, host virtual discussions, and grade assignments.

Flipped classroom instruction: LMSs can be utilized to support flipped classroom instruction, where students learn new material at home and then attend class for discussions and activities.

Blended learning: LMSs can be employed to combine online and face-to-face instruction in a blended learning environment. This can be an effective approach to provide students with more flexibility and personalization.

Professional development: LMSs can be used to offer professional development opportunities for teachers. This can include online courses, webinars, and self-paced learning modules.

2. **Presentation Tools:** Software like Microsoft PowerPoint,Google Slides, or Prezi helps teachers create and deliver engaging presentations for their lessons.
3. **Collaboration Tools:** Applications such as Microsoft Teams, Zoom, or Slack facilitate communication and collaboration among teachers, students, and parents, enabling group discussions, video conferencing, and file sharing.
4. **Interactive Whiteboards:**Tools like SMART Boards or Promethean Boards offer interactive teaching experiences, allowing teachers to write, draw, and engage students using multimedia elements.
5. **Online Assessment Tools:** Platforms like Kahoot, Quizizz, or Google Forms enable teachers to create interactive quizzes, surveys, and assessments to gauge student understanding and engagement.
6. **Educational Apps:**Various apps cater to specific subjects, offering interactive content,games, simulations, and exercises to support teaching and learning.
7. **VR and AR in Education:** Virtual Reality (VR) and Augmented Reality (AR) are rapidly transforming the educational landscape, offering immersive and interactive learning experiences for students at all school levels.

This technology has the potential to:

Boost Engagement: VR and AR can transport students to different locations and time periods, making abstract concepts come alive and sparking curiosity. Imagine exploring the pyramids of Egypt or dissecting a frog in a virtual lab!

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Enhance Understanding: By interacting with 3D models and simulations, students can gain a deeper understanding of complex topics in science, history, and even language learning. Imagine visualizing the solar system or practicing a foreign language conversation in a virtual cafe.

Personalize Learning: VR and AR can adapt to individual learning styles and pace. Students can explore topics at their own speed and receive personalized feedback within the virtual environment.

Develop 21st Century Skills: VR and AR foster critical thinking, problem-solving, and collaboration as students navigate virtual worlds and work together on projects.

Emerging Technologies.

1. Artificial Intelligence (AI) in Education:

Artificial intelligence (AI) is revolutionizing the educational landscape by introducing innovative solutions that enhance teaching and learning approaches. AI-powered tools are being integrated into classrooms, providing educators with valuable insights, personalized learning experiences, and adaptive support for students.

Chatbots for Student Support: AI-powered chatbots offer 24/7 support to students, answering questions, addressing concerns, and directing them to appropriate resources. These chatbots provide students with immediate assistance, fostering a sense of accessibility and support.

Adaptive Learning Platforms: AI-powered platforms can adapt to individual student needs,tailoring content, exercises, and assessments based on each student progress. This personalized approach ensures that students receive the appropriate level of challenge and support, maximizing their learning potential.

Language Learning Assistants: AI-powered language learning assistants provide personalized feedback on pronunciation, grammar, and vocabulary, empowering students to improve their language skills. These assistants offer real-time guidance and support,facilitating effective language acquisition.

Virtual Classrooms and Simulations: AI-powered virtual classrooms and simulations create immersive learning experiences, allowing students to explore concepts and scenarios in a safe and engaging environment. These virtual environments foster interactive learning and promote deeper understanding of complex subjects.

AI is transforming education, providing educators with powerful tools to personalize learning, enhance student engagement, and foster a more supportive and effective learning environment. As AI technology continues to evolve, we can expect even more groundbreaking applications that will revolutionize the way we teach and learn.

2. Immersive Learning with Extended Reality (XR):

Extended reality (XR) encompasses virtual reality (VR), augmented reality (AR), and mixed reality (MR), enabling the creation of immersive and interactive educational experiences. This allows students to explore and learn in simulated environments that bring concepts to life and foster deeper understanding.

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Applications of Immersive Learning with XR in Education

Virtual Field Trips and Historical Explorations: Students can embark on virtual field trips to historical landmarks, scientific laboratories, or far-off locations, gaining a more profound grasp of history, science, and culture.

Interactive Science Simulations: Students can conduct virtual experiments, delve into microscopic worlds, and interact with intricate scientific phenomena, bringing science concepts to life.

Language Learning Immersion: Students can immerse themselves in virtual environmentswhere they can interact with native speakers, practice conversations, and enhance their language skills.

Vocational Training and Simulations: Students can train for various professions in simulated environments, gaining hands-on experience and preparing for real-world scenarios.

Therapeutic and Special Education Applications: XR tools can provide therapeutic support for students with special needs, offering personalized learning experiences and promoting social interaction.

Immersive learning with XR holds the potential to revolutionize education by providing students with engaging, interactive, and personalized learning experiences. By addressing the challenges and considerations outlined above, XR can become a powerful tool for enhancing teaching and learning, preparing students for the challenges and opportunities of the future.

3. Blockchain in Education

Utilized for secure and verifiable credentialing, ensuring the validity of educational certificates, qualifications, and achievements.

4. Internet of Things (IOT) in Education

Connected devices and sensors used to create smart classrooms, track attendance, monitor learning environments, and support interactive teaching methods.

5. Open Educational Resources (OER)

Free, openly licensed materials available online for teachers and students, offering access to a wide range of educational content.

Conclusion

In summary, the implementation of digital technology into education enhances engagement, personalisation, and collaboration while revolutionising established teaching and learning methods. While giving students engaging, customised learning opportunities, these tools also enable teachers to employ creative approaches and expedite administrative duties. All the same, it is imperative that issues such as the digital divide be addressed and fair access be guaranteed. Eventually, a dynamic and inclusive learning environment that equips students for the digital age can be created by fusing digital innovation with the essential human element of teaching.

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SOCIAL MEDIA ACTIVITIES IN DEVELOPING EMPLOYABILITY SKILLS AMONG COLLEGE STUDENTS

M. Thenmozhi
Ph.D Scholar
Department of Educational Technology
Bharathidasan University, Tiruchirappalli

Dr. S. Amutha
Assistant Professor (SG)
Department of Educational Technology
Bharathidasan University, Tiruchirappalli

Abstract

In the Digital era, social media has revolutionized personal and professional opportunities. College students are influenced at large by the social media. It plays a vital role in shaping their digital identity and job opportunity. Numerous research works have investigated how social media affects college student's employability. This study also aims to explore the activities of social media by college students on various domains towards the employability. Descriptive research with survey technique was utilized in this study. A social media tool with 5 point scale was used to collect the data. One hundred and forty-one responses were received randomly from undergraduate and postgraduate college students. Findings of the study revealed that the Social Media Activities in Employability Skills among college Students is high.

Keywords: *Social Media, Employability Skills, College Students*

Need of the Study

Now a days social media fills the cloud through various apps and provide number of skills in order to acquire employability opportunities. Based on previous studies researcher identified that students are comfortable by using social media for their personal purposes. But there is a gap in utilizing these kinds of platform effectively for employability. Hence, the investigator assessed social media activities towards employability skills among college students.

Review Related Literature

According to Chinyamurindi, (2023) social media may significantly help graduates who have completed their higher degree overcome the difficulties they have finding employment. Graduates may utilise it as a marketing tool to highlight their skills, which will increase the likelihood that they will land a job. Additionally, social media may be used as an information tool to help graduates who are unemployed become more aware of labour market difficulties. They may gain insightful information from this that may help them in their career quest. Song, (2017) demonstrated how social media use may have a significant impact on employment results. In particular, the findings of a survey conducted in China among 196 recent graduate students show a strong correlation between social media use and employability skills. The impact of social media use on employability skills is mediated by the success of internships. The association between social media use and internship effectiveness is moderated by Zhongyong.Wang, (2023) Social media platforms are a source of information that influences

college students' attitudes towards work and "persistent behaviour control" as they prepare for direct employment following graduation. The impact of social media information on post-graduation planning-more especially, on direct employment- was examined using the Theory of Planned Behaviour model.

Objectives of the Study

The following objectives were framed for the present study

- To identify the usage of Social Media activities towards employability skills among college students
- To find out the significant difference if any in Social Media activities with regards to demographic variables

Hypotheses of the Study

- The level of social media activities towards employability skills among college students is high
- There is no significant difference in the social media activities towards employability skills with respect to their gender
- There is no significant difference in the social media activities towards employability skills based on their educational qualification
- There is no significant difference in the social media activities towards employability skills with reference to their discipline
- There is no significant difference in the social media activities towards employability skills with reference to their locality

Methodology of the Study

The investigator adopted the descriptive method with survey technique for this study in-order to find out the social media activities towards employability skills among college students. Stratified random sampling technique was used to collect the data from college students through the Google form. The Questionnaire was prepared by using 5 point Likert scale like Strongly Agree - 4, Agree-3, Neutral-2, Disagree-1, Strongly disagree-0. The range of score lies between 0 to 96. Two hundred and fifty questionnaires were distributed to students but one hundred and forty-one responses were received randomly from undergraduate and postgraduate college students.

Analysis of the Study

Descriptive and differential statistics were used for the analysis of data. 't' Test was done to find out the Social Media activities in employability Skills among college students in terms of their gender, educational qualification, discipline and locality.

Analysis of the Data

Table -1: Mean scores of College Students on Social Media Activities

S. No.	Variables	Sub Variables	N	Mean	SD
1.	Total		141	70.96	10.14
2.	Gender	Male	65	71.71	4.51
		Female	76	70.33	12.18
3.	Educational Qualification	Under Graduate	99	70.75	10.42
		Post Graduate	42	71.48	8.74
4.	Discipline	Arts	106	71.22	10.04
		Science	35	70.20	9.19
5.	Locality	Rural	107	71.56	9.78
		Urban	34	70.40	9.20

As table-1 shows that, the mean value of the College Students on Social Media Activities in Employability Skills score was 70.96 with the standard deviation of 10.14. The maximum score of Employability Skills scale score is 96. Hence, Social Media Activities in Employability Skills among college Students is high. Therefore, the hypothesis is accepted.

Table -2: Significant difference between the mean scores of Social Media Activities of college students with respect to gender

Variable	Gender	N	Mean	SD	't' value	Sig.
Employability Skills Score	Male	65	71.71	4.51	0.41	0.52
	Female	76	70.33	12.18		

* Not Significant at 0.05 level

It is inferred from the above table-2, that the calculated value of 't' 0.41 is lesser than table value at 0.05 level of significance. Therefore, there is no significant difference between the mean scores on Social Media Activities in Employability Skills Among College Students. Both male and female have similar level of Employability skills. Hence, the null hypothesis is accepted.

Table -3: Significant difference between the mean scores of Social Media Activities of college students with respect to Educational Qualification

Variable	Educational Qualification	N	Mean	SD	't' value	Sig.
Employability Skills Score	Under Graduate	99	70.75	10.42	1.06	0.30
	Post Graduate	42	71.48	8.74		

* Not Significant at 0.05 level

It is inferred from the above table-3, that the calculated value of 't' 1.06 is greater than table value at 0.05 level of significance. Therefore, there is a significant difference between the mean scores on Social Media Activities in Employability Skills Among College Students based on

their Educational Qualification. Under Graduate students are having more employability skills than Post Graduate students. Hence, the null hypothesis is rejected.

Table -4: Significant difference between the mean scores of Social Media Activities of college students with respect to discipline

Variable	Discipline	N	Mean	SD	't' value	Sig.
Employability Skills Score	Arts	106	71.22	10.04	0.001	1.16
	Science	35	70.20	9.19		

* Not Significant at 0.05 level

It is inferred from the above table-4, that the calculated value of 't' 0.001 is lesser than table value at 0.05 level of significance. Therefore, there is no significant difference between the mean scores on Social Media Activities in Employability Skills Among College Students with reference to their discipline. Both Arts and Science students have similar level of Employability skills. Hence, the null hypothesis is accepted.

Table -5: Significant difference between the mean scores of Social Media Activities of college students with respect to Locality

Variable	Locality	N	Mean	SD	't' value	Sig.
Employability Skills Score	Rural	107	71.56	9.78	.001	1.16
	Urban	34	70.40	9.20		

* Not Significant at 0.05 level

It is inferred from the above table-5, that the calculated value of 't' 0.001 is lesser than table value at 0.05 level of significance. Therefore, there is no significant difference between the mean scores on Social Media Activities in Employability Skills Among College Students with reference to their Locality. Both Rural and Urban have similar level of Employability skills. Hence, the null hypothesis is accepted.

Findings

Based on the analysis following findings are evolved.

- Social Media Activities in Employability Skills among college Students is high.
- Both Male and Female students have the same level of Employability skills.
- Under Graduate students are having more employability skills than Post Graduate students.
- Arts and Science students have similar level of Employability skills.
- Rural and Urban students have similar level of Employability skills.

Recommendations

According to the findings following recommendations are outlined.

- Post Graduate students need to be focus on their proper usage of Social media activities in-order to obtain their job.

- Recognising new strategies and develop Digital literacy activities through social media can enhance student's Employability opportunities.
- Essential to develop good rapport with professionals, alumni, and potential employers through networking can over-cross the student's professional network.
- Engaging in social activities like LinkedIn supports Individual's job opportunities and helpful to gain various insights regarding their job.

Conclusion

In the evolving landscape of social media, one should posses specific skills, related to their career development. As well as, they should aware of social media activities like Technological development, applications and its usage. Preferably, the college students should develop a strategy to utilize various social media tools like LinkedIn, Twitter, and Facebook for updating the industry trends. In this Techno-filled era, individuals can significantly build their employability prospects, with the proper utilization of social media activities.

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FOSTERING RESILIENCE THROUGH SOCIAL EMOTIONAL LEARNING AMONG HIGHER SECONDARY STUDENTS

K. Rashmi
Research Scholar, *NSS Training College, Ottapalam, Palakkad, Kerala*

Dr. K.P. Seema Menon
NSS Training College, Ottapalam, Palakkad, Kerala

Abstract

Every individual has different attitude towards the problems they face in life. Their attitude depends upon their ability to face and overcome the difficulties coming in their way. As students learn to navigate the challenges that arises during their transition period, it helps them up for life long success. Thus, fostering resilient behaviour is critical to student life. Senior students may be experiencing stressful condition like encountering obstacles, academic excellence and social demands. For students with resilient attitude it helps them to gear and adjust the obstacles that comes in their way. So, it becomes necessary to develop healthy resilience among senior students. Social-Emotional learning is a process of developing certain skills which help an individual to deal with the obstacles and challenges they face in all situations. This article discusses the role of social emotional learning and resilience development through the same.
Keywords: *Resilience, Social, Emotional Learning, Higher Secondary Students*

Introduction

One of the most challenging phases in the school life is when the students are in their higher secondary classes. The students face many challenges like arguments among their peers, dismaying study, learning disarray chronic health conditions and so on. The students in higher classes experience toilsome situations at some point in their school life, both academically and also socially, such as difference of opinion with teachers or parents, competitiveness with friends etc. A sentiment of disturbance arises in them when something doesn't go their way, they may get frustrated and thus, it becomes necessary to build positive approach in them. A motivated approach for adapting well with the situations and dealing affectively with stress thus becomes vital. Resilience, will help them with these challenges, since it is the extent to adapt well, when faced with difficulties or stress. It thus, helps students to prevent negative psychological effects of tough experiences. Resilience can be considered fundamental for student detention and is helps to build positive approach among them. The support should be given to explore on effective factors that confer to adolescent resilience. Resilient attitude help students to acquire skills for life that help them acquire with and control challenging situations and events that are unlikely, inevitable in life. It is observed that resilient students can recover from setbacks and retrieve their lives more quickly. Resilient people exhibit determination and motivation to face difficulties coming in their way and they sustain a positive mindset and confidence to persevere.

Every person approaches life's challenges with a different mindset. Their attitude is contingent upon their capacity to confront and surmount the challenges that confront them. As students learn to navigate the challenges that arises during their transition period, it helps them

up for life long success. Every individual experience a fascinating and complex metamorphosis during adolescence as their transition from childhood to adulthood. The difficulties they encounter during this time should be properly considered, so it is crucial that parents, educators, and medical professionals work together to ease their transition.

Compared to past generations, students now confront a new set of problems in the competitive global marketplace. These challenges include easy access to technology, improved lifestyle options, and nuclear families that allow for greater freedom of choice. These advantages alone are the main cause of the difficulties experienced by today's teenagers. Students frequently attribute their psychological distress to the stress of doing successfully in their academic and professional endeavours. The pursuit of academic brilliance and professional skills is not limited to students alone, but often extends to parents, so intensifying the pressure on students. An additional feature that has become an integral component of this generation is the pervasive utilisation of the internet. Technology has emerged as a potent instrument for individuals to cultivate their curiosity, establish connections, and foster relationships.

The fear of failures and the associated stress related to higher secondary students have always been a matter of discussion and to decrease the stress among the student's alternate methods and researches have been done. The well fare and resilient behaviour are essential in hindering and reducing the severity of mental health problems. On providing students with managing skills and protective behaviour can be helpful to them to react positively to hurdles in life, allowing significant mental, social and academic success. Resilience can be defined as a set of attributes that stimulates a process of successful adjustment and transformation in spite of risk and hardship. Attaining mental health incorporating its social intellectual and living aspects is considered one of the greatest challenges faced by the societies. Resilient Behaviour is strongly linked with mental health in students and deserves a more important role in research determinant programmes and regular clinical care.

Today in the ever-changing world, school is the place where students mingle with individuals who come from a range of different backgrounds, hold differing beliefs, and have unique capabilities. To describe these differences and considering all students on equal footing to succeed Social Emotional learning plays an important role as it aims to help students better understand their thoughts and emotions to become more self -aware be empathetic for people around them. Developing these qualities can help students become creative, conscious and humanitarian citizens even outside the classroom in the years ahead.

Review of Related Literature

Social emotional learning (SEL) is an approach that assist students to realize their emotions, deal with the every day challenges, and demonstrate empathy for others. These learned behaviours are effective for the students since it creates self-discipline, helps in responsible decision making create frameworks to achieve their goals, and build positive relationships with others. Thus, SEL concentrates on developing necessary life skills that contribute to overall well-being and mental health.

Ajakiri (2023) Resilience is promoted through social and emotional learning by giving importance to functional skills. Turan (2021) conducted a study on the relationship between social and emotional learning competencies and life satisfaction on 371 adolescents and study

suggested the inclusion of resilience activities in SEL programs to upgrade adolescents quality of life and overall wellbeing. Cahill (2020) suggest the role of SEL programmes in enhancing resilience behaviour, improving academic performance and strong bond between peer group and also improvement in teacher -student relation. Elmi (2020) revealed the practises in favour of social and emotional learning for engaging and enhancing the interest of students that foster social awareness and self- management to increase their overall performance. We can thus infer that Resilience and Social Emotional learning are interrelated and their connection is vital for developing well-being and positive outcomes in students.

Role of Social Emotional Learning

School students coming from different backgrounds faces challenges that can adversely affect their development. The challenges like isolation, mental health, economic hardship needs to be improved.

Social Emotional Learning is a pedagogical concept that focuses on developing a student education beyond the curriculum and into areas like emotions, positive relationship, goal setting and much more. It provides a basis for safe learning and enhances students' ability to succeed in life. Social Emotional learning plays a pivotal role in resilience building by giving importance to areas like self-awareness, self -regulation, problem solving and building relationship. Resilience is recognized as managing self. It changes at different levels of development and shifts according to the contexts faced by an individual. Resilience cannot be considered as a character trait and is not an inborn character of an individual, but can be considered as a development process, mostly shaped by students experience and relationship. The actions that may intimidate resilient behaviours comprise arriving at an earlier conclusion, taking issues personally, thinking negatively when an emergency situation arises or overthinking and thus, allowing sentiments to dominate rational thinking. Every student will encounter such difficulties in their life either in their family environment or may be some unpleasant events from school environment which leads to negative life outcomes. But that doesn't mean every child exposed to negative experience suffer poor outcomes. So, it becomes very essential to develop strategies and motivate students so, that they don't get discouraged and feel low. Thus, in building resilience through SEL schools can take several steps like integrating curriculum, making sure that students get time to develop the essential skills. Programmes like mental health support, leadership, extracurricular activities should be encouraged.

Conclusion

The need for developing resilience is essential in higher secondary students because it leads to the development of a sense of responsibility and faith on themselves. When students foster resilience, they are adjustable, have more confidence, affinity towards their peer group and manage their emotions and behaviours. Thus, the need of Resilience and its development among senior secondary students becomes very much essential for their growth and development. A resilient student group can generate a strong and healthy school environment. Fostering resilience in students through social emotional learning is an important step to develop self-disclosure skills so that they can express their emotions and feelings to reach out for support at the needed hour. A caring and loving relationship with their teachers can

increase their positivity. They should be taught to set practical and attainable goals. Family environment and school environment should be such that intrinsic motivation should be given rather than emphasizing on their failure and negative behaviours. By equipping theses students with social and emotional learning the students mind set can increase their resiliency and thus, it becomes necessary to provide guidance, necessary advice and unconditional love to help them cope up and face the difficulties coming in their way and making them more resilient.

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KARUMUTHU THIAGARAJAR CHETTIAR MEMORIAL LIBRARY - A CASE STUDY

Manika Prakash. S
Student of Thiagarar College of Preceptors, (Aided), Madurai

Abstract

The Karumuthu Thiagarajar Chettiyar Memorial Library (TCP) at Thiagarajar College of Preceptors (TCP) in Madurai is a vital resource for the academic community. This case study examines the history, offerings, and significance of the library, offering insight into its transformation from a small, antiquated establishment to a state-of-the-art, well-resourced facility. The study looks at how the library can help with research, teaching, and learning while highlighting how committed it is to providing excellent services and resources to meet the diverse needs of its patrons. Through a thorough evaluation of the literature and in-person interviews with librarian and student teachers of TCP., the study provides valuable information about the operations of the library, its challenges, and its potential for improvement.

Keywords: *Library Usage, Library, B.Ed. College Library, Librarian, Library Staff*

1. Introduction

Commencing in 1956, the TCP (Thiagarajar College of Preceptors) Library was founded in tandem with the college. Dedicated to the memory of the institution's founder, industrialist and philanthropist Karumuttu Thiagarajan Chettiar, the library began its existence with a small collection of books provided by Chettiar and his companions. The library's collection of about volumes, journals, and educational materials is an amazing collection that has grown significantly over the years. This library serves as an invaluable resource for TCP faculty and students, giving them access to a wide range of educational resources. Textbooks, reference books, scholarly publications from a range of subjects, and academic periodicals are among them. The library serves a wide range of academic interests with its vast collection of books on topics from the scientific sciences, social sciences, and humanities. The TCP Library is distinguished by its total automation and digitization, which has made it possible for resources to be found and retrieved via the library's website with ease. This technical innovation makes it possible for teachers and students to easily access the vast amount of information included in the library's collection. The library also provides easy-to-use services including printing, photocopying, and book renting, which improves the overall experience for its users. Both teachers and students will find themselves in a vibrant, friendly environment that promotes learning and study within the walls of the TCP Library. The TCP Library is a modern, well-equipped facility that has 22,230 books, 15 periodicals, 2 online databases, 331 back volumes, 1,047 books in the book bank, 175 audiovisual resources, 242 reference books, 43 encyclopedias, and 31 dictionaries, among other impressive materials. It can accommodate 60 people for seating. Its steadfast dedication is to providing its user community with the best resources and services possible, making sure that instructors and students alike have access to the information and assistance they require for their academic pursuits.

2. Karumuthu Thiagarajar Chettiar Memorial Library

The Karumuthu Thiagarajar Chettiyar Memorial Library (TCP) in Madurai, India, has been a vital resource for academics since its relocation in 1960. The library has undergone several milestones, including the establishment of subscriptions to educational journals and magazines in 1970, automation efforts in the 1980s, and the launch of the library's official website in the 1990s. By 2010, the library had successfully completed its digitization initiative. The library offers high-quality resources and efficient services, with staff and students using it extensively for reference and research purposes. The library is partially automated using Rovan automation software. Dr. N Sundar, the Librarian at Thiagarajar College of Preceptors, has a impressive record of publications, authored by him from 2013 to 2023. He has received numerous awards for his contributions in the field, including a Google Scholar profile with 4 citations in 2018, and co-authored 18 publications. Dr. Sundar has extensive experience in library and information science, having held various positions in the United Arab Emirates, including a Ph.D. from Manonmaniam Sundaranar University, an M.L.I.Sc from Madurai Kamaraj University, and a B.Sc from Madurai Kamraj University. He is a member of the Indian Library Association and holds a life membership.

2.1 Library's Vision

Ensuring that the TCP user community has access to the information they need to succeed in their academic and professional pursuits.

2.2 Library's Mission

Supporting lifelong learning by providing users with access to accurate and timely information resources.

2.3 Goal & Objectives of the Library

1. Offer comprehensive and high-quality information resources to meet the academic needs of college users.
2. Provide timely and relevant information access to the right users at the right time.
3. Optimize the use of available information resources.
4. Maximize user satisfaction with information resources and services

2.4 Building

The library is located on the left hand side of the second floor of the main campus of the college

2.5 Library's Collection

The library offers a diverse range of collections, including:

1. Online Databases, Periodicals, and Newspapers
2. Dictionaries
3. Encyclopedias
4. School Internship Research Reports
5. Theses/Dissertations
6. Audio-Video (AV Resources)
7. Books Authored by Thiru T. Manickavasagam Chettiar

2.6 Open Educational Resources and Digital Learning

Under the category of Open Educational Resources and Digital Learning, there are several valuable resources listed on the website, including:

1. SWAYAM Online Courses
2. UG/PG MOOCs
3. e-PG Pathshala (offering 77 PG Subjects)
4. e-Content Courseware (covering 87 UG Subjects)
5. SWAYAM Prabha DTH Platform
6. CEC-UGC YouTube Channel

2.7 Library Website

Library has its own dedicated web link (https://sites.google.com/view/librarytcp/) using good sites and listed available electronic resources for the outside access. This can be accessed through the college website also.

1. DELNET
2. N-List
3. Shodhganga (Indian Theses digital repository), etc.

2.8 Open Educational Journals

Library identified open educational journals related to education field and listed separately for the user access.

1. Online International Interdisciplinary Research Journal (UGC Listed)
2. Academia Journal of Educational Research (AJER)
3. IOSR Journal of Research & Method in Education (IOSR-JRME)
4. Evolution: Education and Outreach (SCOPUS indexed)
5. European Journal of Futures Research (SCOPUS indexed)
6. Large-scale Assessments in Education (SCOPUS indexed)
7. Asian Journal of Distance Education (AsianJDE)
8. Australasian Journal of Educational Technology (AJET)
9. Brock Education: A Journal of Educational Research and Practice
10. Annual Review of Education, Communication, and Language Sciences (ARECLS) from Newcastle University, U.K
11. Open Journal of Philosophy (Web of Science – Clarivate Analytics)
12. Creative Education (Web of Science – Clarivate Analytics)
13. International Education Studies
14. International Journal of Education
15. International Journal of Education and Development using Information and Communication Technology (IJEDICT)
16. International Journal of Education Policy and Leadership (Virginia, USA)
17. International Journal of Higher Education (IJHE) (SCOPUS indexed)
18. International Journal of Research Studies in Educational Technology (IJRSET)

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3. Review of Literature

Sickinger-Menard (2005) examines the general worth and function of academic libraries in the twenty-first century on a larger scale. Sickinger-Menard poses important queries regarding the fundamental requirements that libraries ought to try to fulfill. In the digital age, Sidorko and *Yang (2009*) talk about matching user preferences with websites and library services. *Tenopir et al. (2013a, 2013b)* examine how social media and digital resources influence academic readers' behaviors.

Weiner (2005) concludes by examining the question of whether new user-centered measurements are required or if existing metrics, such as collection volumes, still truly reflect library quality and impact in the contemporary setting. This body of work offers a multifaceted view of how academic libraries are changing, trying to prove their worth, and hoping to promote active learning with improved materials, services, and teacher partnerships. Numerous studies have been conducted on the contribution academic libraries provide to student learning and participation. Through a large-scale study*, Kuh and Gonyea (2003)* investigated this relationship and discovered that students who use libraries more frequently are typically more engaged in their studies and get more out of their college experience. Their research emphasizes how important libraries are for more than just giving people access to resources. Numerous studies look at the ways that academic libraries directly improve learning and information literacy. Case studies of libraries working with academics to include information skills training into curriculum are provided by *Mallon (2013). Mirtz (2010)* examines how academic library websites present and convey concepts related to research and education using the metaphor theory.

4. Needs and Significance

The TCP Library is a priceless tool for promoting student learning and engagement due to its wealth of instructional materials and capacity to foster a supportive learning environment. Understanding the needs and desires of its users is essential to the library's ability to fulfill its mission of encouraging lifelong learning and academic success. This case study aims to identify areas that require improvement and offer useful recommendations for expanding the library's resources in order to maximize its impact on students' learning and academic achievement.

5. Objectives of the Study

The primary objectives of this study are to:

1. Provide an in-depth analysis of the resources, services, and operations of the TCP Library.
2. Determine the issues facing the library and the areas that require development.
3. Offer recommendations on how to enhance the library's ability to support students' learning and academic development.
4. Contribute to the body of knowledge in library science by offering viewpoints on how academic libraries could improve instruction and student participation.

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6. Methodology

This study employs an interview-based methodology, integrating a thorough review of the literature with in-depth interviews with student teachers and the librarian at TCP. While the literature review provides a theoretical framework for understanding how academic libraries support student learning and engagement, the interviews aim to extract information on the workings, challenges, and potential growth areas of the library.

7. Research Method

The in-person interviews are arranged according to significant themes including library services, user expectations, and regions in need of development. By asking open-ended questions, participants are encouraged to freely share their thoughts and experiences.

8. Delimitations of the Study

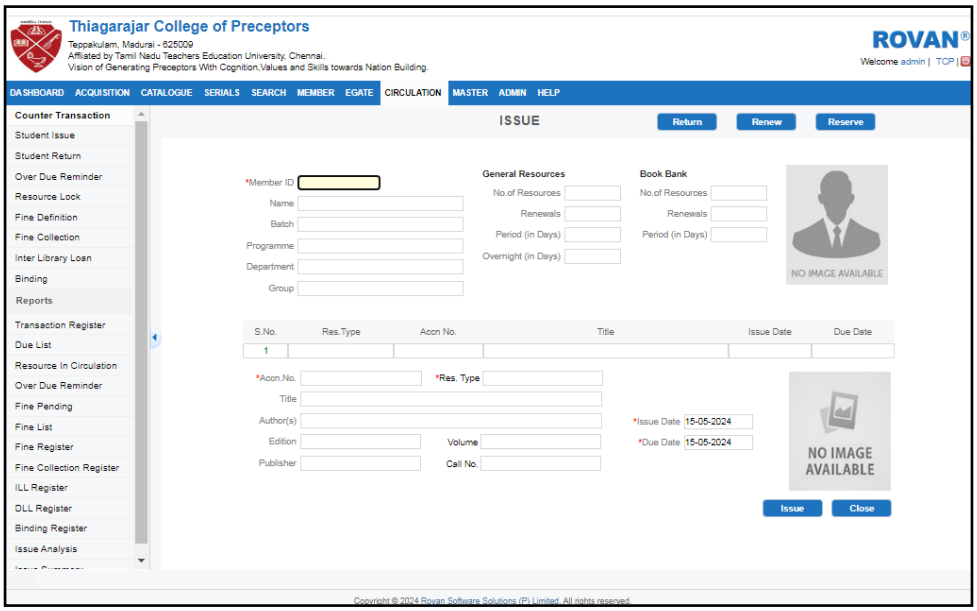
This study's exclusive focus is the TCP Library at Thiagarajar College of Preceptors in Madurai; its findings may not generalize to other academic libraries. Additionally, the study relies primarily on self-reported data from interviews, which may introduce bias. Despite these shortcomings, the study's conclusions offer useful knowledge regarding the TCP Library's operations and challenges, along with recommendations for improvement.

9. Library Features

9.1 Automation

The library is partially automated with ROVAN Software System. Users can access the library catalogue through the web. They can check/do the following activities themselves

1. Simple and advanced Search for identifying resources
2. Borrowed items in hand
3. Circulation History
4. Books can be reserved



9.2 Question Bank

The librarian diligently collects and organizes all the question papers from previous university examinations, making them available to student-teachers.

9.3 Newspaper Clippings

The librarian reviews the newspapers and compiles a collection of pertinent news items related to education, employment opportunities, socioeconomic issues, and current affairs. The articles are then displayed on the notice board and organized in a systematic manner.

9.4 Electronic resources

The College library has digitized its collection, providing student-teachers with access to electronic resources such as N-List and Delnet Consortium on three computers. The library also offers internet and Wi-Fi access to its users. Digital repository is the unique electronic services provided by the library that can be accessed from the following link https://fliphtml5.com/bookcase/udiun

9.5 Library Record

All student teachers keep library records in which they summarize the main points of the books they read.

10. Circulation Policy

Patron categories and circulation policies:

10.1 For students,

1. Book lending limits for students: 5 books for 2 weeks.
2. Eligibility and borrowing limits for students at a single book bank for a return period of two weeks,
3. Category of borrower: Students

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4. Circulations limits: 5 book
5. Return period: 2 weeks
6. Classification of borrowers and borrowing restrictions applicable to students using reference and textbook materials for reference purposes exclusively.
7. Student borrower categories and limitations on borrowing, specifically pertaining to the borrowing of 2 periodicals (magazines/journals) with back issues, allowing for a one-week borrowing period.
8. Borrower categorization and borrowing constraints applicable to students for reference purposes regarding AV Resources, including CDs and DVDs.

10.2 For staff's,

1. Book lending limits for staffs: 25 books for full academic year
2. Classification of borrowers and borrowing restrictions applicable to staff's using reference and textbook materials for reference purposes exclusively.
3. Staff's borrower categories and limitations on borrowing, specifically pertaining to the borrowing of 2 periodicals (magazines/journals) with back issues, allowing for a one-week borrowing period.
4. Categorization of borrowers and lending limitations relevant to staff members, allowing a one-week borrowing period for AV resources, such as CDs and DVD's

10.3 For Admin Staff,

1. The borrowing restrictions for administrative staff members entail a maximum of 3 books with a lending period of 30 days each.
2. Categorization of borrowers and borrowing limits that apply to admin staff members using reference and textbook materials solely for reference purposes.
3. The borrower classifications for administrative staff members and the associated borrowing restrictions include the ability to borrow 2 periodicals (magazines/journals), including back issues, for a duration of one week.
4. Classification of borrowers and borrowing limitations that are in place for administrative staff members when it comes to utilizing AV resources such as CDs and DVDs for reference purposes.

10.4 Reservation

1. Only items that are already out on loan can be placed on hold.
2. You will be notified by email when the items you have placed on hold are available for pickup
3. If you do not pick up your reserved items within 24 hours of being notified that they are available, your reservation will be canceled.

10.5 Return

Resources should be returned before or on the due date listed on the due date slip.

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10.5 Renewal

1. Books can be extended for another 14 days, twice.
2. Journals and audiovisual resources cannot be extended. (Audiovisual resources are available for checkout.)
3. Resources cannot be extended if they have been reserved by another patron

10.6 Overdue fines

Any borrower who fails to renew or return borrowed materials by the due date must pay a fine. The fine amount is calculated based on the type of item and the number of days it is overdue. The following table shows the fine rates for different types of items:

Item type	Fine per day
Books	Rs. 1
Periodicals	Rs. 1
AV resources	Rs. 1
Recalled items	Rs. 2

1. For example, if a borrower returns a book that is 3 days overdue, they will be fined Rs. 3.
2. Please note that these are just general fine rates. Some libraries may have different rates, so it is always best to check with your local library.

10.8 Lost or damaged resources

Borrowers are responsible for replacing lost or damaged resources at their own expense within 30 days. If a borrower fails to do so, the library will purchase a replacement item and charge the borrower the actual cost, plus a 20-30% surcharge for shipping and handling. The surcharge amount will vary depending on the type of resource.

10.9 Copyright

The library follows the fair use doctrine, which allows for the photocopying of up to 10% of a copyrighted work. However, the library does not allow the photocopying of entire books, journals, or other published works. The library's collection does not include any illegally photocopied materials.

11. Extension Services

11.1 Library Activities

The Karumuthu Thiagarajar Chettiyar Memorial Library gives a motivational award to Maragathavalli P, the Best Library User Award 2021-2023, to encourage other students to use library resources effectively. To provide value-added education, the Karumuttu Thiagarajar Chettiar Memorial Library staff coordinates a certificate course in Library Management (CLM). The main goal of the course is to learn about libraries and their overall administrative functions. Both theoretical and practical sessions were held on essential library tasks, including circulation, technical processing (cataloguing and classification), stock maintenance, and general library administration. The course was offered in two phases:

1. Phase I: November 2022 to February 2023, with 57 participants.
2. Phase II: May to July 2023, with 62 participants.

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11.2 Readers Club Activities

The Readers Club is dedicated to fostering lifelong learning and reading culture among the TCP user community. In addition to its regular activities, the library also hosts a variety of events to promote literacy and information literacy, such as:

1. Book reviews
2. Guest speaker series
3. Library visits
4. Information literacy programs

11.3 Book Review Sessions at Karumuttu Thiagarajar Chettiar Memorial Library

The Karumuttu Thiagarajar Chettiar Memorial Library organizes regular book review sessions for first-year students during library hours in the academic year 2022-23. These sessions are aimed at motivating students to read and to introduce them to a variety of books. The Karumuttu Thiagarajar Chettiar Memorial Library offers book review sessions to first-year students during library hours in the academic year 2022-23. These sessions are designed to encourage students to read and to introduce them to a wide range of books.

11.3.1 Book review series

Book review series are usually conducted during the library hours for the first year students by the faculty members. Following activities conducted during the academic year 2022-23.

1. Dr. V. Geetha, an Assistant Professor of Education, reviewed the book "Selling Successfully" on July 28, 2022.
2. Dr. R. Kohila Devi, an Assistant Professor of Education, reviewed the book "Inclusive Education in the Current Scenario" on July 25, 2022.
3. On July 26, 2023, the Readers Club hosted a book review of "Rich Dad Poor Dad" by Assistant Professor of Education Dr. P. Sophia Mesalina.
4. Assistant Professor of English Ms. R. Arthy reviewed the book "You Can Win" on July 27, 2022, at the Thiagarajar College of Preceptors.

11.4 Guest speaker series

On November 19, 2022, at 1:45 PM, the Karumuttu Thiagarajar Chettiar Memorial Library organized a Guest Speaker Series-1 event as part of its Readers Club Activity in celebration of National Library Week 2022. The chief guest, Dr. S. Venkatesh, Assistant Professor of English at Madura College, Madurai, spoke to first-year students on the topic "Avoid Avoidable Mistakes in English." The informative session was well-received by the students, who actively participated.

11.5 Visits

In 2023, our faculty members attended two book fairs in Madurai, India. On September 28-30, they visited the Madurai Book Fair at Thallakulam and purchased 114 books for Rs. 14,932. On March 12, a few of our faculty members visited the Used Books Factory at Raja Muthiah Mandram and purchased 32 books for Rs. 2,999.

11.6 Role model selection and admired reading

The library hour includes admired reading and role model selection activities. Students are given the chance to share their admired readings with other students, which motivates others to read those books. The library directly and indirectly promotes reading habits by conducting such events among the student community. Students are asked to choose a role model and explain their selection, as well as the qualities of the role model that appealed to them.

11.6.1 The library's role in promoting reading

The library organizes a special hour during which students can share their favourite books with others and choose a role model. This activity motivates students to read new books and learn about inspirational people. The library also promotes reading habits indirectly by providing students with access to a wide variety of books and resources. Students can find books on any topic they are interested in, and the library staff is always happy to help them find what they need.

12. Information Literacy Program

Readers' Club Information Literacy Program conducted by a renowned librarian about the Online Database Training on DELNET and N-List in beginning of every academic year proactively. It is organized for first-year students during library hours. The program provides hands-on training on using online databases such as Delnet and N-List, the library website, and other open educational resources.

13. Library working hours

The library is open from 9am to 5.30pm on Monday to Friday, and from 9am to 4pm on Saturday. It is closed on the second Saturday of the month and on public holidays.

14. Library report

Library publishes its annual report every year which includes budgets against purchases, circulation statistics

The library's allocation of its budget for the academic year 2022-2023 was as follows:

1. The library spent 22% of its budget on access to online databases, such as N-List and DELNET, which provide access to scholarly journals, articles, and books.
2. The library spent 59% of its budget on purchasing 231 unique book titles, totaling 293 copies.
3. The library spent 19% of its budget on other resources, such as periodicals (journals and magazines), library automation software AMC (annual maintenance contract), and stationery items.

14.1 Library Circulation Report (2022-2023)

1. December 2022 saw the highest number of book checkouts, check-ins, and renewals (921 total).
2. Overall circulation for the year 2022-2023 was 6,063.

3. In response to student requests, the library committee increased the borrowing limit from 3 to 5 books.

14.1.1 Circulation Desk Report,

1. Check-Out: 2,741
2. Check-In: 2,759
3. Renewal: 563

15. Annual Circulation

Circulation by Year and Circulation Count:

Table 1

2022-23	2021-22	2020-21	2019-20	2018-19
6,063	6,396	1,081	6,653	6,305

Table 1 indicates the year wise circulation report from 2019 to 2023.
Circulation surpassed 6,000 in the year 2022-23.

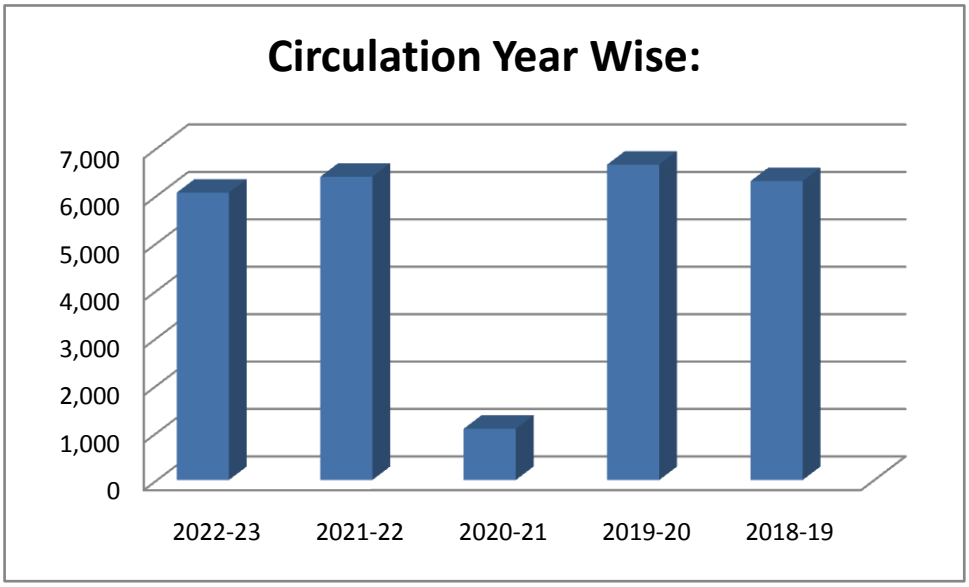

Figure 1 depicts the year wise circulation report from 2019 to 2023

16. Budget

Budget breakdown (2022-23):

Under "Resources" and "Amount Spent," the allocation and expenditure respectively are as follows:

1. Books: 52,714
2. Periodicals: 11,134
3. Online Databases: 19,470
4. Library Software: 3,000
5. Library Stationery: 2,397
6. The cumulative total amounts to 88,715.

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17. Findings

The study's findings demonstrate both the extent to which the TCP Library has aided student participation and learning as well as areas for future development, such as the enhancement of digital materials and the simplification of user services. Among the suggestions are spending money on online databases, improving circulation policies, and stepping up outreach programs to inform teachers and students about the resources offered by libraries.

18. Suggestions

1. In light of the findings, some suggestions are offered to enhance the TCP Library's ability to support student learning and academic success. Increasing investments in digital resources and online databases is one way to adapt to the evolving needs of customers.
2. Simplifying circulation policies and procedures to improve borrower comfort and accessibility.
3. Increasing user participation through targeted outreach programs such as marketing campaigns, welcome parties, and training sessions.
4. Faculty-staff collaboration will be enhanced in order to include information literacy instruction into the curriculum and promote the use of library resources in teaching and research.

19. Conclusion

The TCP Library is a valuable resource for the teaching, learning, and research activities of Thiagarajar College of Preceptors. By identifying areas for improvement and implementing specific recommendations, the library can further increase its effectiveness in meeting the diverse needs of its user community. This study highlights how important it is to continue assessing and enhancing academic libraries in the digital age to ensure their continued relevance and influence.

Acknowledgement

I would like to express my profound gratitude to the distinguished librarian Dr. N. Sundar, whose extensive advice, helpful criticism, and insightful recommendations were essential to the accomplishment of this work.

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A PERCEPTION TOWARDS EMOTIONAL INTELLIGENCE AMONG PRE-SERVICE TEACHERS

A. Gangadharan
B.Ed Student Teacher, Thiagarajar College of Preceptors
Madurai District, Tamil Nadu

K. Thangavel
Assistant Professor of Education, Thiagarajar College of Preceptors,
Madurai District,Tamil Nadu, India

Abstract

Emotional intelligence is recognising, communicating, comprehending, regulating, and utilising feelings. EI significantly affects relationships, work/academic performance, and health. Emotional intelligence (EI) has emerged as a critical competency for effective teaching practices, enabling educators to understand and manage their own emotions, as well as those of their students. The results revealed that pre-service teachers generally recognised the significance of emotional intelligence in the teaching profession. They demonstrated a strong understanding of the key components of EI, including self-awareness, self-regulation, social awareness, relationship management and motivation. However, the study also identified areas where pre-service teachers perceived challenges in developing and applying emotional intelligence skills, such as managing stress and emotions in demanding classroom situations. So, the present study tried to find out the perception of emotional intelligence among student teachers, who are preparing for their future roles as educators. The researcher opted survey method and collected data from 68 samples, interpreted t-test and F-test. The results revealed that there is no significant difference among the demographic variables and perception of emotional intelligence among student teachers.

Keywords*: Perception, Emotional Intelligence, Dimensions and Pre-service teachers*

Introduction

In the field of education, teachers with high emotional intelligence are better equipped to create positive classroom environments, build strong relationships with students, and effectively manage the social and emotional aspects of teaching and learning. Student teachers, as future educators, play a pivotal role in shaping the next generation of learners. Their perceptions and understanding of emotional intelligence can significantly influence their teaching practices, classroom management strategies, and overall effectiveness as educators. However, little is known about how student teachers perceive and value emotional intelligence, and how teacher education programs can support the development of these crucial skills. One can examine emotion from both a psychological and physiological perspective. From a physiological perspective, it is a mental state that causes bodily manifestations such as elevated heart rate, altered pulse rate, perspiration, etc. Psychologically speaking, it is also a state of elation or excitement accompanied by intense feelings; the main emotional categories are surprise, disgust, embarrassment, happiness, love, rage, depression, and worry (Singh, 2006).

More attention is being paid to emotional intelligence in the scientific and lay domains of behavioural science compared to traditional, deeply ingrained theoretical frameworks like intelligent quotient and personality (Berrocal and Extremera, 2006). The landscape of education is shifting. While content knowledge remains undeniably crucial, the ability to

navigate the complexities of human emotions within the classroom is increasingly recognized as an essential skill for educators. This quality, often referred to as emotional intelligence (EI), encompasses self-awareness, self-regulation, motivation, empathy, and social skills (Goleman, 1995). The traditional focus on content knowledge in teacher education is undergoing a necessary evolution. Educators today face a dynamic classroom environment where fostering social-emotional learning alongside academic achievement is paramount. This shift highlights the critical role of emotional intelligence (EI) in effective teaching.

Perception is the foundation upon which emotional intelligence is built. It acts as the gateway to understanding and navigating the complexities of emotion. Self-awareness acts as the bedrock of EI. It involves accurately perceiving your own emotions, strengths, weaknesses, and triggers. This foundation is built through self-perception, which relies on interpreting internal cues like bodily sensations, thoughts, and emotions. Self-regulation utilizes the self-awareness foundation to manage your emotions effectively. Social awareness builds upon self-awareness by focusing on understanding the emotions of others. This requires strong social perception, the ability to pick up on non-verbal cues like facial expressions, body language, and tone of voice to accurately perceive someone's emotional state. Relationship management means by understanding your own emotions and those of others, you can effectively communicate, empathize, and navigate conflict constructively. Motivation is the driving force that propels us towards achieving our goals. Emotional intelligence influences motivation by helping you manage emotions like frustration or discouragement that can hinder progress.

Need and Significance

Emotional intelligence is paramount for student teachers as they prepare to enter the multifaceted and emotionally demanding field of education. With strong emotional intelligence skills, they can effectively manage classroom dynamics, build positive relationships with students, model empathy and self-regulation, and create conducive learning environments. Moreover, emotionally intelligent student teachers are better equipped to navigate the social and emotional challenges of teaching, cope with stress, and maintain their overall well-being. As future educators responsible for nurturing the holistic development of students, they must possess the ability to understand and regulate their own emotions, as well as recognize and respond to the emotional needs of their students. By prioritizing emotional intelligence in teacher education programs, institutions can empower student teachers with the necessary tools to foster social-emotional learning, communicate effectively, and serve as mentors and role models, ultimately enhancing the quality of education and promoting the personal and academic growth of their students.

Objectives of the Study

1. To identify the level of perception towards emotional intelligence among pre-service teachers.
2. To construct and validate a new scale namely, A Perception towards Emotional Intelligence among Pre-Service Teachers.
3. To promote the significance of emotional intelligence among student teachers.

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Hypotheses

1. There is no significant difference between perception towards EI and Gender.
2. There is no significant difference between perception towards EI and Locality.
3. There is no significant difference between perception towards EI and Stream.
4. There is no significant difference between perception towards EI and type of family.
5. There is no significant difference between perception towards EI and type of personality.
6. There is no significant difference between perception towards EI and the Emotional spectrum among I-Year, B.Ed student teachers of Thiagarajar College of Preceptors in Madurai District, Tamil Nadu.

Sample

A sample of 68 I-Year, B.Ed student teachers of Thiagarajar College of Preceptors in Madurai District, Tamil Nadu.

Methodology of the Study

The normative survey method has been used in the present study.

Tools Used

The pilot study was conducted among I- Year, B.Ed student teachers of Thiagarajar College of Preceptors, Madurai District, Tamil Nadu. Random sampling technique has been used in the process of data collection. This tool is available to measure Emotional Intelligence and was constructed and validated by the investigators. A questionnaire about perception towards EI was created through Google Forms. Statistics were carried out using SPSS software.

Table 1 : Reliability and Validity Statistics

Cronbach's Alpha	No. of items
0.589	25

Out of 25 items, 17 items were selected and 8 items were rejected because Cronbach's Alpha is higher for those statements. After the item analysis process, the tool consists18 items on a five-point scale of strongly agree [5], agree [4], neutral [3], disagree [2] and strongly disagree [1] for positive statements and negative statement score is strongly agree [1], agree [2], neutral [3], disagree [4] and strongly disagree [5].

Reliability of the Tool

The term "reliability" refers to the consistency of a set of measures throughout the period. If a respondent gives a response to a particular item, for example, he or she is expected to give the same response to that item even if asked repeatedly. The consistency will be lost if he/she changes the response at the same moment. As a result, the researcher should frame the things in the tool in such a way that consistency and dependability are guaranteed. The researcher

used Cronbach's Alpha to determine dependability in the current investigation. The reliability is 0.589, which is satisfactory.

Validity of the Tool

Experts in the field of Education evaluated the content validity. The scale was given to the teaching faculties of Thiagarajar College of Preceptors, Madurai District, Tamil Nadu to test the validity of the items. Their suggestions and recommendations were taken into consideration and they agreed that the scale's items are valid and reliable for investigating the research aim and objectives. Therefore, it can be said that the scale used in the study possesses Content Validity. As the Scale contains items that seem related to the measured variables, the attitude Scale also possesses face validity. The intrinsic validity was found to be 0.767 and thus the validity of the tool was established.

Table 2: Independent Samples T-test between Gender and perception towards EI of Pre-Service Teachers

Gender	N	Mean	SD	df	t	p	Remarks
Male	8	84.37	3.96	66	0.299	0.209	NS p>0.05
Female	60	83.60	7.15	14.10			

Table 3: Independent Samples T-test between Locality and perception towards EI of Pre-Service Teachers

Locality	N	Mean	SD	df	t	p	Remarks
Urban	36	84.25	7.82	66	0.712	0.101	NS p>0.05
Rural	32	83.06	5.59	63.25			

Table 4: Independent Samples T-test between Stream and perception towards EI of Pre-Service Teachers

Stream	N	Mean	SD	df	t	p	Remarks
Arts	29	82.75	5.70	66	0.969	0.267	NS p>0.05
Science	39	84.38	7.57	65.98			

Table 5: Independent Samples T-test between Family and perception towards EI of Pre-Service Teachers

Family	N	Mean	SD	df	t	p	Remarks
Joint	14	83.35	5.55	66	0.204	0.603	NS p>0.05
Nuclear	54	83.77	7.18	25.529			

Table 6: F test among Personality and perception towards EI of Pre-Service Teachers

Group	Sum of Squares	Df	Mean square	F	Remarks
Between Groups	214.53	2	107.265	2.386	NS p>0.05
Within Groups	2921.98	65	44.954		
Total	3136.51	67			

Table 7: F test among Emotional spectrum and perception towards EI of Pre-Service Teachers

Group	Sum of Squares	df	Mean square	F	Remarks
Between Groups	101.09	2	50.546	1.082	NS P>0.05
Within Groups	3035.42	65	46.699		
Total	3136.51	67			

Findings

- Table 2 reveals that there is no significant difference between male and female (Gender) student teachers of Thiagarajar College of Preceptors, Madurai in their perception of emotional intelligence among student teachers; while comparing the mean scores of male (m=84.37) and female (m=83.60).
- Table 3 reveals that there is no significant difference between urban and rural (locality) student teachers of Thiagarajar College of Preceptors, Madurai in their perception of emotional intelligence among student teachers; while comparing the mean scores of urban (m=84.25) and rural (m= 83.06).
- Table 4 reveals that there is no significant difference between arts and science (Stream) of student teachers of Thiagarajar College of Preceptors, Madurai in their perception of emotional intelligence among student teachers; while comparing the mean scores of arts (m=82.75) and science (m=84.38).
- Table 5 reveals that there is no significant difference between joint and nuclear (Family) of student teachers of Thiagarajar College of Preceptors, Madurai in their perception of emotional intelligence among student teachers; while comparing the mean scores of joint (m=83.35) and nuclear (m=83.77).
- Table 6 reveals that there is no significant difference between personality and perception of emotional intelligence among student teachers.
- Table 7 reveals that there is no significant difference between the emotional spectrum and perception of emotional intelligence among student teachers.
- The above table (2 to 7) reveals that calculated 'p' values of the variables namely Gender, Locality, Stream, Family, Personality and Emotional spectrum are less than the p-value (0.05 at 5% level of significance). Hence the null hypotheses are accepted and inferred that there is no difference between the mean scores of these variables.

Conclusion

This study investigated the perceptions of emotional intelligence (EI) among pre-service teachers. The results did not reveal any significant differences in the scores between the tested variables. The Pre-service teachers have demonstrably different perceptions of emotional intelligence (EI) and the sample size is very low. High EI is linked to increased motivation and self-efficacy. Teachers who are confident in their ability to manage emotions and build relationships are more likely to persevere through challenges and be effective educators. Teachers with high EI can foster a supportive and positive learning environment where pupils feel safe to express themselves.

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INTEGRATING YOGA AND HEALTH EDUCATION FOR HOLISTIC WELL-BEING

T.Pavithra
B.Ed. (student teacher)
Thiagarajar College of Preceptors (Govt-aided)-Madurai, India

Abstract

In today's fast-paced world, promoting holistic well-being becomes increasingly crucial. This paper explores the synergy between yoga and health education, proposing their integration for a more comprehensive approach to health. We will delve into the philosophy of yoga, its various practices (asanas, pranayama, etc.), and their scientifically proven benefits for physical and mental health. We will then discuss the role of health education in empowering individuals with knowledge about healthy living practices. Finally, we will explore how these two disciplines can be effectively integrated within educational frameworks to equip individuals with the tools to cultivate lifelong well-being.
Keywords: *Yoga, health education, holistic well-being, physical and mental health, and living practice.*

Introduction

The concept of health has evolved beyond the mere absence of disease. The World Health Organization (WHO) defines health as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." To achieve this holistic well-being, a multifaceted approach is needed. Yoga, a Sanskrit term translating to "union," encompasses a holistic approach to well-being that integrates physical, mental, and spiritual aspects. With roots stretching back millennia in ancient India, yoga offers a vast repertoire of practices designed to cultivate self-awareness, discipline, and inner peace.

In recent decades, yoga has experienced a remarkable surge in popularity worldwide, attracting individuals from diverse backgrounds seeking to improve their health and well-being. This paper delves into the rich history of yoga, tracing its evolution from its early philosophical foundations to its contemporary adaptations. It explores the core practices of yoga, highlighting the significance of asana, pranayama, and meditation.

The paper then analyzes the growing body of scientific evidence that supports the numerous health benefits associated with yoga practice.

Finally, it proposes practical strategies for incorporating yoga principles and practices into health education programs, empowering individuals to take charge of their well-being. This paper proposes the integration of yoga and health education as a powerful strategy to empower individuals to manage their physical and mental health effectively.

The Historical Evolution of Yoga

The exact origins of yoga remain shrouded in the mists of time. Archaeological evidence suggests practices resembling yoga postures can be traced back to the Indus Valley Civilization (3300–1300 BCE). However, the foundational texts that shaped our understanding of yoga emerged much later.

1. The Pre-Classical Period (1100 BCE–200 CE)

The earliest philosophical roots of yoga are found in the Vedas, a collection of ancient Sanskrit texts dating back to 1500–500 BCE. These texts mention practices like Pranayama and meditation, emphasizing their role in achieving spiritual liberation. The Upanishads, philosophical commentaries on the Vedas composed between 800 and 600 BCE, further elaborated on the concept of the "self" (Atman) and its connection to the universal consciousness (Brahman). These concepts laid the groundwork for the theoretical framework of yoga.

2. The Classical Period (200 BCE–500 CE)

The Yoga Sutras of Patanjali, compiled around the 2nd century BCE, are considered the most influential text on yoga philosophy and practice. Patanjali's sutras, aphoristic verses outlining the "eight limbs of yoga" (Ashtaanga Yoga), provide a systematic framework for achieving liberation. These limbs include ethical principles (Yamas and Niyamas), Asana (physical postures), Pranayama (breath control), Pratyahara (withdrawal of the senses), Dharana (concentration), Dhyana (meditation), and Samadhi (enlightenment).

3. The Post-Classical Period (500 CE–1500 CE)

The post-classical period witnessed the emergence of various schools of yoga, each emphasizing specific aspects of Patanjali's eight limbs. Hatha yoga, focusing on physical postures and breathwork, gained prominence during this period. The text Hatha Yoga Pradipika, authored by Swatmarama around the 15th century, detailed various asanas and their purported benefits. Tantra yoga, another influential school, emphasized the use of rituals and mantras alongside physical postures.

4. Modern Yoga (19th Century–Present)

The 19th and 20th centuries saw the introduction of yoga to the West. Swami Vivekananda, a prominent Indian monk, played a pivotal role in popularizing yoga philosophy and practices in the Western world. In the late 20th century, yoga underwent a significant transformation, with a growing emphasis on its physical and mental health benefits. Today, various forms of yoga, such as Vinyasa yoga, Iyengar yoga, and Kundalini yoga, cater to diverse interests and fitness levels, making it accessible to a global audience.

Yoga: A Philosophy for Wholeness

Yoga, originating in ancient India, is a holistic system encompassing physical postures (asanas), breathing exercises (pranayama), meditation, and ethical principles. The word "yoga" comes from the Sanskrit word "yuj," which means "to yoke" or "to unite.". Yoga aims to unite the different aspects of the human being—physical, mental, emotional, and spiritual—leading to a state of balance and well-being.

The Science Behind the Practice

Yoga offers a wide range of benefits, supported by scientific research. Asanas (physical postures) improve flexibility, strength, and balance. Pranayama (breathing exercises) enhance lung capacity, reduce stress, and promote relaxation.

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Meditation cultivates focus, emotional regulation, and self-awareness. Studies have shown yoga to be effective in managing conditions like chronic pain, anxiety, depression, and cardiovascular diseases.

Health Education: Empowering Knowledge

Health education equips individuals with the knowledge, skills, and attitudes necessary to make informed choices about their health. It covers various aspects, including nutrition, physical activity, disease prevention, mental health awareness, and healthy relationships. Effective health education empowers individuals to take charge of their well-being and adopt healthy lifestyle practices.

Integrating Yoga and Health Education

The integration of yoga and health education presents a compelling opportunity for a more comprehensive approach to well-being. Here's how:

Enhancing Health Literacy: Yoga practices can be incorporated within health education classes to provide students with practical tools for stress management, relaxation, and physical activity.

Promoting Mind-Body Connection: Health education can be enriched by including discussions on the philosophy of yoga and its emphasis on the mind-body connection.

Creating Sustainable Habits: Integrating yoga into the curriculum can create a positive association with physical activity and mindfulness, encouraging students to adopt these practices in their daily lives.

Challenges and Opportunities

Traditional health education often faces challenges in:

Accessibility: reaching diverse populations with geographically dispersed communities.

Engagement: maintaining student interest and fostering active learning.

Personalization: adapting content to address individual needs and learning styles.

However, the digital age presents a plethora of opportunities:

Interactive platforms: Mobile apps, gamification, and online simulations can create engaging learning experiences.

Personalized learning: adaptive learning platforms can tailor content and pace to individual needs.

Accessibility: Digital resources can overcome geographical barriers and provide 24/7 access to information.

Conclusion

Yoga and health education, when combined, offer a powerful strategy for promoting holistic well-being. Integrating these disciplines within educational frameworks can equip individuals with the knowledge and tools to navigate the complexities of modern life and cultivate a lifetime of physical, mental, and emotional well-being.

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EMBRACING INQUIRY BASED LEARNING AND REAL WORLD APPLICATION

Thenmozhi S
Student Teacher,
Thiagarajar College of Preceptors, Madurai.

Abstract

In an era of rapid change and complexity, traditional teaching methods centered on passive learning are increasingly inadequate in preparing students for future challenges. Inquiry-based learning and realworld application emerge as powerful pedagogical strategies to revolutionize the educational experience. This paper explores the principles, benefits, and implementation of these approaches, highlighting their synergistic effects in fostering student engagement, skill development, and transferability of knowledge. Inquiry-based learning empowers students to drive their own learning through questioning, exploration, and discovery, cultivating essential skills such as critical thinking, problem-solving, and selfdirected learning. Real-world application connects classroom learning to authentic contexts, enabling students to apply knowledge to practical situations and develop vital skills like decision-making, collaboration, and adaptability. By combining inquiry-based learning and real-world application, educators can create transformative learning experiences that deeply engage students in meaningful explorations and authentic problem-solving. This integrated approach promotes interdisciplinary learning, enhances motivation, and equips students with the mindset and abilities to navigate future professional and personal challenges.The paper examines various implementation strategies, including project-based learning, case studies, simulations, field experiences, and problem-based learning, all of which involve inquiry practices and real-world application. It also addresses challenges such as teacher mindset shifts, addressing diverse learner needs, rethinking assessment, and resource considerations.Ultimately, embracing inquiry-based learning and real-world application empowers educators to transform the learning experience, fostering a love for exploration and discovery while equipping students with the inquiry mindset and real-world skills to navigate, contribute to, and thoughtfully shape the world around them.

Keywords: *Inquiry-based learning, real-world application, active learning, critical thinking, 21st-century skills.*

Introduction

In today's rapidly evolving world, traditional teaching methods that emphasize rote memorization and passive learning are becoming increasingly inadequate in preparing students for the challenges and opportunities they will face. Inquiry-based learning is a student-centered approach that encourages learners to take an active role in their education. Instead of passively receiving information from lectures or textbooks, students are empowered to drive their own learning experience through questioning, exploration, and discovery. The fundamental principle behind this approach is that learning should be fueled by curiosity, fostering a natural desire to uncover knowledge and seek answers.In an inquiry-based learning environment, students are guided to formulate their own questions, devise strategies for investigation, and actively engage in research and experimentation. They critically analyze information from various sources, synthesize their findings, and draw conclusions based on evidence. This process cultivates essential skills such as critical thinking, problem-solving, and self-directed learning, equipping students with the tools they need to thrive in an ever-changing world.Moreover, inquiry-based learning promotes a deeper understanding of subject matter by encouraging students to construct their own knowledge through direct experience and exploration. Rather than merely memorizing facts, learners develop a genuine appreciation for

the process of inquiry and a lifelong love for learning. This approach not only prepares students for academic success but also nurtures the mindset and skills necessary for navigating complex real-world challenges with confidence and resourcefulness.

Aims

- To explore the principles, benefits, and implementation strategies of inquiry-based learning and realworld application in educational settings.
- To highlight the synergistic effects of combining these two approaches in creating a transformative learning experience for students.
- To emphasize the importance of developing essential skills, such as critical thinking, problem-solving, communication, collaboration, and adaptability, in preparing students for future challenges and careers.
- To encourage educators to adopt innovative teaching methods that foster student engagement, interdisciplinary learning, and the ability to transfer knowledge across various contexts.

Objectives

- Define inquiry-based learning and real-world application, and discuss their key principles and underlying philosophies.
- Analyze the advantages and benefits of incorporating inquiry-based learning and real-world application in the classroom, including their impact on student engagement, motivation, and skill development.
- Examine various implementation strategies, such as project-based learning, case studies, simulations, field experiences, and problem-based learning, that integrate inquiry-based learning and real-world application.
- Identify and address potential challenges and considerations in implementing these approaches, such as teacher training, classroom management, assessment strategies, and resource allocation.
- Encourage educators to embrace a shift towards empowering students as active learners, fostering a love for exploration and discovery, and equipping them with the skills and mindset necessary to navigate and shape the world around them.

By providing a clear introduction, relevant keywords, well-defined aims, and specific objectives, this outline sets the stage for a comprehensive exploration of inquiry-based learning and real-world application, emphasizing their transformative potential in preparing students for success in an everchanging global landscape.

The Power of Real-World Application

Real-world application means connecting what students learn in the classroom to real life situations and practical contexts. This could involve analyzing real case studies, working on projects that simulate professional work, or addressing authentic community issues.There are several advantages to this approach. One is that it shows students how the material they are learning is useful and relevant outside of school. Another is that it develops skills students will need in future careers like problem-solving, decisionmaking, collaboration, adaptability, and

creativity.For example, if students are learning about environmental science, they could partner with a local organization to design solutions for sustainability challenges in their community. Not only would this deepen their science knowledge, but they would practice teamwork, research, data analysis, and proposing real plans - things they may do as environmental professionals.

Combining Inquiry and Real-World Learning

When inquiry-based learning and real-world application are combined, the impact is very powerful. Students are actively uncovering knowledge through their own investigations, and they are exploring topics in authentic, meaningful contexts.This makes learning much more engaging and motivating for students. When they see how what they are studying connects to real issues or careers they may want to pursue, they become more invested in the process.It also promotes interdisciplinary learning and the ability to transfer knowledge across different subjects. For example, a project examining water conservation would require understanding scientific concepts but also applying math skills, communicating findings, and considering economic and policy factors.Overall, this combined approach prepares students well for future professional and personal challenges that will require critical thinking, problem-solving across disciplines, self-directed learning, and adaptability.

Implementation Strategies

Implementing inquiry-based and real-world learning requires some shifts in traditional teaching methods. Teachers must take on more of a facilitator role, providing guidance while allowing students to take charge of their own explorations.

Shifting Roles for Teachers

Implementing inquiry-based and real-world learning requires teachers to change their roles. They must move from being lecturers to becoming facilitators. As facilitators, teachers guide the learning process instead of just delivering information. Their job is to create an environment where students can explore, ask questions, and drive their own learning experiences. This shift in role is crucial for fostering student-driven inquiry and real-world application.

Project-Based Learning Strategy

One key implementation strategy is project-based learning. In project-based learning, students work together over an extended time period. They investigate and respond to a real-world question or challenge. These projects are designed to match learning standards. But they also give students chances to explore authentic, real-life issues. Students develop practical solutions that could be used in the real world. Throughout the project, students do many inquiry practices. They ask questions, research topics, analyze data, and put together information to create conclusions or plans.

Case Studies and Simulations

Another powerful strategy uses case studies and simulations. Case studies present students with actual scenarios from the real world. Simulations create realistic situations students must respond to. Both allow students to apply what they've learned to analyze situations and make

decisions. These are just like tasks professionals face in their jobs. By working through cases and simulations, students deepen their content knowledge. But they also develop vital skills like critical thinking, decision-making, and problem-solving - the kinds of skills valued in the workforce.

Field Experiences

Field experiences are another way to connect classroom learning to the real world. Students go out into the community for these experiences. They might visit important sites, interact with experts and other stakeholders, or observe real-world situations firsthand. Activities could include site visits, guest speakers, internships, or service projects. Getting exposure to authentic professional contexts helps students truly understand the relevance of what they're studying. It can spark interest in potential career paths too.

Problem-Based Learning

Problem-based learning presents students with complex, open-ended problems. These problems are meant to mirror the ambiguous, messy challenges found in the real world. There is no single right answer. Students must collaboratively analyze the problem from many angles. They gather and evaluate relevant information to propose viable solutions, considering constraints and trade-offs. This process builds critical thinking, decision-making, collaboration, and the ability to apply knowledge across different disciplines.

Inquiry Practices Across Strategies

No matter which specific strategy is used, students engage in key inquiry practices. These include questioning, researching, data analysis, experimentation, and using evidence to form conclusions. Developing these inquiry habits and skills is vital for preparing students for future success.

Teacher Mindset Shift

While powerful, implementing inquiry-based and real-world learning is not easy. A big challenge is the mindset shift required of teachers. Going from a lecturer to a facilitator role means changing teaching styles, classroom management approaches, and assessment methods. Making this transition can be very difficult for educators.

Addressing Diverse Learner Needs

Another challenge lies in addressing the diverse abilities and learning needs of students. Because inquiry-based learning involves more self-directed exploration, some students may struggle with the independence required. Careful scaffolding and differentiation is crucial. Providing appropriate support and resources tailored to individual students is key for equitable participation.

Rethinking Assessment

Traditional tests focused on recalling content do not fully capture the deep learning that happens through inquiry and real-world application. Assessing skills like inquiry, problem-

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solving, and crossdisciplinary thinking is hard with standard tests. Teachers need performance-based assessments, portfolios, and self-evaluations to truly measure these skills.

Planning and Resources

Designing authentic, inquiry-based units is time-consuming. Teachers must research case studies, build community partnerships, find materials, and craft engaging prompts. Scheduling longer class periods may be necessary too. Basically, more planning and resources are required compared to traditional instruction. However, the payoff is richer, more relevant student learning.

Professional Support

Overcoming these challenges often requires professional development and support for teachers. Training on facilitating inquiry-based and real-world learning experiences is valuable. Collaboration between teachers to share strategies and materials is also helpful. Schools must allocate resources strategically to enable this shift.

Deeper Learning

Despite the hurdles, the investment in inquiry-based and real-world learning strategies is worthwhile. Students become deeply engaged explorers and problem-solvers. Their learning is meaningful and prepares them for an unpredictable future. With strategic implementation and support, schools can create transformative educational experiences. Students develop the inquiry mindset and real-world skills to navigate an ever-changing world.

Challenges and Considerations

While very powerful, facilitating inquiry-based, real-world learning is not without challenges. One is teachers shifting from being lecturers to facilitators and coaches of the learning process. This requires adjusting teaching styles but also classroom management and assessment strategies.Another challenge is addressing diverse abilities, learning needs, and styles among students. With more self-directed exploration, some students may struggle with the independence or open-endedness. Careful scaffolding and differentiation become important.Related to this is the issue of assessment. Skills like inquiry, problem-solving, and transferring knowledge across contexts are more difficult to measure than recalling content on tests. Performance-based assessments, portfolios, and self-evaluation become useful tools.Time and resources are also considerations. Designing authentic, inquiry-based units and experiences requires more planning and materials than traditional instruction. However, the investment often pays off through deeper, more engaging learning.

Advantages

Develops Critical Thinking and Problem-Solving Skills

One of the primary advantages of inquiry-based learning is that it develops students' critical thinking and problem-solving abilities. Through the process of questioning, investigating, and analyzing information, students learn to think critically, evaluate evidence, and synthesize findings to draw wellreasoned conclusions. They acquire the skills to tackle complex, open-ended problems, which are essential for success in the 21st century.

Fosters Self-Directed Learning and Intrinsic Motivation

Inquiry-based learning empowers students to take ownership of their learning journey. By allowing them to explore topics driven by their curiosity and formulate their own questions, this approach fosters a sense of autonomy and self-directed learning. As a result, students become intrinsically motivated to learn, cultivating a lifelong love for exploration and discovery.

Encourages Collaboration and Communication Skills

Inquiry-based learning often involves collaborative activities where students work together to investigate and solve problems. This process promotes the development of effective communication, teamwork, and interpersonal skills, which are highly valued in both academic and professional settings.

Promotes Deeper Understanding and Knowledge Retention

In contrast to traditional methods that emphasize rote memorization, inquiry-based learning encourages students to construct their own understanding through active engagement and exploration. This approach leads to deeper comprehension and better long-term retention of knowledge, as students connect new information to their existing knowledge and experiences.

Enhances Adaptability and Prepares Students for the Real World

By engaging in inquiry-based learning, students develop the ability to adapt to new situations, think critically, and solve complex problems – skills that are essential for success in an ever-changing world. This approach prepares students for the challenges they will face in their future academic pursuits, careers, and personal lives, equipping them to navigate and contribute to an unpredictable and rapidly evolving global landscape.

Overall, inquiry-based learning offers numerous advantages, including the development of critical thinking, problem-solving, self-directed learning, collaboration, communication, deeper understanding, and adaptability – all invaluable skills for thriving in the 21st century.

Discussion

This content presents a powerful argument for transforming education through inquiry-based learning and real-world application. It critiques traditional teaching methods focused on passive learning as inadequate for developing essential 21st century skills like critical thinking, problem-solving, and adaptability. Instead, it advocates for student-driven inquiry where learners construct their own knowledge through questioning, exploration, and analyzing evidence. Complementing this is connecting lessons to authentic, practical contexts beyond the classroom. Real-world application enhances engagement by showing relevance while cultivating vital abilities like decision-making and collaboration valued in future careers. Combining inquiry and real-life learning synergistically fosters deeper, interdisciplinary understanding and transferable skills.Though implementing these approaches requires overcoming hurdles like teacher mindset shifts and rethinking assessments, the benefits are profound. Students become selfdirected, lifelong learners equipped to tackle complex challenges. Most importantly, they develop an inquiry mindset and real-world capabilities to

not just navigate change, but drive positive impacts in our evolving world. This pedagogical transformation is crucial for nurturing the next generation of innovative problem-solvers.

Conclusion

Embracing inquiry-based learning through authentic, real-world applications, educators can transform the learning experience. Students become active explorers and develop invaluable skills for an unpredictable future.Rather than just memorizing facts, students learn how to learn - uncovering knowledge through their own questioning, investigation, analysis, and application. These self-directed inquiry experiences prepare them to be lifelong learners who can adapt to new situations and challenges throughout their lives.Just as crucially, students gain vital skills like critical thinking, problem-solving across disciplines, communication, teamwork, and creativity. Solving complex, authentic problems equips them well for the kinds of challenges they will face in future careers and in an ever-changing world.Perhaps most importantly, inquiry-based, real-world learning helps students find relevance, meaning, and passion in what they are studying. When classroom lessons connect to their lives and future goals, students become more engaged, motivated learners who develop a love for exploration and discovery.By making this shift, educators empower students not just with knowledge, but with the inquiry mindset and real-world skills to navigate, contribute to, and thoughtfully shape the world around them.

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INNOVATIVE STRATEGIES TO IGNITE STUDENT LEARNING IN THE DIGITAL AGE

M. Kiruthigai Meena
B. Ed Teacher trainee, Thiagarajar college of preceptors (Govt. Aided), Madurai, Tamil Nadu, India

Abstract:

The digital age presents a transformative landscape for education, brimming with the potential to ignite student learning. This thematic paper explores innovative strategies that educators can leverage to capitalize on this potential. We delve into how technology can be embraced to create engaging and effective learning experiences. Blended learning, gamification, and immersive technologies like VR/AR are examined as tools for fostering active participation and knowledge retention. Additionally, the paper explores strategies to cultivate 21st-century skills, such as digital literacy, critical thinking, collaboration, and problem-solving, within a digital framework. Furthermore, the paper acknowledges the challenges associated with technology integration, including issues of equity, digital distractions, data privacy, and effective assessment. Strategies to navigate these challenges and ensure inclusive, focused, and measurable learning are addressed. Ultimately, "Sparking the Fire" aims to equip educators with a toolbox of innovative strategies, empowering them to ignite a passion for learning in their students and prepare them for success in the digital age.

Keywords: *Innovative Strategies, Blended Learning, Gamification, Digital Literacy, Virtual and Augmented Reality*

Introduction

The traditional image of education – a teacher at the front of the classroom dispensing knowledge to rows of silent students – is undergoing a dramatic transformation. The digital age has ushered in a new era of learning, one brimming with the potential to ignite student engagement, personalize instruction, and cultivate critical skills essential for success in the 21st century. This thematic paper, "Sparking the Fire: Innovative Strategies to Ignite Student Learning in the Digital Age," explores a range of innovative strategies educators can leverage to capitalize on this potential and create truly transformative learning experiences.

The transformative power of technology in education is well-documented. A review by ***(Sahin & Ham,2010)*** highlights the plethora of benefits associated with technology integration, including increased student engagement, improved access to information, and enhanced collaboration opportunities. However, simply introducing technology into classrooms isn't enough. To truly spark the fire of learning, educators need a strategic approach that utilizes technology thoughtfully and effectively.

One of the key themes explored in this paper is the concept of **blended learning**. This approach seamlessly merges traditional classroom instruction with online resources and activities. Blended learning can take various forms, from "flipped classrooms" where students learn concepts independently at home and practice them collaboratively in class (***Bergmann & Sams, 2014)***, to the use of online learning platforms that supplement classroom instruction with interactive exercises and assessments. By strategically integrating online resources, educators can cater to diverse learning styles, provide students with opportunities for self-paced learning, and free up valuable classroom time for deeper exploration and discussion.

Another strategy that has the potential to spark student interest is **gamification**. This approach incorporates game mechanics – such as points, badges, and leaderboards – into the learning process. Studies have shown that gamification can increase engagement, motivation, and knowledge retention ***(Kapp, 2012).*** Imagine students tackling math problems in a quest-based learning environment, earning points for correct solutions, and collaborating with peers to conquer challenges. Gamification not only makes learning fun, but it also promotes critical thinking, problem-solving skills, and healthy competition.

This paper also delves into the exciting world of **immersive technologies**, such as virtual reality (VR) and augmented reality (AR). These technologies have the power to transport students to virtual worlds, allowing them to explore historical landmarks, dissect a frog, or conduct experiments in a safe and controlled environment. VR/AR experiences can spark curiosity, enhance understanding, and create lasting memories. While the cost of VR technology is still a consideration, as it becomes more accessible, educators have a powerful tool at their disposal to ignite a passion for learning in students.

Beyond harnessing the potential of specific technologies, this paper emphasizes the importance of fostering a culture of **innovation** in education. This means encouraging experimentation, embracing new approaches, and celebrating student creativity. Educators can achieve this by providing opportunities for students to take ownership of their learning, design projects that address real-world issues, and use technology to create multimedia presentations or interactive learning experiences.

The digital age presents not just opportunities but also challenges. This paper acknowledges issues of **equity and access**. Educators must be mindful of this disparity and ensure that all students have the resources they need to participate fully in the learning process. The digital age presents distractions in the form of social media and other online platforms. This paper explores strategies for managing digital distractions and promoting focused learning. Additionally, the importance of **data privacy and security** is addressed, ensuring student data is protected within the digital learning environment. Finally, the paper discusses the need for **effective assessment** methods that accurately measure student learning in the context of technology-rich classrooms.

By sparking innovation, embracing technology thoughtfully, and navigating the challenges associated with the digital age, educators have the potential to ignite a passion for learning in their students and prepare them for success in the ever-evolving world.

Embracing Technology

The field of education is undergoing a significant transformation driven by the relentless advancement of technology. This tremendous change presents exciting opportunities to enhance the learning experience, leading to diverse learning styles, and improving overall student engagement. Some of the important technological trends revolutionizing the field of education include blended learning, gamification, augmented and virtual reality, collaborative tools, and educational tools.

In Blended learning, the normal classroom methods are integrated with some online resources and activities and they provide strength to both worlds. The traditional classroom provides a structural learning environment for student-teacher interaction and includes some activities related to critical thinking and group discussion can be done whereas online resources

provide access to vast information, different learning styles, interactive simulations, and self-based learning. They have benefits like increased flexibility and personalized learning experiences, the development of digital literacy skills crucial in the 21st century, and enhanced student engagement through interactive online activities.

Gamification is the method of teaching that incorporates game mechanics like badges, points, and leader-boards into the learning process. This strategy capitalizes on the natural human desire for achievement, competition, and transforming learning into a stimulating and enjoyable experience. It increases motivation among the students by encouraging students to persist through challenges and fosters a sense of accomplishment. The students are actively involved in the learning process due to interactive elements and immediate feedback. As it provides different learning experiences to different individuals, they get adapted to the gaming platform easily.

AR and VR technologies create interactive and immersive learning environments that transcend the limitations of traditional classrooms. In augmented reality, the digital information overlays onto the real world, allowing the students to visualize complex concepts in 3D structure or interact with virtual objects in their physical environment whereas in Virtual reality, they can virtually conduct scientific experiments, explore historical monuments, and visit distant locations through which they obtain deeper understanding and engagement.

Collaborative tools and Social media platforms foster peer-to-peer learning and project-based learning. Collaborative tools facilitate group work, project management, teamwork skills, real-time document editing, and communication skills. In social media the students can connect with the external world, share their ideas, and engage in discussion outside the classroom, it also promotes the exchange of knowledge and involvement in collaborative learning.

Fostering engagement

Students today are bombarded with information and distractions. Keeping them engaged in the learning process is crucial for fostering a positive learning environment and maximizing academic achievement. However, they can be kept engaged by following some strategies like flipped classrooms, micro-learning, project-based learning, personalized learning, and choice boards with student-driven learning.

The conventional classroom structure is reversed in the flipped classroom paradigm. Foundational principles are taught to students through homework assignments, films, or lectures. After that, class time is devoted to putting this information into practice through discussions, problem-solving techniques, and interactive activities. Students can participate more deeply in class as they work with classmates and wrestle with the material. It fosters critical thinking and problem-solving abilities in addition to raising student participation. The goal of microlearning is to impart knowledge in brief, concentrated bursts. Students can readily access and assimilate these bite-sized lectures, which are frequently presented through infographics, video clips, or quick quizzes. Because microlearning allows for spaced repetition and shorter attention spans, it can improve retention of the material. It improves student's knowledge, focus, and flexibility for learning.

Project-based learning engages students in solving real-world problems. This approach encourages critical thinking, collaboration, research, and communication skills. Students take

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ownership of their learning as they delve into projects that are relevant and interesting to them. It helps them to apply their knowledge and skills to real-world scenarios.

Personalized learning tailors instruction to individual student needs and learning styles. This can involve differentiated instruction, adaptive learning technologies, or student choice in learning activities. By catering to individual strengths and weaknesses, personalized learning fosters deeper engagement and academic success.

Cultivating 21st Century Skills

The 21st century demands a new set of skills to navigate the complexities of our interconnected world.

Digital Literacy and Critical Thinking: Teaching Students to Evaluate Online Information

Challenge: Students are bombarded with information online, but many struggle to distinguish fact from fiction.

Solution: Develop students' critical thinking skills through activities like:

Source evaluation: Analyze the credibility of websites using tools like CRAAP TEST

Fact-checking: Practice identifying bias and verifying information through reputable sources like Snopes or Factcheck.org

Collaboration and Communication: Developing Teamwork and Communication Skills in a Digital World

Challenge: Effective communication and teamwork are crucial for success in any field, but digital tools can sometimes hinder face-to-face interaction.

Solution: Create opportunities for collaborative learning using online platforms like:

Google Docs: Real-time document editing fosters teamwork and communication.

Project management tools: Platforms like Trello or Asana can help students organize tasks and collaborate remotely.

Video conferencing: Tools like Zoom or Google Meet allow for virtual teamwork and presentations.

Coding and Computational Thinking: Introducing Basic Programming Concepts

Challenge: Coding skills are becoming increasingly valuable, even outside of STEM fields.

Solution: Introduce students to basic coding concepts through:

Block-based coding platforms: Scratch or Blockly provides user-friendly introductions to programming logic.

Coding challenges: Websites like Codewars offer interactive coding problems for all skill levels.

Problem-Solving and Creativity: Encouraging Students to Think Outside the Box

Challenge: The ability to solve complex problems and think creatively is essential for innovation and success.

Solution: Incorporate open-ended projects and activities that encourage:

Design thinking: This framework teaches students to empathize with users, define problems, ideate solutions, prototype, and test their ideas.
Project-based learning: Students work on real-world problems, fostering creativity, collaboration, and problem-solving skills.

Global Citizenship and Digital Citizenship: Promoting Responsible Online Behaviour and Cultural Awareness
Challenge: The internet connects us globally, but it also presents challenges like cyberbullying and online safety.
Solution: Teach students to be responsible digital citizens by:
Discussing online safety: Cover topics like cyberbullying, password security, and online privacy.
Promoting cultural awareness: Use online tools to explore different cultures and perspectives.
Discussing social media etiquette: Teach students to be respectful and responsible online.

Considerations and Challenges
Equity and Access:
Considerations:

- Bridging the digital divide: ensuring all students have access to devices, reliable internet, and technical support.
- Considering diverse learning styles and needs: providing alternative learning methods for students who may struggle with technology dependence.

Challenges

- Socioeconomic disparities: unequal access to technology and internet at home can widen the achievement gap.
- Lack of funding: schools may not have the resources to provide necessary technology and support for all students.

Digital Distractions and Attention Spans:
Considerations

- Promoting media literacy skills: teaching students how to critically evaluate online information and avoid distractions.
- Implementing classroom management strategies: establishing clear expectations for technology use and fostering a focused learning environment.

Challenges:

- Shortened attention spans: the constant barrage of digital stimuli can make it difficult for students to concentrate on complex tasks.
- Cyberbullying and online safety concerns: students may be exposed to inappropriate content or social interactions online.

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Data Privacy and Security:

Considerations:

- Selecting educational technology tools with strong security measures and clear data privacy policies.
- Educating students about online privacy and responsible digital citizenship.

Challenges:

- Data breaches and cyberattacks: student data stored online is vulnerable to hacking and misuse.
- Third-party data collection: educational technology platforms may collect student data for advertising or other purposes.

Assessment and Evaluation:

Considerations:

- Developing assessments that measure student learning outcomes in a technology-rich environment, not just digital skills.
- Utilizing a variety of assessment methods, including traditional and technology-based tools.

Challenges:

- Ensuring the validity and reliability of technology-based assessments.
- Addressing issues of cheating and plagiarism in the digital age.

Professional Development for Educators:

Considerations:

- Training educators on how to effectively integrate technology into their teaching practices.
- Supporting educators in developing content that leverages technology to enhance learning outcomes.

Challenges:

- Time constraints and competing demands on educators' professional development time.
- The ever-changing nature of educational technology.

Conclusion

The digital age presents both opportunities and challenges for education. By embracing innovative strategies and thoughtfully addressing potential pitfalls, educators can leverage technology to create engaging and effective learning experiences. Blended learning, gamification, VR/AR, and social media tools can ignite student interest and foster deeper understanding. Techniques like flipped classrooms, microlearning, and project-based learning can promote active participation and critical thinking. Developing 21st-century skills like digital literacy, collaboration, coding, and problem-solving equips students to thrive in a technology-driven world.

However, ensuring equitable access, managing distractions, safeguarding data privacy, and providing ongoing professional development for educators remain crucial considerations. By addressing these challenges and harnessing the power of technology, educators can ignite a passion for learning and empower students to become successful digital citizens.

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Summary

"Innovative Strategies to Ignite Student Learning in the Digital Age" explores the transformative potential of technology in education. It examines a range of engaging instructional methods, including blended learning, gamification, and project-based learning. The paper emphasizes the development of essential 21st-century skills like digital literacy, collaboration, and problem-solving. It acknowledges the importance of addressing equity, digital distractions, data security, and educator training to ensure the successful integration of technology in the classroom. Ultimately, this paper advocates for a thoughtful and strategic approach to leveraging technology to create a dynamic and empowering learning environment for all students.

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EXPLORING B.ED. GENZ (GENERATION Z) STUDENT TEACHER ADDICTION TO INSTAGRAM

Mr.N.Naveen
B.Ed. Student Teacher Thiagarajar College of Preceptors
Madurai, Tamil Nadu

Dr.S.Anbalagan
Assistant Professor of Mathematics, Thiagarajar College of Preceptors
Madurai, Tamil Nadu

Abstract

The present study aimed to explore the Addiction of B.Ed. Student teacher. regarding the Instagram Application among GenZ (Generation Z) student teachers. The objective was to gain insights into their attitudes, experiences, and opinions concerning the use of technology in social media settings. The researcher aimed to understand the student teacher's Addiction to social media especially in Instagram Applications. The method employed in this study was a normative survey. A simple random sample of 150 B.Ed. A student teacher from Madurai district, Tamil Nādu, India was chosen to participate in the survey. The survey captured B.Ed. Student Teacher Addiction related to social media platforms, especially Instagram application. The data collected from the survey were analyzed using descriptive and inferential statistics. The findings of the study revealed that the Addiction level of B.Ed. Student teacher regarding Instagram was moderate. Additionally, the study found that there were differences in the Addiction to Instagram in GenZ based on factors such as gender, locality of student-teacher living place, Marital status and family type. This study serves as a valuable resource for educators, policymakers, and researchers interested in enhancing Social media integration in B.Ed. programs and promoting effective teaching practices in the digital era. The insights gained from the study can inform the development of strategies and interventions to support trainees in utilizing technology effectively in educational settings.

Keywords: *Addiction, B.Ed. Student Teacher, Instagram, GenZ*

Introduction

This research endeavours to delve into the phenomenon of Instagram addiction specifically among B.Ed. student teachers in Madurai district, Tamil Nadu, India. Instagram's pervasive influence, particularly among Generation Z, underscores the need to understand its impact on academic performance and mental well-being. By conducting a normative survey involving 150 B.Ed. students, the study aims to uncover usage patterns, identify risk factors, and explore interventions to promote healthier digital habits. Through descriptive and inferential statistical analyses, correlations with academic performance, social interactions, and mental well-being will be examined. By addressing Instagram addiction within the context of teacher training, the research aims to inform strategies for integrating digital literacy into education programs and mitigating the negative effects of excessive social media engagement. Ultimately, the goal is to empower B.Ed. student teachers to navigate the digital landscape responsibly while maintaining a balanced approach to online activity. This study offers valuable insights for educators and policymakers seeking to promote effective teaching practices in the digital age while addressing the challenges posed by social media addiction among educators in training.

Instagram

Instagram, launched in 2010, has swiftly become one of the world's most influential social media platforms, boasting over a billion monthly users. Its visually oriented design and innovative features have reshaped digital communication, marketing, and self-expression. In recent years, the phenomenon of social media addiction has garnered increasing attention from researchers, psychologists, and the general public. Among the myriad of social platforms, Instagram, with its visually captivating content and addictive features, has emerged as a significant catalyst for compulsive usage and potential addiction. This paper seeks to delve into the concept of Instagram addiction, exploring its prevalence, underlying psychological mechanisms, potential consequences, and strategies for prevention and intervention. By examining the unique attributes of Instagram and its impact on user behavior, we aim to contribute to a better understanding of the complexities surrounding digital addiction in the contemporary era.

Need and Significance of the Study

In this study can inform educators on integrating social media responsibly into educational settings, promoting engagement and learning while mitigating potential risks. Educational institutions and policymakers can use the study's outcomes to develop guidelines and policies concerning social media usage among student-teachers, fostering a healthy digital environment. By understanding the factors contributing to Instagram addiction, educational institutions can implement support mechanisms to promote student well-being and mental health. Enhancing Professionalism: Insights into B.Ed. student-teachers' social media behavior can aid in designing professional development programs focused on digital professionalism, equipping them with skills necessary for their future roles as educators. The study on B.Ed. GenZ student-teacher addiction to Instagram holds significant implications for educational practices, policy formulation, student well-being, and professional development. By addressing the need to explore this phenomenon, educators and stakeholders can better understand and support the digital lives of the next generation of teachers, ensuring their holistic development and readiness for the evolving educational landscape.

Statement of the Problem

The problem undertaken by the investigator is stated as **"Exploring B.Ed. GenZ Student Teacher Addiction of Instagram".**

Operation of Terms

Exploring

Exploring typically refers to the act of investigating or examining something in depth to gain a better understanding of it.

B.Ed.

B.Ed. stands for Bachelor of Education. It's an undergraduate academic degree program that prepares students for a career in teaching.

GenZ

GenZ refers to the generation born roughly between the mid-1990s and the early 2010s. They are characterized by their familiarity and comfort with digital technology, social media, and a globalized world.

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Students' Teacher

Student teacher refers to someone who is simultaneously a student in an educational program, typically pursuing a degree in education, and gaining practical teaching experience in a classroom setting under the guidance of a supervising teacher.

Addiction to Instagram

Addiction to Instagram refers to a compulsive and excessive use of the social media platform Instagram, leading to negative impacts on a person's daily life, relationships, or mental well-being.

Objectives of the Study

The investigator of the present study framed the following objectives:

1. To find out the level of Addiction in Instagram among B.Ed. Student teacher
2. To find out whether there is significant difference in Addiction of Instagram with respect to gender, types of college, medium of instruction, Locality of Student teacher living place, Marital status and Family Type

Hypothesis of the Study

The investigator of the present study framed the following hypotheses:

1. There is no significant difference between male and female B.Ed. Student Teacher in their Addiction to Instagram with respect to gender.
2. There is no significant difference between Government Aided and Self-finance B.Ed. Student Teacher in their Addiction to Instagram with respect to types of college.
3. There is no significant difference between Tamil and English B.Ed. Student Teacher in their Addiction to Instagram with respect to Medium of Instruction.
4. There is no significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Instagram with respect to Locality of Student teacher living place.
5. There is no significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Instagram with respect to Marital status.
6. There is no significant difference between Nuclear Family and Joint Family B.Ed. Student Teacher in their Addiction to Instagram with respect to Family Type.

The Method

In the present study, the investigator applied normative survey as a method. The normative survey method studies, describes and interprets what exists at present**.**

Population

The Population of the study was B.Ed. Student teachers in Madurai district

Sample

The present study consists of B.Ed. (Bachelor of Education) GenZ Student teachers Addiction of Instagram in Madurai District of Tamil Nadu, India. The sample was selected by using simple random sampling technique. The sample forms a representative sample of the

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whole population. The sample consisted of 150 students of whom 38 were Male and 112 were Female.

Delimitations of the Study

1. The present study is undertaken only in Madurai district
2. The investigator has chosen 150 student teacher samples for this study

Tool Used for Present Study

The tool used for the present study was

(i) Personal Data form

(ii) The Addiction of Instagram Scale is constructed by the investigator and guide (2024).

Tools for data Collection

The Addiction of Instagram scale was developed and constructed by investigator. This scale consists of as many as 25 items and each item has five alternative responses i.e. Extremely, Significantly, Moderately, Slightly, Not at all.

Scoring:

Table:01

Scoring Key

So the scoring to the response given by the students should be like the following

S.No	Response	Weightage
1	Extremely	5
2	Significantly	4
3	Moderately	3
4	Slightly	2
5	Not at all	1

Data Analysis

The level of B.Ed. GenZ Student Teacher Addiction of Instagram

Table:02

The level of B.Ed. GenZ Student Teacher Addiction of Instagram

Addiction of Instagram in GenZ	Low Level		Moderate Level		High Level	
	N	%	N	%	N	%
	22	14.7	105	70.0	23	15.3

According to the table below, 14.7 % of B.Ed. Students teacher have low level, 70.0 % of Students teacher have moderate and 15.3% have high level of B.Ed. GenZ Student Teacher Addiction of Instagram. The level of B.Ed. GenZ Student Teacher Addiction of Instagram is moderate

Null Hypothesis: 1

There is no significant difference between male and female B.Ed. Student Teacher in their Addiction to Instagram with respect to gender.

Table :03

Significant Difference between Male and Female B.ed. Student teacher in their addiction to instagram with respect to gender

Variable	Sub- Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Gender	Male	38	80.32	6.054	2.822	**Significant**
	Female	112	84.07	7.402		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (2.822) is greater than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference between male and female B.Ed. student teacher in their addiction to Instagram with respect to gender.

Null Hypothesis: 2

There is no significant difference between Government Aided and Self-finance B.Ed. Student Teacher in their Addiction to Instagram with respect to types of college.

Table: 04

Significant Difference between Government Aided and Self-Finance B.Ed. Student Teacher in their Addiction to Instagram with Respect to Types of College

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Types of College	Government Aided	44	84.00	6.854	0.957	Not Significant
	Self-finance	106	82.75	7.413		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.957) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is No significant difference between Government Aided and Self-finance B.Ed. Student Teacher in their Addiction to Instagram with respect to types of College

Null Hypothesis: 3

There is no significant difference between Tamil and English B.Ed. Student Teacher in their Addiction to Instagram with respect to Medium of Instruction.

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Table: 05

Significant Difference between Tamil and English B.Ed. Student Teacher in their Addiction to Instagram with Respect to Medium of Instruction

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Medium of Instruction	Tamil	47	83.43	7.270	0.347	Not Significant
	English	103	82.98	7.276		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.347) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is no significant difference between Tamil and English B.Ed. Student Teacher in their Addiction to Instagram with respect to Medium of Instruction**.**

Null Hypothesis: 4

There is no significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Instagram with respect to Locality of Student teacher living place

Table: 06

Significant Difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Instagram with Respect to Locality of Student Teacher Living Place

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Locality of Student teacher living place	Rural	79	80.78	7.942	4.409	Significant
	Urban	71	85.72	5.356		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (4.409) is greater than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Instagram with respect to Locality of Student teacher living place

Null Hypothesis: 5

There is no significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Instagram with respect to Married Status.

Table: 07

Significant Difference between Married and Unmarried B.Ed. Student Teachers in their Addiction to Instagram with Respect to Marital Status

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Marital status	Unmarried	105	85.03	6.287	5.362	**Significant**
	Married	45	78.67	7.465		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that the calculated 't' value (5.362) is greater than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is a significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Instagram with respect to Married Status.

Null Hypothesis: 6

There is no significant difference between Nuclear Family and Joint Family B.Ed. Student Teacher in their Addiction to Instagram with respect to Family Type.

Table: 08

Significant Different between Male and Female of B.Ed. Pre Service Trainees Perception of Classroom Technology in the Digital Age with Respect to Gender

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Family Type	Nuclear Family	102	82.22	7.719	2.256	Significant
	Joint Family	48	85.04	5.761		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (2.256) is greater than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference between Nuclear Family and Joint Family B.Ed. Student Teacher in their Addiction to Instagram with respect to Family Type.

Major Finding of the Study

1. 14.7 % of B.Ed. Student teachers have low level, 70.0% of student teachers have moderate and 15.3% have a high level of B.Ed. GenZ Student Teacher Addiction to Instagram
2. There is a significant difference between male and female B.Ed. Student Teachers in their Addiction to Instagram with respect to gender.
3. There is no significant difference between Government Aided and Self-finance B.Ed. Student Teacher in their Addiction to Instagram with respect to types of college.
4. There is no significant difference between Tamil and English B.Ed. Student Teachers in their Addiction to Instagram with Respect to Medium of Instruction.
5. There is a significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Instagram with respect to Locality of Student-teacher living place.
6. There is a significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Instagram with respect to Marital status.
7. There is a significant difference between Nuclear Family and Joint Family B.Ed. Student Teacher in their Addiction to Instagram with Respect to Family Type.

Interpretation and discussion

The finding of the result shows that male and female student-teachers exhibit varying levels of engagement with Instagram. This observation aligns with broader research indicating that gender influences social media usage patterns, with studies often noting that females tend to spend more time on social platforms compared to males. Possible factors contributing to this difference could include variations in socialization, interests, or motivations for using Instagram.

Findings of present study point out the significant difference between rural and urban B.Ed. student-teachers in their addiction to Instagram underscores the need for targeted interventions and collaborative efforts to address the digital divide and promote equitable access to technology and digital resources. By recognizing the unique challenges and opportunities associated with each locality, educators and policymakers can support the holistic development of student-teachers and foster a culture of digital inclusion within educational settings.

The finding of current study result reveals that the significant difference between married and unmarried B.Ed. student-teachers in their addiction to Instagram underscores the complex interplay between marital status, social interaction, and psychological well-being. By recognizing these dynamics, educators and policymakers can develop targeted interventions and support mechanisms to promote healthy social media usage and overall well-being among student-teachers, regardless of their marital status.

The finding of his study highlights the importance of considering familial factors when examining social media usage patterns. Understanding how family structures shape individuals' behaviours and attitudes towards platforms like Instagram can inform interventions aimed at promoting healthy digital habits, particularly among vulnerable populations such as student teachers.

Recommendations for this Study

1. **Implementing Digital Literacy Programs:**

Given the pervasive influence of social media platforms like Instagram on the lives of GenZ student teachers, educational institutions must incorporate digital literacy programs into the curriculum. These programs should aim to educate students about the potential risks associated with excessive social media use, including addiction, distraction, and negative impacts on mental health. By fostering critical thinking and responsible digital citizenship, such initiatives can empower student teachers to navigate the online world more mindfully.

2. **Promoting Balanced Technology Use:**

Educators and administrators should advocate for a balanced approach to technology use among GenZ student teachers. This includes encouraging periodic digital detoxes, setting boundaries for device use during instructional hours, and promoting offline activities that foster interpersonal connections and well-being. By promoting a healthier relationship with technology, educational institutions can help mitigate the risk of Instagram addiction among student teachers.

3. Integrating social media in Education:

Rather than viewing social media solely as a source of distraction, educational institutions should explore ways to leverage platforms like Instagram for educational purposes. This could involve integrating social media into lesson plans, encouraging student teachers to create educational content or engaging in professional networking within their field. By harnessing the potential of social media for learning and professional development, institutions can help student teachers cultivate a more purposeful and constructive relationship with these platforms.

4. Providing Support Services:

Recognizing that Instagram addiction can have detrimental effects on student teachers' well-being and academic performance, educational institutions should ensure the availability of support services for those in need. This may include counselling services, peer support groups, or workshops focused on stress management and digital wellness. By creating a supportive environment that acknowledges the challenges associated with social media use, institutions can empower student teachers to seek help and make positive changes in their habits.

5. Continued Research and Evaluation:

As technology and social media continue to evolve, ongoing research is essential to better understand the dynamics of Instagram addiction among B.Ed. GenZ student teachers. Future studies could explore the effectiveness of various interventions, the impact of emerging features and trends on social media use patterns, and the intersection between social media addiction and academic performance. By staying abreast of developments in this field, educators and policymakers can make informed decisions to support the well-being and success of student teachers in the digital age.

Conclusion

In conclusion, while Instagram offers numerous benefits as a communication and networking tool, its addictive nature poses significant challenges for B.Ed. GenZ student teachers. By acknowledging these challenges and implementing targeted interventions, educational institutions can empower student teachers to harness the potential of social media responsibly and constructively, thereby promoting their overall well-being and success.

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PREPARING STUDENTS FOR FUTURE CAREER

Anusha P
Student-teacher, Thiagarajar college of Preceptors.

Shivani Indra K
Student-teacher, Thiagarajar college of Preceptors.

Abstract

A comprehensive approach is needed to prepare pupils for their future occupations in the twenty-first century. The modern job requires a special set of skills. This calls for fresh, cutting-edge approaches to student instruction. That's education in STEAM. The goal of STEAM education is to spark children's interest in the arts and sciences at a young age and encourage them to pursue these interests throughout their lives. A potent paradigm for nurturing the abilities required for success in a world that is changing quickly is steam education. The aims of this paper is to give a general overview of steam education, how it develops 21st-century abilities in students to prepare them for future employment, what makes a good STEAM program, and what opportunities and problems it presents. This paper would reveal how the STEAM helps the students for their future sucess.

Keywords: *Holistic approach, discipline, success, workplace, Innovative teaching*

Introduction

The 21st century was a unique era of technological progress that surpassed the events of the previous decade. Educational planners around the world are working hard and doing everything they can to train the next generation of students to be technologically literate and interested in subjects such as science, technology, engineering, art and mathematics with an eye on economic growth. However, these subjects are not taught separately, but must be integrated into a unified interdisciplinary approach. This approach combines separate disciplines into a unit known as STEAM. The concept of STEAM (Science, Technology, Engineering, Art and Mathematics) is an emerging discipline that seeks to provide a multifaceted approach to education. According to the U.S. Department of Education, "In an ever-changing and increasingly complex world, it is more important than ever that our nation's youth be prepared to bring the knowledge and skills to solve problems, understand information, and gather and evaluate evidence to make decisions." Before STEAM education, STEM education was hands-on.

STEAM is an educational approach that combines the arts with the STEM model. A STEAM program can include any visual or performing arts. This movement aims to bring a new spirit of learning to children by combining traditional arts and sciences with high-tech technologies.

Operational Definition of Steam Education

STEAM was developed in 2006 by Georgette Yakman, then a graduate student at Virginia Polytechnic Institute and State University's Integrated Science, Technology, Engineering and Mathematics Education Program.

STEAM education is an interdisciplinary approach to teaching and learning that integrates science, technology, engineering, art and mathematics. An extension of STEM (Science, Technology, Engineering and Mathematics) education, this educational framework aims to develop versatile, creative and innovative individuals ready to meet the complex challenges of the 21st century.

Fostering 21st Century skills

21st century skills is also refer to life and career skills that are very important to student success in the modern world. It is also called as "Soft Skills". The main 4 C's skill of 21st century are communication, collaboration, critical thinking, and creativity. STEAM education helps to develop these skills through arts, science, technology, engineering, and mathematics. With these skills, students are able to share their thoughts, ideas, and solutions.

Communication: Communication skills are crucial in public, work, and relationships. Communication is both a science and an art. STEAM education puts emphasis on communication skills.

Critical Thinking: Critical thinking refers to the ability to analyse information and provide necessary solutions, so STEAM education trains students to sharpen their critical thinking skills through solving problems in the real world.

Collaboration: Collaboration skills are one of the most important skills in the 21st century. According to the National Association of Colleges and Employers, the ability to work in a team is one of the top skills that recruiters want from a student. STEAM education provides an opportunity for students to work collaboratively.

Creativity – STEAM education will kindle the student's creativity to generate new ideas, approaches and solution to problems. It allows us to solve problems more openly with innovation.

Problem Solving: Problem solving is a process that requires systematic observation and critical thinking to find an appropriate solution to reach the desired goal. This requires two major skills, observation and critical thinking, which can be fostered by STEAM education.

Importance of STEAM Education

The value of STEAM education can be emphasized, especially in preparing young people for real problems. Thanks to a holistic approach, students are better suited to different environments and obstacles. STEAM education is important for students for to develop their skill and have the freedom to express their ideas for the real world problem.

Below are the following benefits of STEAM education:

Improves critical thinking

As shown by several STEAM projects, students must methodically acquire knowledge about engineering and technology in the context of effective solutions. By activating multiple areas of the brain when working on ongoing projects, one can look at an issue from many different angles and, at the same time, learn to step back and see the bigger picture of the route.

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Improves problem-solving skills

Since such activities require the use of different techniques to solve problems, STEAM projects offer students the opportunity to solve problems in a new way. Students abandon the conventional method or formula to answer multiple problems step by step, experiencing trial and error, learning to take risks, and learning how to think outside the box." Using STEAM, they have to find more original solutions.

Provides hands-on learning opportunities

Students have the opportunity to participate in engaging, hands-on STEAM projects. Students often use different supplies and equipment to learn how things work, how things are built, and how to fix them. This realm of equality means that all children, regardless of gender, economic background, or race, are capable.

Multidisciplinary collaboration

Students in STEAM classes work closely together to learn new starting points. Let's make compromises together and share responsibility. Interdisciplinary group projects.

Comparison of schools that have implemented STEAM education versus those that have not:

Schools that have implemented STEAM education:

1. Curriculum and Learning Approach:
   Interdisciplinary and project-based learning
   Integration of various disciplines (science, technology, engineering, arts, and mathematics).
   Hands-on and experiential learning activities.
   Emphasis on real-world problem-solving and critical thinking.

2. Facilities and Resources:
   Dedicated STEAM labs, makerspaces, and design studios
   Access to technology tools and equipment (e.g., 3D printers, robotics kits, coding software).
   Collaboration spaces for group projects and workshops.

3. Teacher Training and Professional Development:
   Training programs for teachers to understand and implement STEAM pedagogy.
   Opportunities for professional development and collaboration among STEAM educators.

4. Extracurricular and Co-curricular Activities:
   STEAM-related clubs, competitions, and events
   Partnerships with industry, universities, and community organizations for STEAM initiatives.

5. Assessment and Evaluation:
   Project-based assessments and evaluation of interdisciplinary skills
   Emphasis on process-oriented learning and creative problem-solving.

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Schools that have not implemented STEAM education:

- Curriculum and Learning Approach:
  Traditional subject-based teaching
  Separate teaching of individual disciplines (science, mathematics, etc.)
  Focus on content delivery and rote learning.

- Facilities and Resources:
  Conventional classrooms and labs for specific subjects
  Limited access to technology tools and equipment for interdisciplinary learning.

- Teacher Training and Professional Development:
  Limited training or professional development opportunities for STEAM education.

- Extracurricular and Co-curricular Activities:
  Fewer opportunities for interdisciplinary projects or STEAM-related activities.

- Assessment and Evaluation:
  Traditional assessment methods (e.g., exams, quizzes)
  Emphasis on subject-specific knowledge and skills.

It's important to note that the implementation of STEAM education can vary among schools, with some adopting a more comprehensive approach, while others may have partially integrated STEAM principles or are in the process of implementation.

The key differences lie in the interdisciplinary and hands-on approach, access to specialized facilities and resources, teacher training, extracurricular opportunities, and assessment methods focused on interdisciplinary skills and real-world applications.

Opportunity

In STEAM, there is wide range of opportunity for growth across all occupations in the science, technology, engineering, art and math fields. It gives opportunity to students to develop their skills from their school which are vital in today's rapidly evolving world. And also give them the opportunity to select their higher studies and career based on their interests. It will help them to develop their future in all aspects. Students engaged in STEAM education are better prepared for future careers in fields like robotics, software development, design, and more. STEAM education develop the students creativity, encourages innovative and entrepreneurship.

8 Key Factors for a Successful Steam Program

The nature of STEAM programs varies from school to school based on student population, district constraints, and even faculty approval. That said, there are a few things that can help make the transition from a traditional school program to a STEAM one more successful.

1. **Teacher training (professional learning and professional development)**

Teacher training is important for teachers to increase their knowledge about the disciplines under STEAM and the connection between these courses. Continuing professional development is also important for STEAM teachers to stay abreast of new trends, technology integration, and innovative teaching strategies using available tools.

2. **Curriculum Integration**

STEAM Best Practices are broad enough to easily integrate with current state or federal programs, curricula, and standards. Key concepts such as problem solving, creativity and critical thinking are useful in all subjects. Centres where teachers can work together on the curriculum make the transition process easier.

3. **Infrastructure and Resources**

Providing teachers with certification training is an excellent first step, but schools and districts must invest heavily in equipment and resources to support new learning. The STEAM program is practical and subjective. Tools such as STEM scopes Science, which emerge from case studies, should include these resources so that all students create a sense of collaborative inquiry.

4. **Student Engagement**

Many students prefer a hands-on, student-centred approach to learning. Others want to model exactly how to access affiliate programs. Creating a safe space that allows passion for content, opportunities for student collaboration, and mistakes as learning tools increases opportunities for all students.

5. **Empowering Students**

Successful adoption of STEAM programs does not happen in every classroom. Schools that create extracurricular activities, clubs and events have opportunities to stimulate students' interest in learning. Enriching opportunities such as robotics competitions, tagging challenges, and art exhibits show students how STEAM fields are available.

6. **Assessment and Evaluation**

Successful STEAM projects are adaptable. Schools must have individual assessment systems for the whole school to measure student performance. Standardized assessments are one way to show whether a new program is working, but the STEAM learning style offers the potential for group projects and sweeping assessments.

7. **Teacher commitment**

Teachers who believe in the effectiveness of the program are essential for full student participation. Students find out what their teachers think about what they are teaching. But those sales don't just happen. Continuous professional development with tools and resources that facilitate the adoption of the curriculum is essential for the teachers' acceptance of the new content.

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8. **Community Engagement**

Strong community support improves teacher-student engagement, especially when students' parents are involved. Regions that do not have the resources to upgrade existing programs can also seek partnerships, travel opportunities, and guest lectures to STEAM field communities. These activities connect students to their community on a deeper level.

Challenges

Awareness – About STEAM education, there is no awareness among the students and people.

Facilities – There will be lack of facilities in schools and colleges to implement STEAM education.

Teachers – Lack of teachers who are experts in STEAM education.

Funds – To establish STEAM education in all schools there will be lack of funds to implement the system.

The application of STEAM in inclusive education for children with disability need more research and required special teacher for them.

Recommendations

Implementing STEAM (Science, Technology, Engineering, Arts and Mathematics) education in schools requires careful planning and consideration to integrate these fields into the curriculum. Below are some tips for implementing STEAM education in schools.

Develop a clear vision and goals: We have to start by establishing a clear vision for STEAM education in the school. Identify specific goals and objectives you want to achieve through STEAM participation, such as fostering creativity, problem-solving skills, and critical thinking skills.

Integrate STEAM into all subjects: Instead of thinking of STEAM as a separate subject, integrate STEAM principles into existing subjects such as science, math, and the arts. Encourage teachers to collaborate across disciplines to create integrated lesson plans.

Professional Development for Teachers: We offer comprehensive training and professional development to help teachers understand STEAM educational concepts and how to integrate them into their teaching practice. Provide an in service program to how to integrate STEAM education.

Hands-on learning: Emphasizes hands-on learning and experiential activities such as experiments, projects, and design projects. These activities help students apply theoretical knowledge to real-world situations.

Access to Technology and Tools: Ensures students have access to technology and tools related to STEAM education, including computers, computers, robotics kits, and art supplies.

Encourage critical thinking and problem solving: Create activities that require students to think critically and solve complex problems. Encourage experimentation and risk-taking in a supportive environment.

Encourage creativity and innovation: We foster a sense of creativity and innovation by encouraging students to explore different solutions to problems and think outside the box. Ask open ended question to students to kindle their creativity and innovation

Collaborative Projects: Organize collaborative projects where students from different disciplines work together to solve real-world problems. This shows the nature of the curriculum in the STEAM field.

Student Work Presentation: Students will have the opportunity to present their STEAM projects and work within the school and the wider community. It may include a demonstration, exhibition or contest. Collaborate with industry and community partners: Work with industry experts, local businesses, and community organizations to provide students with real-world experience in STEAM careers and applications.

Give STEAM education training to student-teachers: To implementing STEAM education in school we need a teacher who are trained in this new method. So we have to implement the STEAM education in teacher training also.

By implementing these recommendations, schools can create a stimulating environment that fosters students' interest, creativity, and passion for STEAM programs, preparing them for success in the rapidly changing world of work and innovation.

Conclusion

In conclusion, we would like to emphasize that, compared to traditional methods of teaching, STEAM education allows children to effectively combine their theoretical and practical skills. It prepare students for the challenges and opportunities of the future. In short, STEAM education prepare the students of 21st century by fostering the skills which are needs in today's world. So we should invest in this approach and make our education system that make skilled students.

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UNITY IN DIVERSITY: BUILDING BRIDGES FOR EQUITY

M. Lakshmi
B. Ed Teacher trainee
Thiagarajar college of preceptors (Govt. Aided), Madurai
Tamil Nadu, India

Abstract

In an increasingly diverse world, achieving true unity requires embracing our differences. This paper explores the concept of "Unity in Diversity" and its critical role in building bridges for equity. It examines the challenges posed by societal divisions and explores strategies to foster a more inclusive and equitable society. The paper emphasizes the importance of understanding and valuing diverse perspectives, dismantling barriers to opportunity, and promoting collaboration across differences. By building bridges of understanding and respect, we can create a more unified and just society where everyone can thrive.

Keywords: *Diversity, Equity, Inclusion (DE&I), Multiculturalism, SocialJustice*

Introduction:

The human experience is a vibrant tapestry woven from threads of diverse cultures, ethnicities, and perspectives. This very diversity, as Nelson Mandela eloquently stated, is "not a threat to unity; it is our greatest strength" ([Mandela, N. (1995). Long walk to freedom: The autobiography of Nelson Mandela. Little, Brown & Company]). Yet, throughout history, societies have grappled with the tension between celebrating these differences and fostering a sense of shared purpose and belonging.

The concept of "Unity in Diversity" proposes that a strong and flourishing society can be built by embracing, not erasing, our differences. This requires moving beyond mere tolerance towards actively fostering equity and inclusion. As Audre Lorde, a prominent voice for social justice, reminds us, "The difference between our oppressions is irrelevant and is the illusion of power. We must focus on uniting at the point of pain" ([Lorde, A (1984). Sister outsider: Essays and speeches. Crossing Press]). Building bridges of understanding and respect across these differences is paramount in creating a society where everyone has the chance to thrive.

This essay will examine the problems caused by social divisions and look into methods for bringing diversity and true unity together. We'll look at how removing obstacles to opportunity and encouraging cooperation among people with different backgrounds might help create a more fair and just society in the future.

The Multifaceted Nature of Diversity:

1. Diversity is not a singular concept; it encompasses a rich tapestry of human differences.
    - Cultural Diversity: This refers to the vast array of customs, traditions, languages, and religions that shape human experience. From food and music to family structures and religious beliefs, cultural diversity enriches our world but can also lead to misunderstandings if not approached with sensitivity.
    - Ethnic Diversity: This refers to the shared cultural heritage of a particular group of people. It encompasses factors like ancestry, language, and religion. Ethnic diversity can be a source of strength, fostering a sense of belonging within communities.

However, it can also lead to inter-group conflict if not managed effectively.

- Socioeconomic Diversity: This refers to the differences in income, education, and social status within a society. Socioeconomic diversity can create disparities in access to opportunities and resources, leading to social stratification and marginalization of certain groups.

2. How Diversity Can Lead to Misunderstandings, Prejudices, and Social Fragmentation: While diversity holds immense potential for growth, it can also present challenges:

- Misunderstandings: Differences in communication styles, social norms, and cultural values can lead to misunderstandings. Non-verbal cues such as body language or humor can be misinterpreted across cultures, causing friction.
- Prejudices: Prejudice refers to preconceived negative attitudes towards a specific group of people. These prejudices can be based on stereotypes, which are generalizations about a group that may not be accurate for all its members. Prejudice can lead to discrimination, where members of a group are denied opportunities or treated unfairly.
- Social Fragmentation: When differences are not acknowledged or respected, they can lead to social fragmentation. This occurs when groups withdraw from each other, forming isolated communities and hindering social cohesion.

3. The Historical and Ongoing Roots of Inequality Faced by Marginalized Groups:

Understanding the historical context is crucial to address the ongoing challenges of inequality. Then are some crucial points to consider:

- Legacy of Colonialism and Oppression: Many societies grapple with the legacy of colonialism and other forms of oppression. These systems often resulted in the marginalization of certain ethnic and racial groups, denying them access to education, resources, and political power. The impacts of these historical injustices continue to be felt today.
- Discriminatory Practices: Discrimination can be overt, such as laws or policies that disadvantage certain groups, or covert, where biases influence decision-making in areas like employment or housing. These discriminatory practices continue to perpetuate inequality.
- Intersectionality: It's important to recognize that different forms of discrimination often intersect. For example, a woman of color may face discrimination based on both her race and her gender. Intersectionality acknowledges the interconnected nature of various social identities and how they shape experiences of marginalization.

Building Bridges for Equity: Fostering Inclusion and Understanding

Bridging the divides created by diversity requires a multi-pronged approach that promotes equity and empowers all members of society.

1. Strategies for Promoting Inclusive Environments:

Diversity Training: Diversity training workshops aim to raise awareness of unconscious biases, stereotypes, and discriminatory practices. These workshops can equip individuals with the knowledge and skills to create a more inclusive environment.

- Cultural Competency Programs: These programs help individuals develop the knowledge, skills, and attitudes to work effectively with people from different cultural backgrounds. Cultural competency programs can foster cross-cultural communication and understanding.
- Inclusive Policies and Practices: This involves creating policies and practices that are fair and equitable for all, regardless of background. This may include establishing clear guidelines for anti-discrimination and providing equal opportunities for advancement.

2. The Importance of Open Dialogue and Fostering Intercultural Understanding:
   - Open Dialogue: Creating safe spaces for open dialogue allows individuals to share their experiences, challenge assumptions, and learn from each other. Open communication is key to building trust and understanding across differences.
   - Intercultural Understanding: Promoting intercultural understanding involves actively learning about different cultures, customs, and perspectives. This can be achieved through cultural exchange programs, educational initiatives, and community events that celebrate diversity.
3. The Role of Education in Dismantling Stereotypes and Promoting Empathy:
   Education plays a critical role in dismantling stereotypes and promoting empathy:
   - Curriculum Reform: Integrating diverse perspectives and experiences into
   - educational curriculums can challenge stereotypes and promote a more inclusive understanding of history, society, and the world.
   - Empathy Development: Educational programs can help students develop empathy by encouraging perspective-taking and critical-thinking skills. This allows them to understand the experiences of others and build stronger connections across Differences.

By implementing these strategies, we can create a foundation for a more equitable and inclusive society. Remember, building bridges for equity is an ongoing process that requires continuous effort and commitment from individuals and institutions alike.

Equity in Action: Bridging the Gap Between Theory and Practice:

Moving beyond theoretical discussions, let's explore how equity translates into concrete action across various sectors:

1. Examples of Successful Initiatives:

Education:

- Mentorship programs: Pairing students from underserved communities with mentors from similar backgrounds can provide academic support and career guidance. These programs have shown to increase graduation rates and improve college readiness for mentees
- Culturally Responsive Teaching: This approach acknowledges and values students' diverse backgrounds. Teachers adapt their instruction to cater to different learning styles and cultural experiences. Studies have shown culturally responsive teaching leads to improved academic achievement for students of color and students from low-income backgrounds.
- Mobile health clinics: These clinics bring healthcare services to underserved communities, overcoming geographical barriers and transportation issues. Mobile

clinics have been successful in increasing access to preventative care and screenings, particularly in rural areas.

- Language interpretation services: Ensuring access to qualified interpreters in healthcare settings helps bridge communication gaps and ensures patients receive quality care regardless of their language. Studies have shown that language interpretation services lead to improved patient satisfaction and better health outcomes. Employment:
- Skills-based hiring practices: Focusing on skills and competencies over educational background can open doors for qualified candidates from marginalized communities who may not have traditional qualifications. Research suggests skills-based hiring leads to a more diverse workforce and can improve innovation and creativity within companies.
- Unconscious bias training: Equipping employers and hiring managers with the tools to identify and challenge unconscious biases in the recruitment process can help create a more equitable playing field for job seekers. Studies have shown that unconscious bias training can lead to more diverse hiring pools and a reduction in discriminatory hiring practices.

2. The Role of Policy and Legislation:
   - Affirmative Action Programs: These programs aim to level the playing field by encouraging recruitment and hiring of qualified individuals from historically disadvantaged groups. While often debated, affirmative action can be a tool to address historical inequalities. Research suggests that affirmative action programs have contributed to increased representation of minorities in higher education and professional fields Anti-discrimination Laws: Legislation that prohibits discrimination based on race, gender, religion, or other protected characteristics plays a crucial role in ensuring equal opportunities for all. Anti-discrimination laws have been instrumental in dismantling discriminatory practices in areas like employment, housing, and education.

The Role of Individuals and Institutions:

Bridging the divides of diversity requires a two-pronged approach: individual action and institutional responsibility. Let's explore how both can contribute to a more equitable society:

1. How Individuals Can Combat Prejudice and Promote Inclusivity:
   - Challenge Prejudices: We all hold unconscious biases. By educating ourselves about these biases and actively challenging them in our thinking, we can combat prejudice. Resources like Harvard's Implicit Association Test
   - can be a starting point for self-reflection.
   - Promote Intercultural Understanding: Seek out opportunities to learn about
   - different cultures and perspectives. This could involve attending cultural events, engaging in respectful conversations with people from different backgrounds, or even reading books and articles that broaden your understanding.
   - Practice Inclusive Language: Be mindful of the language you use and avoid stereotypes or generalizations. Consider using gender-neutral language when appropriate and focus on respectful communication.

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- Speak Up Against Injustice: Don't be a bystander to prejudice or discrimination. If you witness an act of unfairness, speak up safely and respectfully, or report it to the appropriate authorities.

2. The Responsibility of Institutions to Create Equitable Opportunities: Educational Institutions:
   - Implement culturally responsive teaching practices that value diversity in the classroom.
   - Diversify curriculum materials to include perspectives from different cultures and backgrounds.
   - Provide resources and support systems for students from marginalized communities.
   - Implement inclusive admissions policies.
   - Governmental Institutions:
   - Enact and enforce anti-discrimination laws that protect individuals from prejudice based on race, gender, religion, or other protected characteristics.
   - Implement social programs that provide equal access to education, healthcare, and other essential services.
   - Allocate resources to support and empower underserved communities.
   - Corporate Institutions:
   - Develop and implement diversity, equity, and inclusion (DE&I) plans within the organization.
   - Implement unconscious bias training for employees at all levels.
   - Promote diversity in hiring practices by focusing on skills and competencies.
   - Generate a culture of inclusivity where all workers feel valued and admired.
3. The Importance of Leadership in Setting the Tone:

Leaders who champion equity and inclusion through their words and actions set the tone for the entire organization. They can:

- Publicly communicate a commitment to equity and inclusion.
- Hold themselves and others accountable for upholding fair and inclusive practices.
- Allocate resources to support equity initiatives within the institution.

By combining individual efforts with strong institutional leadership, we can create a powerful force for positive change and build a society where everyone has the opportunity to thrive.

The Benefits of Unity in Diversity: Reaping the Rewards of Inclusion:

While navigating diversity can present challenges, a society that embraces its differences and strives for equity reaps a wealth of benefits:

1. Fostering Innovation and Creativity:
   - Diversity of Thought: When people from various backgrounds come together, they bring different perspectives, experiences, and problem-solving approaches. This diversity of thought can lead to more creative keys and innovative ideas.
   - Cross-Pollination of Ideas: Collaborative environments where diverse viewpoints are encouraged foster a "cross-pollination" of ideas. This exchange of knowledge and perspectives can lead to groundbreaking discoveries and advancements across various fields.

2. Economic Benefits of a Level Playing Field:
    - Talent Pool Optimization: When everyone has an equal opportunity to participate in the workforce, regardless of background, a larger pool of talent becomes available. This allows businesses and organizations to tap into a wider range of skills and expertise, boosting overall productivity and economic growth.
    - Increased Innovation: As mentioned earlier, diversity fosters innovation, which can lead to the development of new products, services, and technologies. This innovation drives economic progress and creates new job opportunities.
3. The Potential for a More Peaceful and Just World:
    - Reduced Conflict: Embracing diversity fosters understanding and reduces prejudice. When people feel respected and valued for their unique identities, tensions and conflicts are less likely to arise.
    - Social Cohesion: A society that celebrates its diversity is a more inclusive and cohesive society. People from different backgrounds feel a sense of belonging and shared purpose, leading to greater social harmony and stability. Examples:
    - Silicon Valley's success is often attributed to its diverse workforce, where collaboration between individuals from various ethnicities and nationalities fosters groundbreaking technological innovation.
    - Studies by McKinsey & Company show that companies with greater diversity outperform their less diverse counterparts in terms of revenue and profitability.

Conclusion

A Brighter Future Built on Unity and Equity

In conclusion, "unity in diversity" is not merely a slogan; it's a call to action. While acknowledging the challenges posed by our differences, we must strive to create a society where equity allows everyone to thrive. By fostering understanding through open dialogue and intercultural communication, we can dismantle the walls of prejudice and build bridges for a more inclusive future. The benefits of embracing diversity are undeniable. It fosters innovation, creativity, social progress, and economic prosperity. By promoting equity, we not only unlock the full potential of every individual but also create a more peaceful and just world.

Creating true unity in diversity requires a continuous effort – from individuals challenging their own biases to institutions implementing inclusive policies and leadership championing equity. The road ahead is long, but the potential rewards are immense. Let us embark on this journey together, building a future where our differences are not obstacles but the very foundation of a stronger, more vibrant society.

Summary

Unity in Diversity: Building Bridges for Equity

Diversity presents a multifaceted reality, encompassing cultural, religious, ethnic, and socioeconomic differences. While diversity fosters richness, it can also lead to misunderstandings, prejudice, and social fragmentation due to a lack of understanding. These challenges are rooted in the historical and ongoing inequalities faced by marginalized groups.

To bridge these divides and achieve equity, a multi-pronged approach is needed. Strategies

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include promoting inclusive environments through diversity training and cultural competency programs. Additionally, fostering open dialogue and intercultural understanding is crucial. Education plays a vital role in dismantling stereotypes and promoting empathy.

Examples from various sectors, including education, healthcare, and employment, showcase the power of successful initiatives that promote equity. Policies and legislation, like affirmative action programs and anti-discrimination laws, also play a significant role. Integrating equity into everyday practices presents both challenges and opportunities. We must overcome inertia and address unconscious biases, while also creating inclusive environments. Individuals can combat prejudice and promote inclusivity by challenging their own biases, promoting intercultural understanding, practicing inclusive language, and speaking up against injustice. Institutions, like educational establishments, government bodies, and corporations, have a responsibility to create equitable opportunities. Strong leadership that sets the tone for a culture of equity and respect is essential.

Unity in diversity fosters innovation, creativity, social progress, and economic benefits by harnessing a wider range of talent and perspectives. Ultimately, embracing diversity and striving for equity has the potential to create a more peaceful and just world for all.

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A STUDY ON HATHA YOGA AND HATHA YOGIC PRACTICES BENEFICIAL TO DIFFERENT KINDS OF PEOPLE

A. Nisha
Research Scholar, Department of Education
Vels Institute of Science Technology & Advanced Studies
Pallavaram, Chennai

Abstract

Today, the discipline 'Yoga' plays a prominent role in the daily life of human beings. Most of the people in the world practices Yoga for improving their physical and mental health. Yoga is known as a spiritual discipline. It focusses on bringing a congruity between mind and body. Yoga is a science and art of sound and healthy living. There are different types of Yoga; such as Hatha Yoga, Vinyasa Yoga, Ashtanga Yoga, Power Yoga, Bikram Yoga, Jiva Mukti Yoga, Iyengar Yoga, Anusara Yoga, Sivananda Yoga, Vini Yoga, Kundalini Yoga, Yin Yoga etc. Hatha Yoga is one among it. Hatha Yoga is a part of Yoga which includes different types of physical techniques helps to present the vital force or energy and channelize it. The literary meaning of Hatha Yoga is 'force' and traditionally means 'the yoga of force' or 'the means of attaining a state of yoga through force'. So, It is considered as anything one must do with the body is known as Hatha Yoga. The main aim of the study is to study about the significance of Hatha Yoga in daily life of Human being, to study about the role of Hatha Yoga for better performance of students in academic achievements, to study about the scientific aspects of Hatha Yoga Practices, to study about the spiritual aspects of Hatha Yoga techniques. Here is an attempt to make a conceptual study on the topic "Hatha Yoga and Hatha Yogic Practices beneficial to different kinds of people".

Keyterms: *Hatha Yoga, Hatha Yogic Practices, Different kinds of People.*

Introduction

The word Yoga means 'Yoke' or 'Union' of body, mind and spirit. It is a spiritual practice and was introduced in 4000 years ago. It helps for deep meditation and a means to gain self-actualization, which is a comprehension of one's intrinsic wholeness and connectedness in the present moment. Hatha Yoga is known as the most popular type of Yoga because it helps to build strength, increase flexibility and also balance the posture. It is gentle enough for most of the bodies. Hath Yoga originates from Raja Yoga. It is a simple form of Raja Yoga. 'Hatha' is a Sanskrit word, which means 'force'. The name 'Hatha' is composed of two components "Ha" means 'Sun' or 'Solar energy'; the positive current in the body and 'Tha' means 'Moon' or 'Lunar energy'; the negative current in the body. The Hatha Yoga practices balances these two energies in the body. ie. the male and female components in each one's body and mind. Hatha Yoga purifies the Solar or Pingala and Lunar or Ida channels. It includes asana, pranayama, mantra, mudra, shatkriyas and shatkarmas and types of visualization. The development of Hatha Yoga mainly aiming particularly on asanas in 20th century. It became popular in all over the world. as a form of physical exercises. This modern form of yoga now widely called simply as 'Yoga'.

Objectives

1. To study about the significance of Hatha Yoga in daily life of human beings.
2. To study about the role of Hatha yoga for the whole performance of students in school and everywhere.
3. To analyze the scientific aspects of Hatha Yoga practices.
4. To analyze the spiritual aspects of Hatha Yoga practices.

The Origin of Hatha Yoga

The Hindu Sanskrit epics and Buddhism's Pali canon described some style of Hatha Yoga techniques. 'Amruta siddhi is known as the oldest text so far found to describe Hatha Yoga in the 11th century. The oldest text comes from the tantric Buddhist milieu. The Hindu Hatha Yoga Text see from the 11th century onward. Most of the Hatha Yogic texts belongs to Nath Siddhas and most early one prepared by Matsyendranatha and his disciple, Gorakh nadh or Gorakshanath. The early Nath texts teaches the Yoga known as Laya Yoga. Laya Yoga or the Yoga of Dissolution mainly aims for raising kundalini through energy channels or chakras. The early Nath text like Vivekamartanda can co-opt the Hatha Yoga mudras. Later the Hatha Yoga mudras of Nath as well as Sakta texts were adopted by Saiva system blending them with Laya Yoga methods. In the 15th century, the monks started to demonstrate postures at public places. then after Hatha Yoga got popularity in India. In the 18th century, the British photographers posted the photos of monks demonstrating dangerous asanas in the media. This brightened a wave of intrigue among Spiritual seekers in the western country. Many of them travelled to India to get a deeper comprehension of Yoga and Meditation. When the masters of Yoga travelled to west for sharing their information with others, then Hatha Yoga became popularized. In the midst of 20th century, The Yoga teachers like Indra Devi and B.K.S Iyengar published the Yoga Books in the midst of 20th century. Those books sold in millions. Today, there is a fast increase in the number of people doing Yoga. This is because the scientific community began to understand the depth and dimension of it.

At the same London Lecture, Jim Mallinson- author of the title "Roots of Yoga"- observed; "Yoga has been turned in to something you can 'fit in' to a busy modern lifestyle. But it came from something that was the complete opposite, and was viewed very differently to how we view yoga now".

The Significance of Hatha Yoga in daily life of Human Beings:

Scientists and researchers have found lots of benefits by practicing Hatha Yoga. It has the benefits of physical benefits, mental benefits and spiritual benefits. The main purpose of Hatha Yoga to become a wholesome being in harmony and without any disturbances. The daily practice of Hatha Yoga has been shown to make useful effects in lots of health conditions. such as cancer infertility, fibromyalgia, chronic backpain, heart disease, pregnancy, carpal tunnel syndrome, asthma, insomnia etc. Studies have repeatedly shown that Hatha Yoga has a number of benefits for both as physical and mental. Some of the most significant ones are:

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- **Better Sleep:**

2013 reviews noted that daily practice of Hatha Yoga can not only for people to fall asleep faster but can also enhance their quality of sleep. Researchers have shown that regular practice of Hatha Yoga helps a significant reduction in the usage of sleep aids.

- **Relief from Neck and Back Pain:**

A 2008 study review have shown that doing Yoga regularly helps to reduce the neck pain and back pain by improving the alignment, strengthening core muscles and correcting spinal imbalance. A 2019 meta-analysis also show that Yoga helps to enhance range of motion in the neck and decrease the intensity of neck pain.

- **Enhance Mindfulness:**

The 2018, survey of 1820 young adults' participants characterized better mindfulness as well as increased motivation to participate in different forms of physical activity and healthier eating habits by doing yoga practice regularly.

- **Reduce Stress:**

The 2017 study reveals that people who did Hatha Yoga right before performing a stressful task had lower blood pressure levels and lower cortisol levels. The people who did Hatha Yoga regularly reported that they become more confident about their performance in any task.

- **Lower Levels of Depression:**

According to 2013review found that practice of yoga once in a week reported lower scores on surveys measuring depression after only five weeks.

- **Improve Balance and Core Strength:**

2016 study reports that volunteers, who did Hatha Yoga 21 days regularly enhanced their core muscle strength as well as their balance.

- **Strengthen Flexibility:**

Small research conducted in 2015 noted that when the older women practice 90 minutes of Hatha Yoga techniques once in a week, they improved their spine and hamstring flexibility. At last researchers concluded that regular practice of Hatha Yoga by the elder people helps to improve the range of motion in the joints and increase their muscle flexibility.

Role of Hatha Yoga for Better Performance of Students in School

Daily practice of Hatha Yoga helps to improve individual creativity. A study conducted on the topic 'The effects of Hatha Yoga Intervention on student's creative ability' (2020) by Ashish Bollimbala, P.S. James, Shirshendu Gonguli. In this study 92 MBA student participants to enquire the impact of a 20-minute Hatha Yoga Session intervention against a short 20-minute case study session for the control group. The results of the study are that 20- minute practice of Hatha Yoga prominently improves divergent thinking. But the control group shows deterioration in divergent thinking. The high lights of this study are –

- Doing Hatha Yoga for 20-minutes enhance their divergent thinking.
- Doing Hatha Yoga for 20-minutes did not affect convergent thinking.
- Participating in work related activity reduces subsequent divergent thinking performance.
- Hatha Yoga does not have a universal effect on executive functioning.

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Hatha Yoga is beneficial to all age groups including children and adolescents. Adding Yoga in to school curricula provides plenty of benefits that improves students over all wellbeing and contribute to their academic performance. Regular practice of Yoga helps the children promotes the mental health and physical health and also improves their co- ordination, flexibility and strength. The different Yoga postures and movements engage different muscle groups, supporting the development of strong and balanced bodies. Likewise, integration of Yoga class to school curricula which encourages students to be physically active, reducing the sedentary behaviour and encouraging a fruitful life style. In addition to the physical health, Yoga practice produces mental wellbeing of all students. The mindfulness and relaxation techniques in Hatha Yoga also develops self-awareness and emotional regulation skills in children. By passing through the present moment and participating in deep breathing exercises, children learn to reduce anxiety, stress and negative emotions. It helps to create a conducive learning environment and improves children's ability to focus, memory power and participate effectively in their academic activities. Doing Yoga in group contribute an opportunity for students to interact with their peers in a positive and non-competitive environment. It helps to strengthen the social bonds and developing empathy and understanding among students. The most important benefits of integrating Yoga in to school activities, it helps to enhance academic performance of the students. It also promotes self-discipline, patience, sympathy and self-reflection. Students learn to fix the aims, work on them and also achieve the goals and celebrate their achievements. These skills are transferable to different areas of their lives, including academics and personal relationships and future careers.

The Scientific Aspects of Hatha Yoga Practices:

Hatha Yoga is known as the traditional forms of physical yoga that concentrates on the asanas or physical postures and pranayama or breathing exercises. Hatha Yoga, symbolizing the balance between Solar energy and lunar energy. So, the main purpose of Hatha Yoga is to create a harmonious union of the physical body and mind. Hatha Yoga includes a set of asanas or physical postures designed to improve flexibility, strength and balance. the other benefits of Hatha Yoga include improved flexibility of spine, increased immunity power and calmness of mind. Hatha Yoga aims to refresh not only the muscles and locomotor system but also the complete being consisting the mind, nervous system and vital inner organs. The Hatha Yoga practice integrates breathing practices to enhance relaxation and focus. Hatha Yoga is gentle and accessible form of yoga and it is suitable for both beginners and experienced practitioners. The physical benefit includes improved flexibility, strength and balance. The scientific aspects of Hatha Yoga include the benefits such as it improves strength, balance and flexibility. The other benefits of Hatha Yoga include the benefits such as:

The Physical Benefits:

- It is a relief for back pain.
- It can ease arthritis symptoms.
- It benefits heart health.
- It promotes relaxation.
- It helps to sleep better.

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- It improves energy levels and brighter moods.
- It helps to manage stress.
- It connects the people with a supportive community.
- It promotes better self-care.
- It improves the functioning of all body systems.
- It rejuvenates the ligaments.
- It increases the energy levels.
- It improves flexibility in the connective tissue.
- It improves the functioning of whole-body systems.
- It helps to stimulate the lymphatic system and cleanses the body.
- It improves mobility in joints.
- It boosts metabolism
- It improves the function of the lungs and heart
- It stretches the fascia and improves its condition.
- It stimulates the cell repair and regeneration.
- It improves the over all range of motion of the body
- It brings balance to the sympathetic and parasympathetic nervous system.
- It improves blood flow in the spinal cord and brain
- It helps to become more strong and powerful
- It improves respiration, energy and vitality
- It reduces the weight
- It improves the athletic performance

Mental Benefits of Hatha Yoga includes

- It energizes and calms one's senses.
- It improves the alertness.
- It balances the mind and body and establish a balance of state with them.
- It enhances the focus.
- It improves concentration power.
- It helps to deduct stress and anxiety
- It balances emotions.
- It relieves anxiety and depression.
- It removes the mental fatigue.
- It stimulates learning and development.
- It fosters creativity.

The Spiritual Aspects of Hatha Yoga Practices

Hatha Yoga is yoga style based on yogic traditions and cultures. The main purpose of Hatha Yoga is to improve flexibility of the body by integrating the richness of both solar and lunar energies. Embracing Hatha Yoga by all age groups have its scientific aspects as well as the spiritual aspects. The spiritual aspects of hatha Yoga includes –

- It encourages inner peace and happiness.
- It helps to aware of our inner being.
- It feels less connected to materialism.
- It helps to attain the ultimate consciousness.

There are variety of asanas included in the Hatha Yoga. Doing asanas heat the body and breathing practices helps to cool it down. This process cleanses our inner spirit and mind. while heating our body releases all physical stress in muscles, nerves and bones. The breathing exercises cools down our body and relaxes our mind and balances its energy. It is not a simple process or short-term process. It takes long duration of years to attain the human body's and mind's real consciousness.

Conclusion

Today, People practice Yoga for lots of reasons. Stress is the main reason. In their daily life, they face stress at their home, at the working places, at families etc. So, everyone needs a relaxation, pleasure, peace and wants to reduce stress. So, they turn in to Yoga practice daily. The breathing techniques and meditative postures in Yoga leads to reduce stress. Yoga is a scientific practice as well as a spiritual practice. Scientific practice includes the training of breath control, mindfulness, physical exercise and meditation. The spiritual practice includes that the practice which enquires for establishing a bond between the individual consciousness with universal consciousness realizing that we are a part of the universe not separated from it. Hatha Yoga is a preparatory process of Yoga. It establishes a proper balance between the Sun energy and Moon energy or 'Ida' or 'Pingala' with in one person. In Hatha Yoga, the people practice yoga and breathing exercises very slowly. So Hatha Yoga is better for beginners, who need better creativity and this will help to reduce anxiety and stress leads to aware of the bond between body and mind. It involves a sequence of yoga postures and breathing techniques.

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INNOVATIVE TEACHING AND LEARNING METHODOLOGIES IN HIGHER EDUCATION

Dr. K. Mummurthi
Educationist, 46,Rajalakshmi Nagar, Chidambaram

Abstract

Teaching is evolving to incorporate new methods and technologies to achieve educational goals. Previously, books were the sole means of providing instruction and personalized learning. Teaching is a cognitive process that involves careful planning of learning activities and creating a conducive learning environment. Teachers must continuously analyze and assess the classroom environment to develop strategies to change the behavior of learners with different interests and learning speeds. Teaching incorporates both artistic and scientific elements, and requires training to adhere to specific procedures. In the field of education, learners are considered the primary resources, equipped to teach in a constantly changing society. They undergo practical training in teaching and other pedagogical activities to achieve specific outcomes. Effective communication is crucial in teaching, as teaching is a scientific endeavor that requires methodical and structured approaches that must be followed step-by-step. Teaching is highly transmissible and requires a systematic approach to ensure effective learning. A fresh approach is needed to enhance active engagement, understanding, and cognitive growth of students.Contemporary students are proficient in using digital technology, and teachers must address challenges in customizing the educational process for diverse learning styles and evolving teaching demands. The primary obstacle faced by educators is to ensure that every student remains engaged during class and effectively convey ideas in a lasting impact. To properly address this difficulty, teachers should employ unique approaches and concepts that enhance the students' classroom experience and make it more enjoyable. Conventional teaching approaches are no longer efficient in meeting the current requirements of learning. The integration of both traditional and technological methods can enable an educational institution to achieve a position of superiority. Students who have been exposed to interactive technology from a young age tend to disregard traditional classroom lectures. What educators should prioritize is delivering students with pertinent and captivating learning opportunities.

Keywords: *Challenges in Education, Innovative Teaching and Learning, Methods, Higher Education*

Introduction

The teaching profession is self-organized and primarily carries out a social service, with education being a powerful tool for effecting change in any country. It involves an extensive duration of study and training, with individuals aspiring to pursue this profession engaging in several years of study and attaining a high level of expertise in the subject field. The teaching profession also possesses a significant level of self-governance, with independence in various aspects such as curriculum development, annual activity planning, setting instructional objectives, determining teaching methods, selecting media usage, establishing evaluation criteria, formulating admission and promotion rules, and planning and implementing co-curricular activities. These activities are strategically designed with the specific objectives of education in mind, to be accomplished within a defined timeframe.

The teaching profession is founded on a structured and comprehensive body of knowledge, derived from various aspects of social, psychological, historical, political, and economic domains. It is also shaped by the religious and spiritual convictions of a culture. The teaching profession adheres to a universal code of ethics worldwide. In the teaching profession, teachers continuously acquire knowledge and skills at every stage of the teaching process, resulting in

professional development during their in-service period. Education is a constantly changing field, with continuous advancements in teaching methods and other fundamental aspects. In-service teachers must seek to enhance their knowledge and update their existing teaching skills to perform expected tasks efficiently and effectively. The teaching profession possesses specific attributes that qualify it as a profession, considering the demands and aspirations of a constantly evolving society.

Conference is an instructional approach similar to class discussion, but with a smaller group of students. Teachers divide large classes into smaller groups to facilitate conversation or address specific problems. This method is used before and after observation visits, as a pre-visit and post-visit conference. The lecturer may engage other professors to facilitate the conference groups. The goal is to provide students with learning experiences that cannot be offered through lectures or other means. Convention Conference enhances lectures by facilitating question-asking, clarification of doubts, task completion, and assessment of individual learning. It also offers individualized direction and guidance to students, including those with slow learning, specific interests, or exceptional intelligence. The process of teaching and learning by encouraging independent, critical, and creative thinking, facilitate skill acquisition using cutting-edge technology equipment, offer information on resources and events related to improving teaching and learning, investigate strategies for effective instruction and learning in primary and secondary settings, facilitate the exchange of exemplary teaching and learning experiences among educators, and enhance the enjoyment and engagement of teaching and learning to fulfill the requirement of free and mandatory education.

In the 21st century, India is facing significant changes and innovation, necessitating a shift from traditional teaching methods to interactive education. This shift aims to promote long-lasting and marketable skills and enhance the skills of both teachers and students.. Research has shown that many students fail to comprehend course material when delivered through traditional lecturing, highlighting the need for improvement in teaching and learning approaches. To address this issue, educators worldwide are promoting innovation and exploring new teaching styles. Innovative teaching methods can improve academic achievement across students from diverse backgrounds, as the rapid and exponential rate of various aspects of life, such as employment, technology, culture, lifestyle, and environment, necessitates students acquire new skills and information.

Various institutions providing higher education have made efforts to implement and test modifications in their teaching methods, with extensive research conducted in this area. A study by Ganyaupfu (2013) found that the teacher-student interactive method was more effective than the teacher-centered approach in terms of teaching. This approach focuses on fostering profound comprehension, problem-solving, and creativity, while also ensuring active participation and interaction among all students in the class. Critical pedagogy attempts have been undertaken to implement and test alterations in the instructional approach, with many educational institutes conducting extensive research in this topic. Education is widely recognized as a powerful tool for promoting social change and improving the lives of individuals in society. However, the quality of education can only be improved by implementing creative teaching methods that make the information engaging and inspire learners.

Pedagogical Effectiveness of Innovative Teaching Methods

In today's digital age, multimedia tools have become the most potent means of communication. Many educators are skillfully using a blend of diverse digital media formats, including text, graphics, audio, and video, to teach pupils, making this technique highly efficient in facilitating the transfer of knowledge. Many higher education institutions have used problem-based learning to improve students' creativity and analytical problem-solving skills. Multimedia technology enhances the teacher's ability to convey information in a more significant and impactful manner. Course material presentations are created using multimedia resources to meet specific needs, ensuring that students understand the content and are inspired to focus on the material, helping them retain the information for a longer period of time. Examples of multimedia technology include PowerPoint presentations, educational videos on YouTube, Gyan Darshan broadcasts, NPTEL video lectures, SWAYAM courses, and MOOCs.

Position playing is a powerful tool that allows students to quickly implement knowledge by assuming the role of a decision maker responsible for making policy decisions and allocating resources optimally. This technique is highly effective for actively involving students and facilitating their interaction with classmates while they work towards accomplishing their allocated task within their designated role. Role-playing techniques in education can enhance the attainment of learning objectives, as it facilitates a deeper comprehension of the information by students, fosters enhanced collaboration and synergy among pupils, and resolves many classroom difficulties and enhance interpersonal relationships.

Role acting is an effective method for teaching complicated concepts in a simplified manner, allowing students to actively participate in their academic learning, thus enhancing their understanding and knowledge. The primary benefit of utilizing role playing as an instructional tool lies in its inherent active aspect, as participants engage in conversations on theoretical issues related to behavior, as well as explore alternative approaches such as role play and novel behavioral strategies. Therefore, there is an emphasis on actively engaging in the learning process, which improves the learning experience.

Flipped Classroom Learning is another approach that focuses on active learning methods, such as problem-solving, case-based situations, and interactive discussions, all facilitated by the teacher. In conventional learning, students typically complete homework or apply their classroom knowledge at home, with no teacher available to provide assistance. In a flipped classroom setting, the instructor or professional educator is available in the classroom to address inquiries from students as they apply new knowledge and concepts. Another benefit of a flipped classroom is that students have the opportunity to review lecture topics at their own preferred speed and can revisit and replay certain sections of the lecture as frequently as necessary.

Active learning is essential for students, as it goes beyond simply listening to a lecture and involves students actively improving their cognitive and creative skills by engaging in project-based work. This allows students to critically analyze tasks at hand and contemplate the underlying objectives. Active learning can be easily included into pre-existing lectures and can be effectively employed in expansive lecture hall environments. To achieve the best outcomes, students must independently plan and prepare their learning process, actively engage in learning, and effectively regulate, control, and retain their learning activities.

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E-Conferences and webinars offer numerous advantages, including active workplace participation, unlimited participation, instant feedback, and the ability to store the entire process for future use. Participants can express their opinions, receive instant feedback, and comment on posts. Both synchronous and asynchronous communication are possible, and archived sessions are accessible for future consultation. These events eliminate regional, national, and international boundaries, allowing teachers and educators from various countries to collaborate and exchange their work on a single platform.

A seminar is a group discussion similar to a symposium, typically used with students at collegiate and university levels. It aims to provide students with the opportunity to use a scientific method to analyze and synthesize observed data to find answers to questions or solutions. The methodology involves the entire class, smaller groups, or individual students choosing issues and applying problem-solving procedures. Students engage in extensive literary research and gather factual information from primary sources. The facts are gathered, examined, and summarized under the direct supervision of a teacher. Periodic reports and conversations occur at different stages of problem-solving to exchange experiences and conduct rigorous evaluations, overseen by the chairman, typically a student. The efficacy of a seminar depends on the careful selection and thorough preparation of the topic, as well as the teacher's guidance in choosing, strategizing, organizing, gathering, analyzing, and presenting facts to the group. The seminar offers several benefits, including instruction in autonomous learning, encouraging the development of autonomous thought, fostering camaraderie and collaboration, and fostering a collaborative disposition.

Higher education pedagogy has experienced numerous transformations over the past two decades, with many institutions embracing innovative approaches to teaching and learning. Teachers are increasingly eager to embrace novel instructional methods, as multiple studies have shown that the use of new teaching and learning methods has had a major positive impact on student performance and classroom attendance. Educators possess several attributes, including effective communication, active listening, extensive knowledge, compassionate connections with students, amiability, planning, organizing, diligence, community fostering, and high standards. They possess a sense of humor, personality, adaptability, kindness, leadership, classroom management, calm demeanor, experience, and multitasking. An exceptional educator is the most valuable resource of a nation and holds the most crucial position within a community. They have the potential to save a society lacking purpose or meaning, and it is imperative to have competent educators to establish a society composed of compassionate and kind individuals.

Advance pedagogy is a method of using advanced teaching methods and strategies to improve the performance of teachers and learners. It involves the use of technology and multimedia in various functions such as teaching, question paper creation, student assessment, feedback, and research technique. The purpose of education is to ensure that content taught by academic professionals is understandable to students from varied cultural and linguistic backgrounds, and that they quickly become familiar with the anticipated standards. Incorporating technology into teaching and learning approaches can provide students with a comprehensive learning experience and faculty with a fulfilling teaching experience. The two prevailing educational models implemented worldwide are face-to-face learning and hybrid learning. Hybrid learning combines technology-driven asynchronous instruction with

traditional methods, offering advantages such as a catalyst for knowledge acquisition, temporal flexibility, and alleviating overcrowded classrooms.

The hybrid teaching model enhances students' soft skills, critical thinking, problem-solving abilities, proficiency and technical abilities, faculty's ability to achieve course teaching objectives more effectively, and promotes extracurricular learning. Technology in teaching stimulates students through activity-based learning, enhances the appeal of materials, and enhances media literacy. Technological Pedagogical Content Knowledge embodies the characteristics of an emerging hybrid educator who must navigate the convergence of these attributes. Podcasts are sequential audio recordings that are routinely published on the internet, providing flexibility, the capacity to reuse lectures, and are beneficial for students with hearing impairments. Screencasts have become a significant instructional tool on the Internet, providing detailed explanations of processes, elucidating specific concepts, or delivering PowerPoint presentations accompanied with narration and multimedia components. They can be used in any educational setting either as a component of live instruction or as the primary lesson, following the flipped teaching style.

To produce an instructional screencast that fulfills content objectives, it is necessary to employ a methodical approach to the preparation process. Screen casting is a potent, efficient, and cost-effective learning technique that can enhance learning in any subject. Incorporating brainstorming sessions in classrooms can stimulate creativity by allowing students to express their opinions without fear of correctness or incorrectness. These sessions can be individual, group, or paired. Embodied learning is an educational approach that integrates physical movement and sensory experiences to enhance learning and understanding. It involves the conscious recognition of the body's involvement in interacting with a real or virtual environment. Technological advancements in this field include wearable sensors for collecting personal data, visual systems for monitoring movement, and mobile devices that can detect and respond to activities like tilting and motion. This methodology can be used to examine various aspects of physical sciences and analyze simulated scenarios.

Incidental learning refers to the acquisition of knowledge or skills that occurs without deliberate effort or planning. It can occur during the execution of an activity that appears unconnected to the subject being studied. Initial investigations focused on the process of acquiring knowledge and skills during regular work activities. Mobile devices have become an integral part of people's daily lives, offering numerous opportunities for accidental learning aided by technology.. However, it can initiate introspection and motivate learners to view disconnected pieces of learning as integral parts of a cohesive and extended learning process.

In contemporary education, the primary approach should prioritize student autonomy, self-directed learning environments, and hands-on experiential training. This entails providing students with opportunities for decision-making and initiative, as well as implementing adaptable training programs that allow them to work at their own pace. Interactive training methods can stimulate interest in the profession, facilitate effective learning of training material, establish behavioral patterns, enhance motivation, strengthen knowledge, foster team spirit, encourage freedom of expression, and contribute to the development of comprehensive skills in future professionals.

Behavioral modeling is another method that provides students with behaviors that effectively align with real-world professional settings, enabling them to fully engage in

professional activities and quickly adjust to specific conditions. Narration Storytelling imparts the principles of professional conduct to aspiring professionals through the use of myths and anecdotes from real-life professional experiences. The teacher equips the student with the necessary knowledge and skills to comprehend traditions, philosophy, culture, and professional activities related to their field of work. To prevent future specialists from experiencing disappointment in their career decision, it is essential to offer them with comprehensive and accurate information about the objectives they can expect to achieve. This strategy facilitates the rapid acquisition of job-specific knowledge, governing documents, career prospects, and other relevant information for the pupils. This approach facilitates the rapid adjustment of students to the profession and enables them to develop informed assessments of professional activities and their societal significance.

Conclusion

The traditional teaching approach focuses on imparting knowledge and guidance to students, with the teacher determining content and teaching methods based on typical student needs. This approach often fails to consider individual student needs and interests. The teacher's primary focus is on passive listening, reading, writing, and reproducing information presented by the teacher. The teacher's administration of the classroom relies on their expertise and personal preferences, and they have complete authority over classroom discipline principles. Transferring knowledge from experienced teachers to younger students can be advantageous for students, as demonstrated by successful individuals who have emerged from traditional educational environments. However, learners face unfamiliar and abstract concepts that require clear explanations. Teachers should demonstrate experiments or activities using materials or instruments in hazardous situations to help young children manage them.

In large classrooms with high student populations, teaching in a large group becomes the only practical approach. Each strategy has its use and constraints, and its suitability depends on how well it aligns with specific needs. This study explores various instructional techniques in nursing education, including classroom-based and clinical-based methods. These techniques include lecture, discussion, demonstration, role acting, project, and simulation. The effectiveness of these methods depends on the instructor's characteristics and abilities. The outcomes depend on the objectives, student capacities, and psychological principles. It is also noted that certain techniques are more effective than others. The fundamental nursing program heavily relies on students' practical experience to train them as competent and efficient professionals. The acquisition of skills, attitudes, and competencies through direct experience enhances students' confidence and ability to handle problems and provide tailored care. Learner-centered approaches prioritize comprehensive development of students, with activity-based learning being widely adopted in many schools. Competency-based approaches achieve competencies through various modes and methods, while the constructivist approach believes that students can build their own knowledge by drawing on previous experiences and interacting with the social environment.

Each technique has its strengths and limits, and the instructor must evaluate the suitability of the strategy taking into account the students' needs and the current learning environment. Interactive training methods such as case study, behavioral modeling, storytelling, basket, and action learning can significantly improve the effectiveness of professional training for students.

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These strategies equip students with essential knowledge and abilities to effectively navigate the complexities of the professional world, enabling them to gain the necessary competencies for their future careers. However, management education in India faces challenges such as an emphasis on theoretical knowledge rather than actual implementation, a lack of industry exposure, and a significant gap between business and academia. To address these issues, management education should prioritize case studies, offer a well-rounded mix of industry knowledge, teaching skills, training opportunities, research capabilities, and consultation expertise, and equip students with practical knowledge that bridges the gap between theoretical concepts and real-world experience in the industry.

Indian students often pursue uninterrupted education from foundational to postgraduate level, leading to a dearth of practical industry experience and challenges in acquiring management education through conventional classroom approaches. Management education globally emphasizes case studies, and management educators often possess a well-rounded blend of industry experience, teaching skills, training abilities, research knowledge, and consultation proficiency. They can apply their skills to teach their knowledge to students who already have some industry experience.

The India Council for Technical Education (AICTE) should enhance its oversight of non-compliant educational institutions to guarantee equitable access to high-quality management education and undertake periodic inspections to prevent corruption in Indian educational institutions. Successful management education requires active participation and collaboration between students and educators to support the transfer of knowledge, skills, and talents in the classroom. Management education incorporates both creative and analytical parts, with creative skills honed through classroom instruction and analytical abilities acquired through hands-on experience in the corporate world.

To implement effective management education, universities must establish comprehensive grading rules, conduct orientation workshops, and actively support and promote the adoption of entrance examinations for admission to higher education institutions. The National Evaluation Organisation (NEO) can be used to create, plan, and manage entrance exams for admissions. In response to the National Policy on Education (NPE) in 1986, NCERT organized a National Seminar on Examination Reforms, which focused on topics such as scale and grading, continual comprehensive internal evaluation, and the creation of balanced question papers. Teachers play a crucial role in evaluating students' knowledge and skills, designing instructional plans, engaging in activities tailored to individual needs, and using pre-assessment tools to generate interest in upcoming subjects or proficiency. Students also demonstrate their existing knowledge and identify areas of ignorance to facilitate further learning, access their memory repository, contribute expertise, and identify specific areas of interest to investigate during the next study.

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INTEGRATING LIFE SKILLS APPROACHES TO SUSTAINABLE DEVELOPMENT GOAL'S AND PSYCHOSOCIAL DEVELOPMENT: A NECESSARY LEADING STRATEGY

Ms. K.U. Sukanya
Research Scholar, NSS Training College, Ottapalam

Dr. K.P. Seema Menon
Professor, NSS Training College, Ottapalam

Abstract

The psychosocial development of a child is a dynamic and intricate process influenced by biological, psychological, and social factors. Rooted in Erikson's Stages of Psychosocial Development, this developmental journey involves crucial milestones during childhood, adolescence, and adulthood. Integral to this process is the seamless integration of life skills—such as empathy, communication, self-awareness, critical thinking, and creativity—which collectively contribute to the holistic growth of an individual. Life skills serve as the building blocks for psychosocial development, facilitating a child's ability to navigate interpersonal relationships, understand emotions, and tackle challenges effectively. For instance, communication skills aid in expressing thoughts and emotions, while empathy fosters a deeper understanding of others' perspectives, nurturing meaningful connections. Self-awareness and critical thinking empower children to form a robust sense of identity and make informed decisions, essential components for psychological resilience.

The significance of this integrated approach transcends individual well-being, aligning with Sustainable Development Goals (SDGs). Life skills are instrumental in nurturing socially responsible and empathetic individuals, addressing goals related to quality education, gender equality, and reduced inequalities. By fostering holistic growth, psychosocial development contributes to the formation of citizens equipped with the competencies necessary for active participation in building sustainable, inclusive societies. As children develop these life skills, they become agents of positive change, shaping a future aligned with the principles of social justice and equality outlined in the SDGs.

Keywords: *Life Skills, Psycho Social Development, Sustainable Development Goals*

Introduction

Psychosocial development in children is a multifaceted journey, intricately weaving together psychological and social dimensions that profoundly impact their cognitive, emotional, and social well-being. This developmental process lays the groundwork for a child's future interactions, relationships, and overall mental health. This essay delves into the factors that shape psychosocial development, encompassing family dynamics, peer interactions, educational environments, and the role of media and technology. Moreover, it explores the crucial role of various stakeholders, including parents, teachers, peers, and the broader community, in creating environments that facilitate productive growth.

Erikson's Stages of Psychosocial Development, introduced in the 1950s, expands on Freud's psychosexual development theory, incorporating social dynamics and extending the framework into adulthood. This bio-psychosocial approach has significantly influenced various fields, such as gerontology, personality development, and identity formation.

Stages and tendencies: The theory outlines eight sequential stages throughout the lifespan, each marked by opposing psychological tendencies and resulting in the development of ego virtues or maldevelopment. For example, in adolescence (Stage 5), individuals navigate the tension between ego identity and confusion/diffusion, yielding the virtue of fidelity or the maldevelopment of repudiation. Balancing these tendencies is crucial, as extremes can lead to maladaptive or malignant outcomes.

Components and periods: While some attempt to assign specific ages to each stage, Erikson initially defined periods within childhood, adolescence, and adulthood. Each stage offers examples where positive attributes can be furthered. Childhood stages, including Trust vs. Mistrust and Autonomy vs. Shame, set the foundation for later psychosocial development. Adolescence introduces the critical Identity vs. Identity confusion stage, while adulthood includes stages like Intimacy vs. Isolation and Generativity vs. Stagnation. The final stage, Integrity vs. Despair, marks old age.

Continuity and flexibility: Erikson's stages are not rigidly fixed, and resolution is a lifelong process, reactivated by life events. Advancing to a new stage involves questioning and reintegrating preceding stages. This 'epigenetic principle' underscores the ever-evolving nature of identity formation, challenging the notion of a concrete system. Research suggests that the latter four stages somewhat repeat aspects of previous ones, highlighting the ongoing developmental process.

Clinical significance and tools: Erikson's theory has clinical significance, influencing treatment approaches for various mental health stages. The acceptance and trust stages, for instance, align with stages of mental illness recovery. Tools like the Erikson Psychosocial Stage Inventory (EPSI) and modified versions are reliable for assessing psychosocial development. Psychodynamic psychotherapy models also draw from Erikson's concepts.

Application in Health Care: In healthcare, particularly mental health, Erikson's stages serve as a guide for providers treating patients facing pivotal life adjustments. When considered in the context of social and cultural factors, it enhances patients' self-awareness and understanding. While many stages focus on early life, they can be a conceptual guide for individuals facing significant life transitions later on.

Factors Influencing Psychosocial Development

Family Dynamics: The family unit stands as the primary environment where psychosocial development unfolds. Positive family dynamics marked by love, support, and effective communication foster emotional resilience and a secure attachment, pivotal for healthy psychosocial development. Conversely, dysfunctional family dynamics, such as neglect or abuse, can have detrimental effects on a child's emotional well-being.

Peer Interactions: As children progress through their formative years, peer interactions become increasingly influential. Socializing with peer's aids in the development of essential social skills, empathy, and a sense of belonging. Positive peer relationships contribute to self-esteem and emotional regulation, while negative experiences may lead to social anxiety or behavioural issues.

Educational Environment: Schools play a pivotal role in psychosocial development. Positive interactions with teachers and peers, along with a supportive learning environment, contribute to cognitive development and emotional well-being. Conversely, bullying, academic

pressures, or inadequate support systems can adversely impact a child's psychosocial development.

Media and Technology: The pervasive influence of media and technology is a contemporary factor affecting psychosocial development. Exposure to age-appropriate content can enhance learning and social awareness. However, excessive screen time, exposure to violent content, or engagement with social media may contribute to anxiety, depression, and altered social perceptions.

Creating Environments for Productive Growth:

Promoting Social-Emotional Learning (SEL): Incorporating SEL programs in schools enhances emotional intelligence, self-awareness, and interpersonal skills. These programs provide children with tools to navigate emotions, resolve conflicts, and build positive relationships.

Parental Education and Support: Educating parents on effective parenting strategies, communication skills, and the importance of a nurturing environment is crucial. Support systems, such as parenting workshops or community programs, empower parents to create environments that support psychosocial development.

School-Based Intervention Programs: Schools can implement intervention programs that identify and address psychosocial challenges early on. Guidance counsellors, mental health professionals, and peer support programs contribute to creating a holistic educational environment.

Media Literacy Programs: Implementing media literacy programs in schools and communities equips children with the skills to critically evaluate media content. This empowers them to make informed choices, fostering a healthy relationship with technology and me

Weaving Life Skills into the Tapestry of Psychosocial Development: A Necessary Symbiosis

Psychosocial development, the intricate dance between our inner world and external interactions, shapes who we become. It's a tapestry woven with threads of emotional well-being, social competence, and cognitive growth. Life skills, those practical and adaptable abilities, are not merely tools; they're the vibrant colours that bring this tapestry to life, enhancing our resilience and enabling us to navigate the complexities of life. Take, for instance, a child navigating the tumultuous waters of adolescence. Social awareness, a crucial life skill, allows them to understand and empathize with peers, fostering positive relationships. This, in turn, bolsters their self-esteem and emotional security, vital pillars of psychosocial development. Conversely, the inability to manage conflict constructively, a skill gap in life skills, can lead to social isolation and emotional turmoil, hindering their overall well-being. Beyond interpersonal skills, life skills like critical thinking and problem-solving empower individuals to make informed decisions. Imagine a young adult facing academic pressure. With effective communication and time management skills, they can advocate for support, navigate deadlines, and achieve academic success. This not only bolsters their cognitive development but also strengthens their self-confidence, a cornerstone of healthy psychosocial development. Similarly, financial literacy, a life skill often overlooked, plays a crucial role. Understanding budgeting and responsible credit management fosters a sense of control and independence,

contributing to emotional stability and well-being. Conversely, financial insecurity can be a significant stressor, impacting mental health and social interactions.

The integration of life skills also empowers individuals to cope with challenges and build resilience. Consider a teenager facing the loss of a loved one. Self-awareness, a key life skill, allows them to understand and express their grief, facilitating emotional processing. This, in turn, strengthens their coping mechanisms and promotes healthy psychosocial adjustment. The importance of life skills integration extends beyond individual well-being. It fosters a society where individuals can contribute meaningfully. When equipped with communication and collaboration skills, individuals can effectively work towards common goals, building stronger communities. Critical thinking and problem-solving skills, when applied collectively, can tackle social issues and drive positive change.

In conclusion, life skills are not mere add-ons; they are the very threads that weave together the fabric of psychosocial development. By integrating these practical abilities into our educational systems, support networks, and communities, we can empower individuals to navigate life's challenges with confidence, resilience, and a sense of purpose. Only then can we truly create a tapestry of well-being and collective progress.

Integrating Life Skills into Sustainable Development Goal's

Skills are categorized into four dimensions: Empowerment, Citizenship, Learning, and Employability, each comprising a cluster of ten core skills. These dimensions are interconnected and mutually influence one another. For instance, negotiation and decision-making skills, integral to employability, extend their relevance to empowerment and social skills. In contexts of gender inequality, these skills become crucial for adolescents advocating for themselves in decision-making processes related to education, health, and participation. Self-awareness and critical thinking play a pivotal role for girls navigating educational opportunities, encompassing aspects like self-esteem, self-care, and awareness of rights and power dynamics. Citizenship skills involve grasping and applying concepts such as democracy, fairness, justice, rights, responsibilities, equal opportunities, equity, equality, identity, cohesion, ethics, and legislations. These skills encompass critical thinking, participation, decision-making, negotiation, and communication. Citizenship skills are comprehensive, covering dimensions like communication, empathy, participation, critical thinking, problem-solving, negotiation, and decision-making. These skills are vital for civil deliberation, government monitoring, coalition-building, peaceful conflict management, and engagement with public bodies through petitions, speeches, or testimonies.

Skills can be cultivated progressively and in various contexts throughout one's life. Integrating these skills into curricula is most effective when aligned with the national curricular framework. Drawing from the National Curriculum Framework (NCERT, 2005), specific periods within the educational journey can be identified for emphasizing particular skills, thereby supporting learning achievement and empowerment. While recognizing the significance of life skills across the lifespan, brain science highlights those skills like participation, communication, or negotiation, initiated in early childhood, tend to consolidate more effectively in later years. Social and self-empowerment skills, especially, retain high adaptability throughout childhood, early, and late adolescence. The concept of lifelong learning underscores that initial education cannot provide all life-relevant competencies. Competencies

evolve and fluctuate over the lifespan, subject to acquisition or decline. Changing technological, social, and economic structures shape evolving demands on individuals throughout adulthood. Contrary to the notion that competence development concludes early or in adolescence, developmental psychology asserts that it extends into adult years. Specifically, the capacity for reflective thinking and action, central to the framework, matures with age. Therefore, significant life skills can have perpetual continuum throughout one's life and can also be integrated with the larger framework of Sustainable Development Goal's.

Communication and Participation

Effective communication channels, fostering openness and inclusivity, are crucial for achieving Goal 16 (Peace, Justice, and Strong Institutions). When individuals actively participate through transparent communication, institutions become more accountable, contributing to the establishment of just and peaceful societies. In essence, communication is the bedrock upon which accountable and participatory institutions can be built.

Self-awareness and Empathy

SDGs related to health and education benefit significantly from enhanced self-awareness and empathy. Goal 3 (Good Health and Well-being) is advanced when individuals are self-aware and prioritize mental health. Additionally, empathy in educational settings, aligned with Goal 4 (Quality Education), ensures that diverse perspectives are acknowledged, fostering an environment where everyone, regardless of differences, can access quality education.

Critical Thinking and Creative Thinking

Goal 9 (Industry, Innovation, and Infrastructure) emphasizes the importance of innovation for sustainable industrialization. Here, critical thinking is the engine behind innovative solutions, fostering advancements in industry and infrastructure. Moreover, Goal 4 (Quality Education) is furthered by nurturing creative thinking, ensuring that education is not just about information retention but also about fostering creativity for problem-solving and adaptability.

Problem Solving and Decision Making

Addressing Goal 2 (Zero Hunger) and Goal 6 (Clean Water and Sanitation) requires effective problem-solving and decision-making skills. Individuals capable of strategic problem-solving contribute to sustainable agriculture, ensuring food security. In tandem, informed decision-making is vital for responsible water resource management, aligning with the objectives of Goal 6.

Empowerment and Citizenship

Life skills related to empowerment and citizenship directly impact Goal 5 (Gender Equality) and Goal 10 (Reduced Inequalities). Empowered individuals actively participating in civic processes contribute to gender equality and work towards reducing societal disparities. Life skills empower individuals to be informed, responsible citizens, fostering social cohesion and supporting initiatives aimed at reducing inequalities.

In essence, each life skill plays a multifaceted role in the pursuit of sustainable development. By empowering individuals with these skills, we not only enhance personal

growth but also contribute to the collective effort of building a more sustainable, equitable, and resilient world.

Operationalization

In order to provide children and young people with a profound sense of empowerment, life skills are essential. Empowered persons possess the ability to acknowledge their own identity and value, as well as that of others, and combine the collective qualities of a group to facilitate both societal and personal transformation. The framework serves as the cornerstone for developing an operational strategy that includes procedures at multiple venues wherein people or groups with diverse backgrounds—including origin, age, ethnicity, caste, class, religion, and gender—are accepted and treated fairly on a social and cultural level. In order for this empowerment to be sustained, problems must be solved with durability, and children and young people must get regular, sufficient scaffolding to help them become change agents in society.

Program Access to Life Skills

Ensure life skills development programs accessible, with safe and secure platforms and environments for delivery. Establish convenient and adaptable schedules for the life skills development platforms, both inside and outside of schools, to guarantee children's and youths' regular participation.

Incorporate Life Skills initiatives into the current Social Protection Plans to encourage kids and teenagers to enroll in and finish the program.

Development and Training: Provide consistent guidance and assistance to accountable personnel and organizations that possess the capacity to foster the development of abilities in young people and individuals. These include head teachers, classroom instructors, and school administration committees in educational environments.

The Child Protection Committee (CPC), Self Help Groups (SHG), and Local Governance (Panchayati Raj Institutions-PRI) are examples of these in the community. In their capacities, duties, and jurisdiction, they must be trained and orientated in various skills and approaches to help and nurture children and young people. These employees' and groups' participation, sensitivity, and listening abilities must be fostered via the training programs. Enhance the agency, learning, and leadership skills of mentors and make sure they are involved in decisions that impact their personal and professional lives. Conduct development and training programs for parents, the school management committee, the administration, and other community leaders.

Content Measurement and Material: Create or implement curriculum with a gender focus to dispel gender stereotypes in community-based and classroom settings. This curriculum, which may be used both independently as part of community-based treatments and as part of the school curriculum, requires that significant mentor-student interactions that question preexisting power dynamics be positioned in order to entrench children's and adolescents' social realities.

Platforms: Integrate the Life Skills Programme seamlessly into the existing school curriculum, co-curricular activities, and vocational programs, ensuring a harmonious and impactful approach while maximizing the effective use of classroom time. Existing literature

strongly supports the idea that skills are best acquired when woven into the teaching methodologies of core subjects like mathematics, literacy, and science, extending to diverse fields such as sports and arts.

Create dedicated platforms within schools for the development of life skills, catering to both in-school and out-of-school children and young individuals. In-school platforms may encompass leadership initiatives, sports, morning assemblies, cultural events, drama and debate forums, children's governance structures, committees, among others. Meanwhile, out-of-school platforms should extend to community-based adolescent groups, sports activities, cultural events, and civic engagement initiatives. This comprehensive integration across educational settings and community environments aims to provide a holistic approach to life skills development, recognizing the diverse contexts in which these skills are fostered and applied.

Collaborations: To foster an atmosphere that is supportive of children and young people, forge strong community ties to influence parents and the community on important gender and social issues. Develop processes that are enablers, fostering a sense of worth, compassion, and trust among all those who administer and take part in the Life Skills Program. Work together with the government, business community, and civil society to achieve coordinated and expedited results. Work with the private sector and possible employers to create platforms that assist in putting life skills into practice. You can also teach these skills by volunteering or offering internships, and then you can connect internships with job prospects. Create a cooperative accountability framework by designating roles and duties for each enabler and stakeholder.

Conclusion

In conclusion, life skills emerge as fundamental building blocks for personal and societal development, fostering competencies that extend far beyond traditional academic realms. The integration of life skills into Sustainable Development Goals (SDGs) forms a symbiotic relationship, where the nurturing of essential abilities aligns seamlessly with the broader objectives of sustainability, equity, and human development. The operationalization of life skills involves a strategic and multifaceted approach, emphasizing their manifestation at various stages of an individual's life. By aligning with national curricular frameworks, life skills can be strategically emphasized during distinct periods, ensuring a progressive and effective developmental trajectory. The malleability of certain skills, such as communication and negotiation, across different life stages underscores the concept of lifelong learning, reinforcing the idea that competence development is an ongoing process.

This integration finds practical expression in educational settings, both within formal curricula and through diverse co-curricular and extracurricular activities. The operational strategy involves providing accessible and flexible life skills programs, creating safe and secure platforms for their implementation within schools and communities. Collaborative efforts with various stakeholders, including the private sector, civil society, and government, are crucial for synergistic and accelerated impacts. The manifestation of life skills goes beyond individual empowerment; it plays a pivotal role in achieving broader societal goals outlined in the SDGs. These skills contribute to creating responsible and engaged citizens, addressing gender inequalities, fostering social justice, and building a knowledge society. In essence, the

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integration of life skills into SDGs represents an investment in the holistic growth of individuals and communities, ensuring a sustainable and equitable future.

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A STUDY ON DIGITAL COMPETENCE (TPACK) SELF EFFICACY AND ATTITUDE TOWARDS ICT AMONG B.ED TRAINEES

Ms. G. Mahalakshmi
Research Scholar, Department of Education
Lady Willingdon IASE, Triplicane

Abstract

Technology has significant effect on every aspect of our daily life, and education is no exception. Technology has also starts to change the teachers role and learners role. Technology is a powerful tool and Teachers must understand how technology can be correlated with pedagogy and content knowledge in order to integrate technology effectively into classroom instruction. Self efficacy is the confident teacher having in their work. It has been shown that the beliefs of a teacher are closely linked to the technologies that they use and the way in which they use them. Significantly, the teachers Digital Competence are important in terms of using technology in the classroom because belief about their capability to use technology is a powerful predictor of their potential technology use. Attitude towards ICT means setting personal goals. The research investigator uses survey method for collecting the data. For measuring Self efficacy investigator adopted self constructed 3 point scale, The investigator use standardized and validated tool for measuring Attitude towards ICT. The sample drawn from the population of students belongs to B.Ed., colleges in Chennai Tamil Nadu. The total number of sample was 69 B.Ed trainees, 33 B.Ed trainees were Male and 36 B.Ed trainees were female. For analyze the data statistically, the investigator used Mean, Standard Deviation, 't' test. The findings showed that the Digital Competence of self efficacy and Digital Competence of Attitude towards ICT has no significant difference in gender and location and significant on the basis of age. Hence, it is critical to measure pre-service teachers' self-efficacy beliefs and Attitude towards ICT towards Digital Competence in order to identify the factors that contribute to a teacher's use of technology in classroom instruction.

Keywords: *Digital Competence, Technological Pedagogical Content Knowledge, Self Efficacy, Attitude towards ICT, B.Ed trainees*

1. Introduction

The standard of a nation depends on the calibre of its citizens, quality of citizens is based on the quality of education and the quality of education depends on the quality of teachers. There are many new technologies being used in the present-day classrooms. Digital Competence (Technological Pedagogical Content Knowledge). It is a theory that was blossomed to describe the set of knowledge that teachers need to educate their students a subject, teach effectively, and use technology. Digital Competence is an educational framework that examines the ideal combination of technological and pedagogical choices made by an educator to most effectively transmit their content experience (Mishra & Koheler, 2006).

Digital Competence has been launched in the educational field to have a clear idea about the content knowledge of the teachers. Pedagogy has been introduced for the effective integration of technology in teaching. Digital Competence improves the core ideas of Shulman's idea of Pedagogical Content Knowledge (PCK) with the inclusion of technology as another domain. A developing body of research has lengthened the work of offering a conceptual framework known as Digital Competence or Technological Pedagogical Content knowledge.

Teaching holds the most pivotal position and helps in the prosperity of any educational system. Students' enhancement is influenced by media literacy. Developing a critical analysis of media consumption is considered as a paramount skill for students. Technology and media intersects each other in the process of learning in order to understand it, consider the compatibility between theories of technology and education, and how that relates to the content. There is a need for teachers as well as the institutions to identify and articulate the occupational realities during the overlapping of technology and Aspirations have been shown to be a strong achievements. The aspiration level of teacher trainees has a great affect on the education system.

2. Need and Significance of the Study

To eliminate the difficulties in teaching learning strategies and to provide better learning environment, it is necessary to discover a new method. The study of Digital Competence (Technological Pedagogical Content Knowledge) has a great significance in learning. It strengthens the students' level of education. Pedagogical Content Knowledge incorporates the understanding that gives the learning of both complex and simple subjects. It is the information of various teaching methods for various subjects. It is the mixing of teaching methods and content with the understanding of managing the issues in education, the method for arranging, representing and adopting diverse student interests and abilities. Pedagogical Content Knowledge is the convergence and connection of instructional methods and content learning. It covers fundamental information of teaching and learning, content-based curriculum, and additionally evaluation and reporting of that learning.

A B.Ed trainee's belief in his/ her own capability to prompt student engagement and learning, even when students are difficult or unmotivated. Teachers with high self-efficacy are more open to new teaching methods, set themselves more challenging goals, exhibit a greater level of planning and organization, direct their efforts at solving problems, seek assistance, and adjust their teaching strategies when faced with difficulties. Attitude towards ICT have been shown to be a strong outcome predictor, in other words achievements.

3. Operational Definition of the Key Terms Used

Digital Competence

This is the hybrid method of teaching in which ICT is being used for teaching learning situation. Literally, 'pedagogy' refers to the art-science of teaching and 'techno' refers to the art-skill in handcrafting (weave or construct'). Here, 'techno' is a qualifier; it intersects or crosses the meaning of 'pedagogy' with its own. Thus, Techno-pedagogy refers to weaving the techniques of the craft of teaching into the learning environment itself (Thakur, 2015).

Self-Efficacy

Self-efficacy is characterized as a teacher's assessment of his or her capacity to attain desired learning results & student engagement, even with challenging or uninspired students (Bandura, 1997).

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Attitude towards ICT

Collis & Jung (2003) described that the use of ICT within teacher training programs around the world is being approached in a number of different ways with varying degrees of success.

Bernard (1997) has suggested that effective component of attitudes include the responses to computers such as anxiety, liking and fear.

B.Ed., Trainees

Trainees of B.Ed. student instructors who have not yet started teaching.

4. Review of Literature

Review of previous literature or studies is a systematic process that requires careful and perceptive reading and attention in detail. In this, the researcher attempts to determine what others have learnt about similar research problems and to gather information relevant to the research problem at hand. For any research study in the field of knowledge, the researcher needs an adequate familiarity with the work, which has already been done in the area of their choice. One of the early activities in the research process is research literature; the body of research information relates to the problem. After the problem has been identified information is needed about the problem so that it can be put in the proper context and then only the research can be preceded effectively.

The purpose of the literature review was to obtain information from a wide range of source, therefore this chapter attempts to review the literature that the researcher believes are relevant to the study. In this study, the researcher looked at pre-service teacher educators' teaching strategies in terms of Self efficacy and Attitude towards ICT of the B.Ed Trainees Technological, Pedagogical, and Content Knowledge Digital Competence .

Adalar, Hayati (2021) conducted a study on Social Studies Teacher Candidates' Self-Efficacy Beliefs for Technological Pedagogical Content Knowledge (TPACK). This study aims at examining social studies teacher candidates' self-efficacy beliefs for technological pedagogical content knowledge through multiple variables and presenting new perspectives for researchers and practitioners. A causal-comparative research design was adopted for this study. Among non-random sampling methods, convenience sampling was used to select participants. The sample of the study consists of 349 3rd and 4th year college students (teacher candidates) studying at three state universities in Turkey's Central Anatolia Region in the 2018-2019 academic year. The Technological Pedagogical Content Knowledge (TPACK) scale was used for collecting data in this study. T-test and one-way analysis of variance (ANOVA) was employed to analyze data. According to the obtained results, the social studies teacher candidates' self-efficacy beliefs for technological pedagogical content knowledge can be considered above average. No significant differences were found between participants' self-efficacy beliefs for TPACK and some independent variables such as gender, year in college, GPA score, personal computer ownership, and Instructional Technology and Material Development course score. On the other hand, it was determined that perceived technology competency and the use of content sharing platforms for professional purposes were important predictors for social studies teacher candidates' self-efficacy beliefs about TPACK.

Miss Ligang Suniya, Prof. T. Lhungdim (2017) Students' Attitudes Towards The Use Of Ict In Secondary Schools In Arunachal Pradesh Ph.D. Research Scholar, Faculty of Education Department of Education, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, India The

present study was undertaken to find out the attitude related to ICT among secondary school students of Arunachal Pradesh. Students' attitudes were evaluated summatively and with respect to gender, race and type of school management. The total sample for the study comprises of 1290 students from 24 secondary schools of Papum Pare, Lower Subansiri and Upper Subansiri districts. Attitude scale was developed for secondary school students to collect the data. The data analysis included percentage, mean, standard deviation and t-test. The finding revealed that students have favourable attitude towards ICT. The significant difference of attitude was found between government and private secondary school students towards ICT. Moreover, this study revealed that there is no significant difference of students' attitudes towards ICT was found with respect of gender and race. Hence, the students should be made more aware of the potential benefits of ICT integration in education by promoting innovative programme related to ICT in school. So that they would be encourage to utilize the ICT for learning effectively.

5. Objectives

1. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on their Gender.
2. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on their Gender.
3. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Students Location.
4. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Students Location.
5. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Age of B.Ed trainees.
6. To find out significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Age of B.Ed trainees.

6. Hypothesis

1. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on their Gender.
2. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on their Gender.
3. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Students Location.
4. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Students Location.
5. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Age of B.Ed trainees.
6. There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Age of B.Ed trainees.

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7. Method and Procedure

The investigator adopted survey method for the present study. The investigator prepared and validated a scale to measure Digital Competence of Self efficacy and Attitude towards ICT of B.Ed trainees. All the B.Ed students studying in college of education in Chennai District formed the population of the study. From the population, the investigator has chosen 69 B.Ed trainee students using simple random sampling technique. For analyzing the data, the investigator used Mean, SD and 't' Test.

1. Hypothesis Testing

Null Hypothesis – 1

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on their Gender.

Table -4.01

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on their Gender using mean scores.

VARIABLE	GENDER	N	MEAN	SD	t - value	L.S
Digital Competence of Self efficacy	MALE	33	40.97	7.209	0.035	NS
	FEMALE	36	40.92	5.326		

Inference

From the above table, it is inferred that t- value (0.035) is lesser than the table value (1.96) at 0.05 level. The female mean score is 40.97 is better than Male mean score 40.92. Hence there is no significance difference between the Male and Female B.Ed trainees Digital Competence of Self efficacy mean scores. Therefore the above null hypothesis is accepted.

Null Hypothesis – 2

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on their Gender.

TABLE -4.01

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on their Gender using mean scores.

VARIABLE	GENDER	N	MEAN	SD	t - value	L.S
Digital Competence of Attitude towards ICT	MALE	33	102.85	8.243	0.509	NS
	FEMALE	36	101.75	9.572		

Inference

From the above table, it is inferred that t- value (0.509) is lesser than the table value (1.96) at 0.05 level. The female mean score is 102.85 is better than Male mean score 101.75. Hence there is no significance difference between the Male and Female B.Ed trainees Digital Competence of Attitude towards ICT mean scores. Therefore the above null hypothesis is accepted.

Null Hypothesis – 3

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Students Location.

Table -4.03

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Students Location using mean scores.

VARIABLE	LOCATION	N	MEAN	SD	t - value	L.S
Digital Competence of Self efficacy	RURAL	46	40.74	5.571	0.379	NS
	URBAN	23	41.35	7.547		

Inference

From the above table, it is inferred that t- value (0.320) is lesser than the table value (1.96) at 0.05 level. The urban area mean score is 41.35 is better than rural area score 40.74. Hence there is no significance difference between the rural and urban area B.Ed trainees with respect to Digital Competence of Self efficacy mean scores. Therefore the above null hypothesis is accepted.

Null Hypothesis – 4

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Students Location.

Table -4.03

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Students Location using mean scores.

VARIABLE	LOCATION	N	MEAN	SD	t - value	L.S
Digital Competence of	RURAL	46	102.37	9.176	0.123	NS
	URBAN	23	102.09	8.559		

Inference

From the above table, it is inferred that t- value (0.123) is lesser than the table value (1.96) at 0.05 level. The rural area mean score is 102.37 is better than urban area score 102.09. Hence there is no significance difference between the rural and urban area B.Ed trainees with respect to Digital Competence of Attitude towards ICT mean scores. Therefore the above null hypothesis is accepted.

Null Hypothesis – 5

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Age of B.Ed trainees.

Table -4.05

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Age of B.Ed trainees using mean scores.

VARIABLE	Age of B.Ed trainees	N	MEAN	SD	t - value	L.S
Digital Competence of Self efficacy	Below 30 Years	49	39.56	6.832	2.451	0.05
	Above 30 Years	20	43.23	4.366		

Inference

From the above table, it is inferred that t- value (2.451) is greater than the table value (1.96) at 0.05 level. Above 30 years Age of B.Ed trainees mean score is 43.23 is better than Below 30 years Age of B.Ed trainees mean score 39.56. Hence there is a significance difference between the B.Ed trainees with respect to Digital Competence of Self efficacy based on Age of B.Ed trainees mean scores. Therefore the above null hypothesis is rejected.

Null Hypothesis – 6

There is no significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Age of B.Ed trainees.

Table -4.05

Table shows the significant difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Age of B.Ed trainees using mean scores.

VARIABLE	Age of B.Ed trainees	N	MEAN	SD	t - value	L.S
Digital Competence of Attitude towards ICT	Below 30 Years	49	101.63	8.923	0.774	NS
	Above 30 Years	20	103.35	8.966		

Inference

From the above table, it is inferred that t- value (0.774) is lesser than the table value (1.96) at 0.05 level. Above 30 years Age of B.Ed trainees mean score is 103.35 is better than Below 30 years Age of B.Ed trainees mean score 101.63. Hence there is no significance difference between the B.Ed trainees with respect to Digital Competence of Attitude towards ICT based on Age of B.Ed trainees mean scores. Therefore the above null hypothesis is accepted.

8. Educational Implications

is considered as a powerful tool for teaching and learning with the help of wide range of applications. WhatsApp, social networking sites, wikis, blogs, discussion forums, etc. work in a web environment; are highly useful and also mandatory in communicating information. But many teachers are afraid to use then. One of the important remedies to avoid fear is to give intensive training in Integration of Technological Pedagogical Content Knowledge. In such a way, the practice of Digital Competence implementation in subjects could be improved and it will be more helpful to the teachers.

Based on the findings and conclusions, the investigator suggests the following recommendations that would help the associated stakeholders in upgrading the present educational practices combined with Digital Competence studies. Teacher training sessions must be equipped with latest Digital Competence framework technologies and opportunities must be provided to student teachers for hands on experience. Student teachers should be provided with both theoretical and practical knowledge in using Digital Competence. They have to take the classes integrated with Technological Pedagogical Content Knowledge.

Digital Competence framework should be included in the teacher education curriculum to increase Attitude towards ICTs of B.Ed trainees in the coming years.

9. Conclusion

Better learning experiences for all students are the immediate goal of research in educational technology use. This research analysis explains the nature of the Digital Competence measure and its associations with important factors in the teachers' teaching and learning contexts, with the hope that findings would help build our understanding of the Digital Competence construct, as well as illuminate the path towards the best learning experiences in schools. The level of education will only improve if the Digital Competence based on self efficacy and B.Ed trainees Attitude towards ICT improves.

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TEACHER AS GENDER CONSTRUCTIVIST

M.S. Manjary Karthy
Research Scholar,
Institute of Advanced study in Education, Thrissur, Kerala

Abstract

In the existing context, coaching is a career wherein trainer works now no longer handiest in educational area however works in social placing also. Gender associated problems were placed in our curriculum. Therefore a legitimate know-how of gender problem is a ought to for a trainer. A trainer is an agent of extrude, promotes gender equality in lecture room and eliminates the stereotype wondering from the society with the aid of using converting the mind-set of younger generation. For building a gender pleasant mind-set a trainer makes techniques on the premise of coaching studying materials. A trainer as a gender constructivist, adopts new methodologies, observes the lecture room practices and with converting mind-set, creates an environment wherein boys and ladies are similarly dealt with in elegance or out of doors the elegance . For growing nice mind-set towards gender problems, it's far a critical want to increase a programme in instructional institutions wherein instructors are sensitized and thru right talent they allow the scholars to interrupt the gender bias and gender stereotyped mind-set from the society. A well- prepared programme on gender problems, promotes gender equality in our society. By this, the discovered trainer ought to advise and spotlight a gender pleasant society.

Keywords: *Gender Problems, gender Equality, Extrade Mind-Set.*

Introduction

Today whole schooling machine is present process notable changes. In different phrases we can say now paradigm has end up changed. Today, instructor works now no longer best as a transmitter of expertise however offers precedence to social placing and social troubles in instructional context. The influence of instructors on gender associated troubles has been meditated on students' outcomes. Teacher's behaviors and attitudes create gender sensitivity in elegance room. Now, gender troubles are triumphing in society in all regions of life. To limit those gender troubles we want to begin converting the mindsets of the more youthful era of society as they're individuals who can carry similarly alternate in society, with their revolutionary ideas, mind and practices. To try this we want correct knowledgeable instructors who have a valid expertise concerning gender troubles .teachers as alternate agents: Gender is a socio- cultural concept. Every society determined gender roles i.e. which conduct is common for male/ lady and which can be now no longer. In this way, genders used to explain the traits of women and men which can be absolutely designed through society. Teachers play a critical position within side the early upbringing and converting mind-set of college students. Teachers can display gender equality primarily based totally conduct in elegance room. There are sure methods via which instructors extrade the thoughts set of college students:

1. Teachers bolstered the conduct that is suitable to the elegance. For instance as a instructor we ought to know no longer discriminate among boys and ladies. Every conduct of the college students need to be examine impartially. When we're going to pick out elegance monitor, sports activities activity, programme teachers occasionally instructor 's conduct prompted via way of means of stereotyping mind-set. Selloff (1998) argues that guys remain the principle characters in textbooks and to be depicted in better function than girls, even as girls 's achievements are rarely recognized. Pandey (2006) notes that the conduct of

instructors in the elegance room has been criticized for perpetuating gender stereotypes, with boys desired in lots of elegance room activities. Most of our textual content books depict guys as a productive/ incomes member in society and girls in family work. In spite of getting those kinds of exercise instructors can mold the conduct and mind-set of college students. Give greater identical possibility to college students in instructional putting i.e. Identical remedy is required for growing a honest mind-set. When we are saying indoor video games are greater suitable for ladies and boys finished properly in out of doors video games, boys room fill with motor bikes,

2. automobile and digital gussets and ladies room embellished with fairy substances and we as a instructor need to increase a category room in which pupil are capable of assemble a brand new thought process.
3. In the study room an attempt need to be made to combine boys and ladies and now no longer separate them within side the seating arrangements. A instructor can use combined sitting arrangement, in which boys and ladies each take a seat down together.
4. Teachers set examples, even as asking query instructors make certain their frame language, gesture do not favour regardless of gender.
5. Social problems seemed because the center idea of the theme, infant abuse, home violence girls's proper harassment at administrative center etc. Ought to be mentioned via way of means of the instructors.
6. Gender impartial language desires to be promoted via way of means of the instructors.
7. Teachers want to choose testimonies and fables that don't perpetuate hierarchies that will finally get transmitted from one technology to another.
8. The first factor that instructors want to apprehend is that intercourse is a organic truth and gender is a social construct. Boys and ladies do now no longer have any mental and social differences, however its miles society that makes them research gender roles. Therefore, as instructors we have to now no longer ask boys to resolve the sum due to the fact they may be "naturally" top at math or ladies to assist with the cleansing up of the magnificence room as they may be anticipated to be greater willing it do housework.
9. It is likewise critical that instructors use the books which have been conceptualized through the NCERT and different publishers the use of fantastic examples for guys and girls. Both textbook and audio- visible substances need to be checked at the floor of gender stereotypes examples like male docs and lady nurses aren't reproduced. We do now no longer need youngsters to ask whether or not girls can certainly pressure buses; we should create a everyday surroundings that does now no longer construct on the ones stereotypes that we've got ourselves grown with.
10. 10. Teachers' dialogue need to be targeted upon dad and mom each. They need to make efforts to contain each fathers and moms and now no longer request to talk to the mom alone.

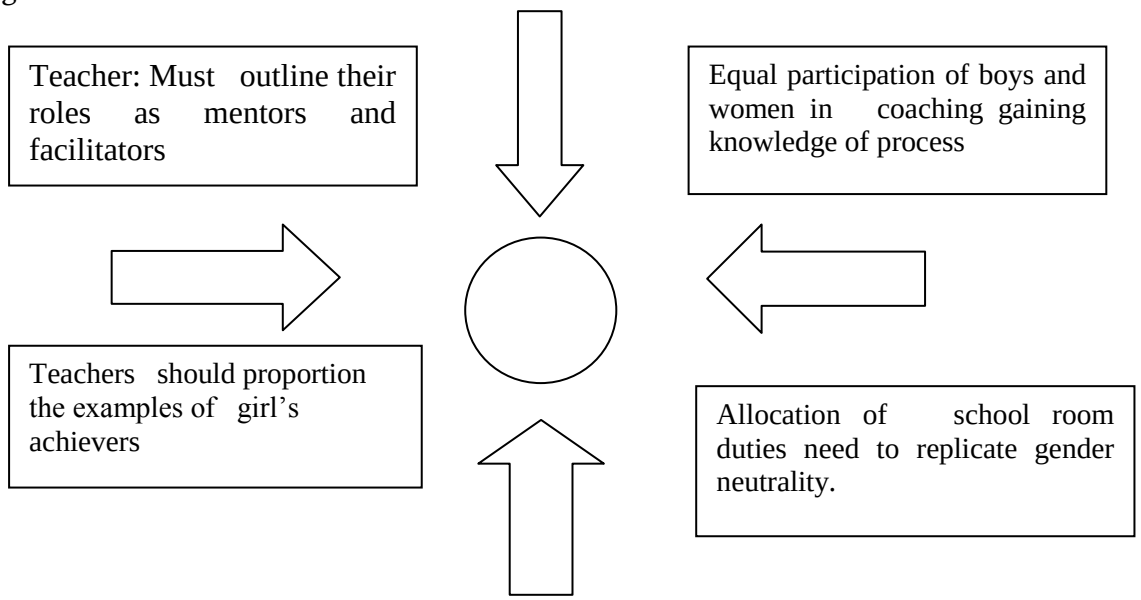
Teacher Training Programme: Teacher Training Programme concerning gender sensitivity wishes to be obligatory at each stage of education. There is a want to all male and female instructors assemble a truthful mindset closer to gender associated concept. This programme has to be evolved with the aid of using specialists and relevance of the subject matters to be

checked properly. For the development of the programmes the help of stakeholders (network members, parents. Teachers etc.) Ought to be encouraged.

Gender Sensitivity Counseling: Gender Sensitivity Counseling have to be made to be had for instructors. Counseling is useful to take away gender primarily based totally disparities from society. Through counseling, instructors are capable of recognize the conduct that promotes gender biasness.

Hidden Curriculum: Hidden Curriculum is an essential a part of all sports that take location inside and outdoor classrooms .School's vision, mission, perception norms, values all are called hidden curriculum. These matters mirror in instructors behaviours and mindset, this is unconsciously transmitted to our college students. The crucial seen webweb sites that mirror hidden curriculum are pedagogical processes, study room control and all curricular sports that take location in colleges.

Classroom Organization and Management: India has special styles of colleges and each School has its personal ideology. Several studies research over the 12 months have genuinely proven how the Classroom surroundings can facilitate college students gaining knowledge of and take away gender bias and stereotype. In act a gender pleasant surroundings can without problems be created with the aid of using a instructor in any context. It requires Sensitivity and fantastic approach. Gender pleasant surroundings create harmonious relations Derween boys and ladies at special degrees of education. Classroom control works on gender problems at the given areas:



Conclusion

Today in instructional state of affairs the function of instructors, the technique concerning gender have shifted far from its conventional approach .Now instructors ' mind-set should changed, they're expected to take initiative in putting off social stigma, gender bias and assemble an surroundings in which gender equality exists. For setting up gender equality within side the lecture room, instructors should encompass male and woman each in his or her discussion. Studies in lecture room conduct have proven that boys are some distance extra energetic within side the lecture room than women and that they normally don't have any

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hesitation in initiating a discussion. Girls on the opposite hand are extra shy and hesitant. In this context instructors, should contain the women for aspire and encourage them to take management roles within side the lecture room discussion.
In this kind of debate instructors can blend the genders in preference to segregating them. Thus, teacher can be the function version to their students.

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A STUDY ON TEACHING APTITUDE OF PROSPECTIVE TEACHERS IN COLLEGES OF EDUCATION

Ms. R. Chitrakala
Ph.D. Research Scholar
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai

Prof. S. Mani
Former Professor and Head
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai

Abstract

This paper mainly aims on the Teaching Aptitude of Prospective Teachers in the Colleges of Education in Salem district of Tamil Nadu. The main objectives of the study are to find the level of teaching aptitude with respect to demographic variable. Survey method was adopted for the present study. Simple random sampling technique was adopted to select the sample. The main findings of the study are the level of teaching aptitude of prospective teachers with respect to the gender was not significant.

Keywords: *Teaching Aptitude, Prospective Teachers and Colleges of Education.*

Introduction

Teachers must have essential background of understanding in different subjects to enable themselves to guide their children in their problems and facilitate them to obtain the basic skills with simplicity and precision. In reality teaching engages the creation of an environment in which the emergent minds of their pupils may possibly grow through their personal efforts, supported, directed and guided by teachers through their suggestions, affiliation and motivation.

Teaching aptitude refers to the ability or potential of an individual to become an effective teacher. It involves a range of skills, traits, and characteristics that enable an individual to understand the needs of students, communicate effectively, and motivate them to learn. Teaching aptitude may also refer to a person's capacity or hypothetical potentials for acquisition of certain characteristics, mental abilities and inclination involved towards teaching profession with respect to which the individual has had little or no previous training.

Review of Related Literature

Shallu Rani (2021) has undergone a study of teaching aptitude among B.Ed. students. In this study, investigator explored the teaching aptitude among B.Ed. student teachers because they are the future teachers and most of times they become the role model for their pupils. A representative sample of 60 (32 boys and 28 girls) student teachers was taken and self-prepared questionnaire (in google form) used to collect data in virtual way. It usually signifies the mainly three domains like cognitive, affective and psycho-motor domains in teaching. Investigator mainly instructed to tick the all questions within 20 minutes to complete the test. At last, after

the collection or analysis of the data investigator found there is no significant difference in teaching aptitude among B.Ed. student teachers gender basis.

Objectives of the Study

The following are some of the objectives of the present study.

1. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on gender.
2. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on age.
3. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on stream.
4. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on qualification.
5. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on type of institution.
6. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on parent's occupation.

Hypotheses of the study

The following are some of the hypotheses of the present study.

1. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on gender.
2. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on age.
3. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on stream.
4. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on qualification.
5. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on type of institution.
6. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on parent's occupation.

Methodology

The investigator has adopted the Survey method for the present research study.

Sampling Technique Adopted

In this study, an investigator took 700 samples of B.Ed. student teachers to collect the sample.

Statistical Techniques Used

The data was analysed statistically by using mean, median, mode, standard deviation t-test and ANOVA Test to access the teaching aptitude among B.Ed. student teachers.

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Analysis and Interpretation of the Data

After collecting the data from the samples, the investigator has analysed and interpreted the data using the SPSS. The inference of the results is tabulated below.

Hypothesis: 01

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on gender.

Variable	Sub Variable	N	Mean	SD	t Value	Significance
Gender	Male	227	120.36	18.64	1.616	Not Significant
	Female	473	122.87	20.41		

It is evident from the above table that the mean value of male prospective teachers is 120.36 with standard deviation 18.64. The mean value of female prospective teachers is 122.87 with standard deviation 20.41. The calculated 't' value is 1.616. It is less than the critical value of 1.96 for degrees of freedom of 698 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on gender" is accepted.

It is inferred from the above table that the male and female prospective teachers show uniform level of teaching aptitude. It means that the teaching aptitude of prospective teachers in colleges of education do not differ irrespective of their gender.

Hypothesis: 02

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on age.

Variable	Sub Variable	N	Mean	SD	t Value	Significance
Age	Below 25	511	122.13	18.58	0.135	Not Significant
	Above 25	189	121.87	23.07		

It is evident from the above table that the mean value of prospective teachers whose age is below 25 is 122.13 with standard deviation 18.58. The mean value of prospective teachers whose age is above is 121.87 with standard deviation 23.07. The calculated 't' value is 0.135. It is less than the critical value of 1.96 for degrees of freedom of 698 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on age" is accepted.

It is inferred from the above table that the prospective teachers whose age is below 25 and above 25 show uniform level of teaching aptitude. It means that the teaching aptitude of prospective teachers in colleges of education do not differ irrespective of their age.

Hypothesis: 03

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on stream.

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Variable	Sub Variable	N	Mean	SD	t Value	Significance
Stream	Arts	386	123.08	21.53	1.547	Not Significant
	Science	314	120.80	17.58		

It is evident from the above table that the mean value of prospective teachers from arts stream is 123.08 with standard deviation 21.53. The mean value of prospective teachers from science stream is 120.80 with standard deviation 17.58. The calculated 't' value is 1.547. It is less than the critical value of 1.96 for degrees of freedom of 698 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on stream" is accepted.
It is inferred from the above table that the prospective teachers from arts stream and science stream show uniform level of teaching aptitude. It means that the teaching aptitude of prospective teachers in colleges of education do not differ irrespective of their stream.

Hypothesis: 04

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on qualification.

Variable	Sub Variable	N	Mean	SD	t Value	Significance
Qualification	UG	527	121.31	20.07	1.786	Not Significant
	PG	173	124.34	19.15		

It is evident from the above table that the mean value of prospective teachers with UG qualification is 121.31 with standard deviation 20.07. The mean value of prospective teachers with PG qualification is 124.34 with standard deviation 19.15. The calculated 't' value is 1.786. It is less than the critical value of 1.96 for degrees of freedom of 698 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on qualification" is accepted.
It is inferred from the above table that the prospective teachers with UG and PG qualification show uniform level of teaching aptitude. It means that the teaching aptitude of prospective teachers in colleges of education do not differ irrespective of their qualification.

Hypothesis: 05

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on type of institution.

Variable	Sub Variable	N	Mean	SD	t Value	Significance
Type of Institution	Aided	100	121.94	22.14	0.058	Not Significant
	Private	600	122.08	19.49		

It is evident from the above table that the mean value of prospective teachers from government aided college is 121.94 with standard deviation 22.14. The mean value of

prospective teachers from private colleges is 122.08 with standard deviation 19.49. The calculated 't' value is 0.058. It is less than the critical value of 1.96 for degrees of freedom of 698 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on type of institution" is accepted.

It is inferred from the above table that the prospective teachers from government aided college and private colleges of education show uniform level of teaching aptitude. It means that the teaching aptitude of prospective teachers in colleges of education do not differ irrespective of the type of institution they study.

Hypothesis: 06

There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on parent's occupation.

	Sum of Squares	**df**	**Mean Square**	**F**	**Significance**
Between Groups	237.865	4	59.466	0.150	Not Significant
Within Groups	275853.849	695	396.912		
Total	276091.714	699			

It is evident from the above table, that the calculated F value is 0.150. It is lesser than the critical value 3.00 for the degrees of freedom 2 for 697 at 0.05 level. It is not significant. Hence, the hypothesis stated as "There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on parent's occupation" is accepted.

It is inferred from the above table that the prospective teachers in colleges of education with parent's occupation as Government, teacher, farmer, self-employed and private show uniform level of teaching aptitude.

Findings of the Study

The following are some of the findings of the present study.

1. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on gender.
2. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on age.
3. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on stream.
4. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on qualification.
5. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on type of institution.
6. There is no significant difference in the teaching aptitude of prospective teachers in colleges of education based on parent's occupation.

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EMPOWERING LEARNERS IN SOCIETY 5.0: A LOOK AT DIGITAL LEARNING ENGAGEMENT AND PERSONALIZED LEARNING STRATEGIES

Sruthi Sugunan P
Ph.D. Research Scholar, Department of Education
Central University of Kerala, Kasaragod

Abstract

The hyperconnected, technologically-driven Society 5.0 offers educational opportunities as well as challenges. This paper explores how digital learning and personalized learning strategies can improve student engagement in this new era. The paper examines the potential of innovative strategies like AI-powered, microlearning to personalize learning experiences. It recognizes the significance of taking at-risk students' engagement strategies into account. The emergence of Education 5.0 demands investigating Artificial Intelligence's (AI) potential for customized learning experiences. The paper concludes by highlighting the need for more research on personalized learning frameworks that are effective in empowering learners and bridging the gap between education and the rapidly changing technological landscape.

Keywords: *Digital Learning Engagement, Society 5.0, Personalized learning Strategies*

Introduction

Imagine a world where technology and society are seamlessly intertwined. This isn't science fiction! We are already in the early phases of Society 5.0, an incredibly intelligent period characterized by quick advances in science and technology. With so many innovative tools and trends available in the digital sphere, learning is now easier than ever. It is now essential to pursue lifelong learning in this fast-paced setting. Because Society 5.0 is always changing, we must stay current with our knowledge and abilities to prosper (Yaraş & Öztürk, 2022). Society 5.0, a revolutionary vision for the future, is combined with digital technologies and cyber-physical spaces to create a smart society (Laura Icela et al., 2023). The goal of Society 5.0 is to make everyone a part of a "smart society" without displacing them and to enhance the quality of people's everyday lives. The good news is that you can learn things through yourself without depending on others to spoon-feed you. The digital world offers a treasure mine of resources for personalized learning, tailored to your specific interests and goals. Accepting personalized learning and using digital tools to its full potential are the keys to opening this treasure trove. The days of universal education are long gone. With the help of Society 5.0, you can take control of your education by deciding what, when, and how you study (Ikeda, 2024). Imagine learning platforms that adapt to your pace, recommend relevant content, and make the process engaging and interactive. Imagine being able to learn a new language with AI-powered conversation partners, becoming proficient in a technical area with bite-sized online courses, or travelling back in time with virtual reality simulations. There is no end to the possibilities! Although cutting-edge technologies like artificial intelligence and machine learning are key components of Society 5.0, the fundamental goal of the movement is individual empowerment. You can not only stay up with the quick speed of change but also develop into a lifelong learner who is always expanding and changing along with this fascinating new era by embracing a

personalized learning mindset and actively interacting with the digital world. With the recent developments in technology for recording and assessing lectures, classroom time can now be more effectively used for knowledge-sharing sessions (Muthuraman, 2021).

In this knowledge era, a wealth of knowledge is available and there is a growing demand for ongoing learning that necessitates suitable solutions for everyday life problems. The constant evolution of knowledge necessitates that learner adapt continuously to remain productive. But our educational system still lacks in successful deliberation of this ocean of knowledge and skills because of outdated curricula, an exam-oriented education system, inequality in access to education and inflexible pedagogical approaches and strategies. Most of the classroom doesn't encourage a concrete approach to teaching rather than abstract delivery. Overloaded content delivery practices in an abstract manner can hinder students' effective communication of critical learning components and essential achievements especially while learning the subjects like physics. So, it is necessary to consider access, clarity, prioritization, engagement, summarisation, feedback, assessment, and time management in teaching-learning practices. By focusing on these components, educators can better convey the crucial things and facilitate effective learning. Examination-oriented learning and its impact on sustainable learning is significant. When examination becomes the primary focus, it can lead to a narrow approach to learning, where students only study to pass exams. The teacher and the student treat the subjects to get good grades rather than their application in real life. Because of this system, the students fail to feel the real essence of subjects like physics and it becomes harder for them to think that these subjects are not separate they are a part of their everyday life itself. The tight time schedule for delivering content in classrooms and inappropriate use of strategies the learners feel the cognitive load and learning difficulty. The cognitive load and mental fatigue experienced by students can lead to stress, with the hope that this burden will ease after exams. Unfortunately, students often don't continue to apply or update what they've learned, causing them to forget valuable knowledge. To address this, it's crucial to reshape the way students perceive learning. Learning should not be seen as a mere preparation for exams; it should be engaging and an integral part of life, especially in the realm of science. To cultivate these positive feelings, we must make learning captivating and break it down into manageable, bite-sized portions. It should seamlessly fit into students' schedules, be cost-effective, and be easily accessible. The answer lies in the digital world, specifically in the realm of microlearning, which presents an innovative solution to make learning a lifelong, enjoyable journey. So, to prepare students as sustainable learners, the education system must consider assessment reforms, fostering curiosity and interest in learning, skills over grades, teacher training, seeking diverse opportunities in the digital world, and holistic education. The only thing is that we have to find out and know the pedagogical approach and methodologies that align with the learning outcome. To overcome these obstacles, we must think of creative solutions that will get people ready for a smart society.

Understanding Digital Learning Engagement

Enhancing students' academic engagement is the key element of the educational process (Barkoukis et al., 2014). There are numerous approaches to define and operationalize student engagement (Skinner, 2016). Digital Learning Engagement refers to the active participation, interaction and, meaningful involvement of students with digital learning resources, tools, or

online learning environments. It encompasses active participation, interest, and sustained attention to digital learning content and platforms, which is essential for effective learning outcomes. There are lots of studies related to the importance of digital environment how effectively influence learning engagement in digital ecosystem.

Personalized Learning Strategies for Engagement

Teachers utilized various strategies like storytelling and gamification to engage students (Amin et al., 2023). A wide range of digital media, including computer-based activities, video games, mobile devices, electronic toys, and more. Research in this field has shown positive outcomes, with improvements in children's cognitive and problem-solving skills, language development, creativity, and collaborative learning (Lieberman et al., 2009).

Innovative personalized learning strategies:

- Adaptive Learning Platforms: These AI-powered platforms tailor the learning journey to a student's strengths, weaknesses, and pace, providing targeted content and activities
- Gamification and interactive elements to enhance motivation: By adding aspects of games to the educational process, learning can be revolutionized. Gamification is a teaching strategy that uses leader boards, badges, and points to incentivize students. Gamified learning generates greater engagement and a more pleasurable learning experience by presenting challenges and encouraging a sense of accomplishment. To encourage meaningful knowledge acquisition, it is crucial to make sure that these components are in line with learning objectives.
- Game based learning: Digital learning experiences with game-based learning (GBL) include elements of games such as badges, challenges, and points. By increasing learning's interactivity and enjoyment, this strategy can increase student engagement. Platforms like Prodigy Math personalize the experience by adapting to a student's strengths and weaknesses. Personalized learning combined with GBL has the potential to increase student motivation and successfully meet individual needs.
- Micro-credentials and Badges: Recognize and reward students for mastering specific skills or competencies, rather than just completing courses. This allows for personalized recognition and fosters a growth mindset.
- VR/AR Integration: Imagine exploring historical events through virtual reality or dissecting a virtual frog in biology class! Integrate immersive technologies to cater to various learning styles and create engaging learning experiences
- Learning Pathways with Choice: Provide students with curated learning paths that offer options based on their interests and goals. This empowers them to take ownership of their learning journey.
- Utilizing AI-powered learning management systems for personalized recommendations: Learning Management Systems (LMS) with AI capabilities can intelligently recommend ways to personalize learning. These systems recommend pertinent learning materials based on an analysis of learner data, including performance and course history. Artificial Intelligence customizes the learning experience to each learner's needs and interests, boosting engagement and enhancing retention of

information, much like recommendation algorithms on streaming services. Students can feel more empowered and the learning environment can be more productive with this individualized approach to education

Adaptive Learning Platforms: Utilize AI-powered platforms that analyze student data to recommend personalized learning paths, tailoring content difficulty and instruction to their strengths and weaknesses.

AI-powered recommendations: Integrate AI to analyze student performance data and learning patterns. Provide personalized recommendations for learning resources, activities or practice problems that target their specific needs.

AI-generated feedback: AI can generate personalized feedback on student work, identifying areas of strength and areas for improvement. This allows for more targeted guidance and support.

IV. Impact of Personalized Learning on Engagement

Personalized learning caters to individual needs and interests, fostering a sense of ownership and control over the learning process, which leads to higher motivation and enjoyment of learning (Shemshack & Spector, 2020). Studies have shown a correlation between personalized learning and better academic outcome. Personalized learning fosters deeper engagement by allowing students to actively participate in setting goals, choosing learning methods, and reflecting on their progress (Major et al., 2021).

Challenges and Recommendations

Challenges

- Teacher preparedness: Society 5.0 technologies may require additional training for teachers to effectively implement personalized learning strategies (Supa'at & Ihsan, 2023).
- Access to technology: Ensuring equitable access to technology and resources for all learners is crucial to avoid exacerbating educational disparities.
- Digital Divide: it will cause inequality in educational access.

Recommendations

- Explore how Society 5.0 technologies like AI can personalize learning while addressing teacher training needs.
- Discuss strategies to address equity concerns and ensure inclusive access to technology in Society 5.0 learning environments.

Conclusion

Society 5.0 offers a unique opportunity to transform education through technology and personalized learning. Through the utilization of digital tools such as interactive e-books and online platforms, educators can design personalized and dynamic learning experiences that are tailored to the unique strengths, weaknesses, and interests of each student. Students may become more motivated, retain more information, and perform better academically as a result. Nonetheless, it is critical to address issues like low student motivation and guarantee that all students have fair access to technology. The potential of AI-powered learning technologies and

the creation of successful engagement strategies for individualized learning in Society 5.0 classrooms require more investigation. As we proceed, adopting these innovations can enable students to take an active role in their own learning and prosper in the highly interconnected world of Society 5.0.

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TEACHER DEVELOPMENT

S. Rengaraj
Ph.D Research Scholar, Department of Education
Annamalai University, Tamil Nadu

Abstract

Development is that process which is done on living and non-living things. Through development, changes or modification is done indicating the solution of the problem but it would be possible by the teachers only. Now, it becomes necessary that the teachers should change or modify themselves with the demands or the needs that are arising in society. For that change; change in the teacher's training; teaching and learning materials; theoretical and practical aspects; curriculum; professional development; evaluation and assessment and many more, etc., There are four stages to a teacher's development: developing, proficient, accomplished, and distinguished. Explore these stages of development that determine skills over the course of a professional teaching career.

According to Andy diSessa et al "One often talks about teacher development in conjunction with pedagogical innovation and change management. Teacher Professional Development is, what the research says about how to do it effectively, and how Qualtrics can assist you in ensuring that your school system provides adequate opportunities for teachers to improve professionally. The learning process for teachers has gotten much more attention than in many other professions because it can affect how well students learn, how the classroom is run, and several other important key performance indicators.

Keywords: *Important Factors for Teacher Development, Designs for Teacher Development, Stages of Teacher Development, Teacher Professional Development.*

Introduction

Teacher development means continuous teacher training (both formal and informal). The endeavor includes cultural and individual constraints. Culturally, teachers are embedded in a community with various group norms and mechanisms which influence what they do in the classroom. Beyond these constraints, changing one's instructional practice can be a difficult instance of conceptual change at an individual level. We would expect that changing one's view of classroom instruction (e.g., becoming a guide on the side rather than a sage on a stage) to be similar to children changing their scientific ideas about the physical world."

- "Professional development content that is clearly structured, easy, appropriately sequenced and includes activities to assist teachers in the construction of their own knowledge from previous experiences produces effective teachers. The activities should be related to authentic classroom situations in order to increase teachers' interest in the programme and make learning fun (Koehler & Mishra, 2006; Webb, 2007). These experiences should be provided in an environment that is comfortable for teachers to explore, experiment and practice with the tools and content. Furthermore, activities that are designed to be completed collaboratively produce quality results and build professional relationships whereby expert teachers support the less knowledgeable ones. Collaborative practices that yield better results are those that enable expert teachers or facilitators from within the group to carry out demonstration exercises that are beneficial to teachers with less experience in technology integration into lessons.
- The stages of teacher development have less to do with years of teaching and more to do with a teacher's ability to demonstrate certain skill levels based on a pre-determined

criterion. The four stages of development that have been identified for the purposes of this lesson are: developing, proficient, accomplished, and distinguished.

Professional development for teachers includes programs and activities that help them improve their teaching knowledge, skills, and expertise. These programs and activities can be self-directed or directed. It can take many different forms, such as ongoing lessons, regular seminars or workshops, in-class observations, collaborative learning sessions, or support groups.

Many educational institutions place a high value on the quality and availability of professional development opportunities for teachers, and for a good reason: research shows that growth and development are key drivers of the teacher experience. This eventually affects both the students and the institution's overall success by having an impact on numerous crucial factors.

1. Important Factors for Teacher Development

Changes in the curriculum; • Changes in learning aids; • Modification or innovation coming in teaching aids; • Professional development; • Individualized learning. There are additional factors that help the teachers to develop themselves more so, research take place which is conducted in every area but when we talk about the development of the teacher than all the things which are related to them whether it is for the pre-service or in-service program. The researcher takes the concerned area where they feel any kind of innovations or the need for modification is required. Thus, following are the emergent research inclinations in the field of Teacher Education.

Teaching and Learning Methodology:

In today's era of development, society wishes that their students should have an overall development in every area. School changes their pattern of teaching- learning methods accordingly. With this, students construct their knowledge and skills; do experiments with which they further gain experience etc. James (2010) led study on communication in second language (English) for teaching and learning. Teacher is undertaking a difficult step of imparting language skills to the students as they are not in position of learning new basic skills of language at school and at college level. Students require high level of skills in critical analysis and literary appreciation but they are failing in this which lead to decline in the socio-cultural development. Instructional communication is the best method to impart a second language. Bhati (2016) studied the effectiveness of cooperative learning methods for teaching English students of secondary school. The researcher wants to compare different teaching methods. Teachers must change the roles for knowledge transference to help, promote and encourage learners to acquire knowledge from various media and learning centers. Josephine (2016) studied the effectiveness of a blended learning programme on academic achievement in teaching of physical science among student teachers of Pondicherry, where blended learning was found to be an appropriate method to use in the classroom for increasing academic achievement. Here, students are given freedom to understand the concept on their own level. After going through the above research, it was found that teachers should use those methods which suit best to them for having lifelong learning.

2. Designs for teacher development

Communities of practice : Theory argues that teacher development is improved when teachers as learners constitute a community of practice, i.e. form a group that jointly develops better practices and views professional identity construction as participation.

E.g. According to Foley & Chang (2006) [2]: "Effective teacher preparation should help teachers improve their knowledge of their subjects, their understanding of students thinking and of different instructional practices. A key component of many successful teacher preparation programs is the development of a community of teacher-learners (Borko, 2004). Several projects have used technology as a way to support communities of teachers (Barab et al, 2001; Renninger & Shumar, 2002; Schlager, Fusco, & Schank, 2002)."

Observing and exploiting practices rewarded by Awards

"we stand to gain a tremendous amount of knowledge from award-winning online instructors and their diverse teaching experiences." Their qualitative study of eight award-winning online faculty, "found that online instructors assume five different roles: Facilitator, Course Designer, Content Manager, Subject Matter Expert, and Mentor. Common tasks of an online instructor course fell into two areas: Course Design or Teaching." For each of these roles, the study found a set of responsibilities and associated competencies that can serve as model for novices.

Technologies for Teacher development

According to diSessa et al. "The goals of using technology for teacher development can include: (a) introducing teachers to the materials to be used in a design experiment, (b) learn about conceptual frameworks for instruction and learning, (c) engage in reflection about their own practice, or (d) develop materials which can be useful to other teachers wanting to use a particular innovation or reform their teaching method."

Collaboration tools

(e.g. for community building)

- Wikis, e.g. Foley and Change (2006)
- MOOs, e.g. Schlager et al.
- Forums, Mailing lists or any other sort of asynchronous communication tool.

Cognitive tools

- lesson planners and Curriculum planners
- Concept maps

See also: Cognitive tools and Visualization

Observation tools

Gather what happens in the classroom

Misc

- all the sorts of technology used in teaching.

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3. Developing Stage

The developing level is one in which the teacher demonstrates basic knowledge of what is required as a professional educator. For example, the teacher may understand that she needs to differentiate instruction for all learners (use various methods and resources to benefit the learning needs of all students), but not be able to execute a lesson that incorporates such instruction. While it is expected that new teachers would fall within this range of teacher development, in some cases, teachers with years of experience may fall within the developing stage in one or more areas of their professional development.

Proficient Stage

The next stage of development is proficient. Here the teacher's actions are more progressive, and she is able to apply evidence of what she knows to her lessons, to a certain degree. Using the previous example, the teacher understands the need to differentiate instruction and provides evidence to support that various resources are being used to engage all learners in the learning process. It is understood that the teacher may need additional support and feedback in order to refine her skills at this stage.

Accomplished Stage

A teacher at the accomplished stage would be not only a participant in the execution of the learning process, but also a major contributor to the learning environment. At the accomplished level, a teacher would have the skills to support students in the development of their higher order thinking skills, and all learners benefit from instruction. We can expand our example to now include: The teacher understands the need to differentiate instruction, provides evidence that a variety of resources to engage all learners in the learning processes, and actively assesses students to determine areas of strengths and weaknesses. The teacher needs little to no support at the accomplished stage of teacher development.

Distinguished Stage

At the distinguished level, the teacher has met the criteria to be considered a master within the profession. She is one to whom others would look for guidance and support when it comes to best practices and staying abreast of current trends. The teacher understands the need to differentiate instruction, provides evidence that a variety of resources are used to engage all learners in the learning process, assesses students to determine areas of strengths and weaknesses, and uses student assessment data to inform future lesson planning.

Lesson Summary

Stages of teacher development are used to determine teachers' skill levels throughout their professional career. Each stage of the development process determines whether a teacher has demonstrated certain skills based on the criterion for that stage. For this lesson, the four stages were identified as: Developing Proficient Accomplished Distinguished.

4. Retention

When instructors stay in their schools, the entire educational system benefits by saving money on recruitment and training costs, implementing effective policy changes, reaching out

to underserved groups, and more. Teachers are engaged when they feel like they belong and are making a difference, and not getting enough attention is one of the main reasons they switch schools or leave teaching altogether.

Academic performance: It's simple: teachers are accountable for giving quality education to their students. They must be able to plan and carry out a great curriculum that helps students get ready for the next step in their education.

Mental health and well-being: Teaching can be a very demanding job, so it's important to get regular feedback on educators' mental health and give them access to tools that can help.

Culture: When teachers are happy and practical, they are more likely to give off a sense of confidence, optimism, and power, which makes for a good business culture as a whole.
Financial effects: Improving the teaching experience to reduce turnover can positively affect the budget allocation and save money by avoiding extra costs related to hiring and training.

Factors Contribute to Good Teacher Development

How can you ensure that your school system provides adequate and relevant opportunities for professional teacher development? In this section, we will look at the essential characteristics of good teacher professional development, as well as some principles for assessing and tracking the outcomes of your projects.

Effective teacher professional development, according to the Learning Policy Institute:

1. Is concerned with substance Teacher professional development that is successful focuses on teaching practices related to specific curricular content that enhances teacher learning within their classroom contexts.
2. Employs adult learning theory to incorporate active learning.
   Teachers can solve problems in their everyday work by getting hands-on experience making and using new teaching strategies and skills.
3. Encourages collaboration, typically in job-related circumstances
   Teachers often learn through "job-embedded" situations that connect new teaching methods to their students and classrooms. These situations allow teachers to share and contribute ideas, which is an important part of "active learning."
4. Makes use of models and models of effective practice
   Good teacher learning means having access to lesson plans, unit plans, samples of student work, observations of peer teachers, and written or video examples of good teaching.
5. Offers guidance and skilled assistance
   School leaders should have master teachers and specialists who can share their specific knowledge with teachers as one-on-one coaches in the classroom, leaders of group workshops, or remote mentors who talk to teachers through technology.
6. Provides opportunities for feedback and introspection
   Teachers must have time to think about, receive input, and change their practice to grow professionally.
7. Maintains a consistent duration
   Finally, an effective teacher development program gives teachers enough time (weeks, months, and years) to learn, practice, implement, and reflect on new strategies that help them change their course.

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Conclusion

Teacher development stages are told about ideas on various topics. important factors. Designs.Academic Performance. Mental health. cultural. Financial effects. and good teacher development etc. can be improved in the society as a good teacher and can bring out the talent and hidden abilities of the teacher.

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SELF-REGULATED LEARNING AMONG PROSPECTIVE TEACHERS IN TIRUNELVELI DISTRICT

Mrs. E. Michael Jeya Priya
Research Scholar & Assistant Professor of Biological Science
St.Ignatius College of Education(Autonomous), Palayamkottai, Tirunelveli

Dr. M. Maria Saroja
Research Director, IQAC Coordinator &Associate Professor of Biological Science
St.Ignatius College of Education(Autonomous), Palayamkottai, Tirunelveli

Abstract

Self-regulation, one of the most important factors affecting lifelong learning and academic success of an individual, is a deep internal mechanism encompassing the careful, deliberate and thoughtful behaviours of students. It is an effective and constructive process in which students set their own learning goals, try to regulate their cognition, motivation, and behaviour, and are guided and limited by their goals and the contextual characteristics of their environment. The investigators used a simple random sampling technique for selecting the sample. Self-Regulated Learning Scale was developed by Michael Jeya Priya,E., & Maria Saroja, M (2022) was used for the present study. Data were collected from 250 prospective teachers pursuing B.Ed. programme. Mean, SD, 't'- test and χ^2 was used for analysis of the data. The investigators found that i) there is significant difference between rural and urban, nuclear and joint family in their self-regulated learning among prospective teachers (ii) there is no significant difference between girls and co-education prospective teachers in their self-regulated learning among prospective teachers.

Keywords: *Self-regulated Learning, Prospective Teacher,*

Introduction

Self Regulated Learning is generally refers to awareness and knowledge of one's learning and cognition and control one's own cognition. This ability is essential in learning and development. This is an educational theory influenced by constructivism theory (BenAri, 1998) and social learning (Bandura, 2001), follows self-directive process by which learners transform their mental abilities into academic skills. Learning is viewed as an activity that leaner do for themselves in a proactive way rather than as a covert event that happens to them in reaction to teaching (Zimmerman, 2002) . SRL includes self-generated thoughts, feelings, planned and adapted actions that are all managed by the learner to reach learning goal. Although the concept of self-regulated learning (SRL) plays a prominent role in the design of teacher education programmes yet research into SRL has mainly focused on how teachers can promote SRL of their students (Kramarski & Michalsky, 2009) Rather than teachers' regulation of their own learning. Research on how student teachers plan, execute, control and evaluate their learning experiences is still in its infancy (Efklides,2011) and it is still unclear how prospective teachers differ in the self-regulative activities they use.

Since the concept of self-regulation has a versatile structure covering behavioral, mental, social-emotional and motivational processes, it has been addressed and defined by many theoretical perspectives. Self-regulation skills, first introduced by Bandura, focus on the importance of an individual reflecting on her/his abilities and capacities regarding the behaviors that s/he will display (Çiltaş & Bektas,2009). In social-cognitive theory, Bandura

defined self-regulation as having an internal system in which to control one's feelings, thoughts and actions, and further explained this internal system as having functions, such as planning alternative strategies, organizing own behavior, having the ability to symbolize, and learning from others (Karabacak, 2014). Zimmerman (1989) described self-regulation as the degree of active participation of students in their own learning processes in terms of metacognition, motivation, and behavior. Academic self-regulation involves the ability to set goals, monitor progress, and adapt one's learning strategies to achieve academic success. B.Ed. college student teachers, who are preparing to become educators themselves, must possess strong self-regulation skills to effectively manage their studies, teaching practice, and future responsibilities in the classroom (Zimmerman, 2002). Research suggests that fostering academic self-regulation can lead to improved academic performance and overall well being among students (Cleary & Zimmerman, 2004). In India, where the education system is diverse and multifaceted, understanding the specific self-regulation challenges faced by B.Ed. college student teachers becomes paramount. Cultural expectations, teaching methodologies, and the socio-economic context can all influence the development of self-regulation skills in this population.

Significance of the Study

In India, literacy rate has grown from time to time. The awareness about higher education has been increased due to parents support, shape of modern society, technology and self-interest of the students. Various educational schemes developed by Government, insists quality in education to stimulate dynamic growth among the learners through learning by doing. In Indian classroom climate, Self-regulated learning is a critical learning process. But it can be promoted and learned at all levels of education. The importance of self-regulated learning is vital for teachers as well as pupils for developing values and to be competent with global challenges. The awareness about self-regulation makes true learning which is always associated with thirst of self-seeking, self-motivation and self-development. Self-regulated learning reduces the stress and anxiety and builds cognitive and metacognitive knowledge. It prepares the learners to become a lifelong skilled learner. Motivation, learning style, metacognition and behaviour are the four components which can enhance planning, monitoring and evaluating process of pupils. Classroom environment must play the concrete role on it. Kothari Commission (1964-66) rightly stated that the 'Destiny of India is being shaped in the classrooms'. Hence classroom plays a greater role in encouraging self-regulated learning which will in turn ensure quality and equity. Performance oriented learning create opportunity to develop appropriate learning strategies that engage self-regulation skills. In India, researchers (Ramganesh, 2012 and Johnson, 2012) found that self-regulated learning increase academic outcomes of learners from accurate instructional design. Zimmerman (2002) rightly stated that Self-regulation is a self-directive process by which learners transform their mental abilities into academic skills. Learning to be self- regulation is an essential ability of the learners to become lifelong learners. Self-regulated learning is an active engagement learning process developed by behaviour management, motivation, cognition and metacognition in order to organize the thoughts and learn the content well.

In the learning environment, being a self-regulated learner is not an easy task. It requires necessary resource factors including methodology, classroom atmosphere, cognition of teachers, support from technology and belief of pupils. Further it requires self-management and

self-correction and learners need to develop foundational skills. If the learner becomes a self-regulated learner who is willing to take responsibility of own learning, reduce the burden, based on the needs they can learn and contribute individually towards the society. Hence the researcher was interested in developing self-regulated learning among higher secondary pupils. Is self-regulated learning possible for all learners? To make it possible, learners are more important than the other factors. How to reduce the learners' difficulties to become self-regulated learner? Many research studies found that having life skills reduce the obstacles and facilitate learning an easy task. Pupils, who adopt the treatment in life skills can develop awareness about the image of self, shape the behaviour and take guidance from instructor. Planning, monitor the plan of action and analyse the learning progress and get feedback from supporters are also achievable through life skills. These valuable features are the signs of self-regulated learning which makes excellence in achievement and continue learning for long life. Lifelong learners can contribute their knowledge and skills for the social and economical development of the nation. Hence the researcher has considered to take this as a research problem in order to analyse the self-regulated learning among prospective teachers.

Review of Related Studies

Kumar,K.,& Banerjee,P.(2017). Conducted study on "A study of self-regulated learning among prospective teachers". The result of their study revealed the locale wise prospective teacher do not differ significantly i.e. they were found to have SRL to the similar extent. But gender wise and caste wise, they differ significantly. **Kunar (2020)** conducted study on "Effect of brain based learning on self regulation skill and learning achievement in science among secondary school students". The findings of this research study may provides teachers and administrators with enough information to consider Brain Based Learning (BBL) strategies to use in the classroom which can enhance student achievement and allowing students to become more successful at higher level. **Ilagar S., et al., (2021)** conducted study on "Investigation of Prospective Teachers' Self-Regulated Learning Skills in terms of Different Variables". The findings of their research revealed that the prospective teachers had high scores in the subscales of SRLSS and the overall scale. It was concluded that the prospective science teachers had higher scores in planning and goalsetting than the students attending all other programs except for mathematics teaching. Furthermore, the scores of female prospective teachers in all subscales were higher than those of the male participants. Considering the type of high school, the participants that had completed basic high school scored higher in strategy use and evaluation compared to those that had finished other types of high school. When the prospective teachers' self-regulated learning skills were analyzed according to their parents' education level, no significant difference was found**. Vosniadou,S. et al., (2024)** conducted study on "The promotion of self-regulated learning in the classroom: a theoretical framework and an observation study". The results revealed a paucity in the design of Constructive and Interactive lesson tasks that support the indirect promotion of SRL and a preference for the direct support of SRL through implicit strategy instruction and the provision of metacognitive reflection and support. There were important teacher differences in both the direct and indirect promotion of SRL, but the teachers who were more likely to design Constructive and Interactive lesson tasks did not necessarily promote SRL directly and vice versa.

Objective of the Study

- To find out the level of self-regulated learning among prospective teachers.
- To find out whether there is any significance difference between prospective teachers in their self-regulated learning with reference to the following background variables (i) Locality of Residence (ii) Nature of College (iii) Type of family

Hypotheses of the Study

- Self-regulated learning among prospective teachers are moderate.
- There is no significant difference between prospective teachers in their self-regulated learning with reference to the following background variables. variables (i) Locality of Residence (ii) Nature of College (iii) Type of family

Population and Sample

The investigators used simple random sampling technique and randomly selected 250 prospective teachers in Tirunelveli District.

Statistical Techniques used in the Present Study

Self-Regulated Learning Scale (SRLS) was developed and validated by Michael Jeya Priya,E., & Maria Saroja .M (2022). Mean, Standard deviation,'t' test and 2 were used to analyze the data.

Data Analysis and Interpretation

Table.1. showing the percentage level of the self-regulated learning among prospective teachers in Tirunelveli District.

Self-Regulated Learning	Low		Average		High	
	N	%	N	%	N	%
	57	22.80	141	56.40	52	20.80

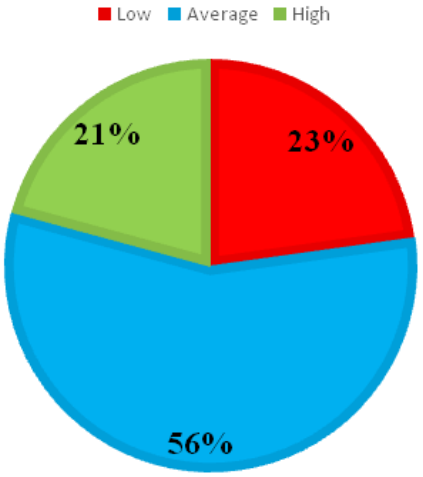

Figure.1 showing the percentage level of the self-regulated learning among prospective teachers in Tirunelveli district.

Interpretation of table-1.

It is revealed from the above table that among the prospective teachers 22.80% have low, 56.40% have average and 20.80% have high level of self-regulated learning**.**

Table.2. Difference between rural and urban prospective teachers in their self-regulated learning.

Variable	Categories	N	Mean	SD	Calculated 't' Value	Table Value	Remark
Locality	Rural	118	59.79	6.99	3.62	1.96	S
	Urban	132	62.86	6.17			

Interpretation of table-2.

There is significant difference between rural and urban prospective teachers in their self-regulated learning among prospective teachers.

In the present study, the mean of self-regulated learning value of urban prospective teachers (62.86) is greater than that of rural prospective teachers (59.79). This may be due to the fact that, rural students are unaware of different SRL strategies . Therefore, still they are not able to equip themselves with SRL skills. Hence it would be inferred that they are failure to impart SRL into the students. Thus it pointed out that both rural and urban prospective teachers must know all strategies/ domains of self - regulated learning equally for fostering learning skills. While in some research reviews, it revealed that urban prospective teachers and students are more self-regulated. Similarly, R.D. Mulia (2015) found that more number of students have SRL from urban area than rural area but Mean value was higher in case of rural students. In case of Non SRLs, the situation was entirely inverted as it had more students from rural area: the Mean score of non SRLs was higher for Urban than Rural students. So from the finding of present study it might be say that prospective teachers of both urban and rural areas have knowledge of SRL skills and strategies.

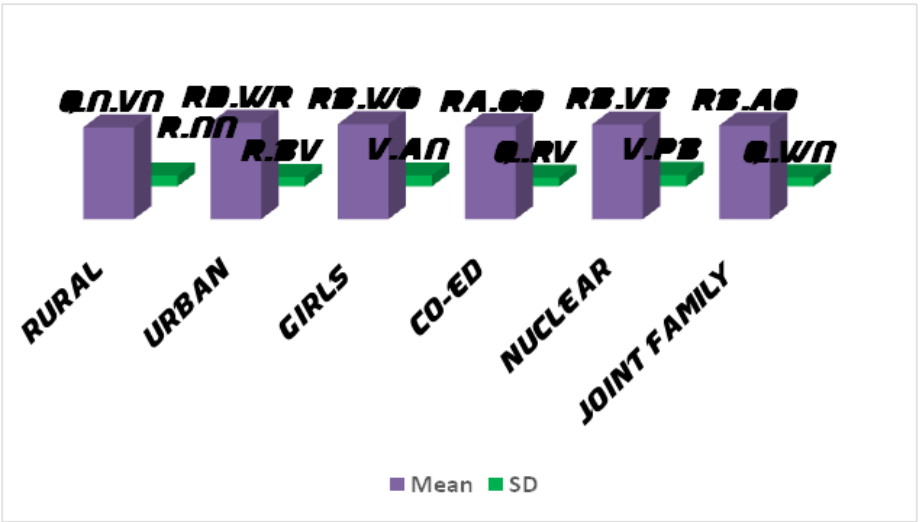

Figure.2.Showing the self-regulated learning among prospective teachers in Tirunelveli District.

Table.3. Difference between girls and co-education prospective teachers in self-regulated learning

Variable	Categories	N	Mean	SD	Calculated 't' Value	Table Value	Remark
Nature of college	Girls	177	61.83	7.09	1.76	1.96	NS
	Co-ed	73	60.33	5.67			

Interpretation of table-3.

There is no significant difference between girls and co-education prospective teachers in their self-regulated learning

Table.4. Difference between nuclear and joint family prospective teachers in their self-regulated learning

Variable	Categories	N	Mean	SD	Calculated 't' Value	Table Value	Remark
Type of family	Nuclear	133	61.71	7.41	0.80	1.96	NS
	Joint family	117	61.03	5.89			

Interpretation of table-5.

There is no significant difference between the Nuclear and Joint family prospective teachers in their self-regulated learning**.**

Conclusion

In present day's teacher training centres as well as in other institutions for vocational education, SRL is highly valued. So it is hope that result of this study will help to get better and additional informative picture of how prospective teachers can vary in their self- regulation activities, As well as their conceptions of learning how to teach and made it lean into the students. This result and explanation might help teacher educator to identify different configuration of SRL. So Self-regulatory programmes like motivational programmes, activities & exercises which can promote self-regulation of learning in both male and female prospective teachers should be integrated with the science curriculum. This would rise level & extent of selfregulation amongst. There were more number of SRLs among prospective teachers which suggest that training teachers tend to relax & take it easy. So necessary steps should be taken to sustain the motivation and thereby level of self-regulation for self and for students would be integrated. It is also established by earlier researches that SRL leads to greater teaching and academic success therefore more efforts should be made to spread the awareness of its importance. Worthy news is that self-regulation is not a fixed personality trait but is a set of attitudes, approaches and skills that can be taught & developed. It is quite possible to become a self-regulated learner to understand and promote SRL into the student. Also to increase its level. In the second objective, locale wise science prospective teachers do not differ significantly that is rural and urban science prospective teachers were found to have SRL to the dissimilar extent.

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INNOVATIVE STEM TECHNOLOGY: EMPOWERING STUDENTS LEARNING SKILLS

Dr. R. Annadurai
Director i/c, Centre For Educational Research,
Madurai Kamaraj University, Madurai

Abstract

The training and right tools in students' hands can help prepare them with the knowledge and skills they need to succeed in the workplace today and tomorrow. Technology is changing education, changing where and how students learn and supporting them at every stage of education. On the path to self-learning, technology empowers students to take charge of their own learning, aligns learning with their digital lives, and prepares them for the future. Through the use of technology and access to resources outside the classroom, students will be inspired to become problem solvers, thinkers, collaborators, and builders. When technology is integrated into the classroom, students develop a lifelong love of learning. STEAM education is designed to provide students with fun, hands-on experiences that will contribute to their development. The balance between learning and play always encourages young people to ask questions, try new things, interact with friends and explore the world around them. When STEAM is developed and integrated with the right technologies, learning from the creator's mind and environment can be possible.

Keywords: *STEM Technology, Active Learning, Empowering Education, A.R Learning.*

Introduction

Education is a process that continues from birth to death for all living things. Whether you are talking about animals, birds, insects or people, they learn something every day, directly or indirectly. You can learn from anyone. Even a tiny ant teaches us one of the most important lessons in life: "Don't be afraid of failure." But it will be easier to learn with the help of some tips and tricks. Knowing the best courses can help you achieve the best results in the shortest time possible. STEAM-related learning skills encourage creativity; Help students apply what they learn and prepare them for future careers and jobs yet to be created. Specialized skills in coding, programming, computational physics, and computer science are increasingly in demand in the workforce. Students acquire these skills and hone them even as they develop 21st century problem-solving and critical thinking skills.

STEAM Education and Comprehensive Skills Approach

The best learning strategies help you do your best when trying to acquire new ideas, concepts, and skills. If you're like most people, your time is limited, so it's important to get as much learning experience as possible. STEM education includes problem solving, life skills, technology and deep learning. However, if we provide special education to students, we can improve their thinking patterns and develop their interest in the subject. STEAM education promotes meaningful learning and allows children to think outside the box. As children enter primary school and participate in these activities, it is good to help them look at the subjects they love from a different perspective. STEM focuses on complex science, technology, engineering or mathematics skills to advance or develop new ideas. In a STEAM curriculum, according to The Conversation, students use both hard and soft skills to solve problems and encourage collaboration to understand a concept. The whole point of a learning system is to

inspire inquiry and curiosity; enable students to ask thought-provoking questions that encourage creativity and inquiry and connect their problem-solving to real-world solutions.

Childhood Improvement and Beyond

STEAM learning exercises energize children to sharpen their perception abilities, discover designs, and analyze comes about, and foresees results. Presenting this sort of logical considering to youthful understudies nature essential basic considering abilities and makes a difference them gotten to be superior issue solvers. STEM instruction may be a learning approach that combines innovation, building and science. Its later successor, STEAM, too incorporates the expressions, which have "the capacity to extend the limits of STEM instruction and application," concurring to the Stem Instruction Direct. Concurring to the Institution for Craftsmanship Integration and STEAM is planned to energize discourse and problem-solving among understudies, creating viable aptitudes and an appreciation for collaboration.

STEAM coordinating them into a comprehensive learning worldview based on real-world applications.

According to the U.S. Division of Instruction In an ever-changing and progressively complex world, it is more imperative than ever that our nation's youth be arranged to bring information and abilities to bear on tackling issues, understanding data, and knowing how to accumulate and assess prove. Make choices. Children, indeed as youthful as preschool, can advantage from STEM-based learning exercises! Underneath are a few of the key benefits that STEAM learning can have for early childhood advancement and beyond.

1. **Create a long lasting adore of learning**

STEAM exercises and ventures are planned to urge youthful learners energized almost creating modern skills by presenting them to these openings through fun and profitable experiences. This may offer assistance children create a positive state of mind towards learning at an awfully youthful age and make it less demanding and more energizing for them to move on to higher levels of learning. Making a solid point of view on learning and scholastics early in life can too lead to new experiences and openings afterward in life those children might not something else take advantage of.

2. **Construct self-confidence and self-esteem**

This hands-on approach to learning is not as it were fun and locks in, but can moreover offer assistance children feel more sure and able. For case, numerous STEAM exercises offer assistance children learn to utilize particular instruments to total diverse tasks, such as learning to utilize scissors to cut paper or a blending spoon to blend fixings. As youthful students interact with less complex apparatuses, they start to memorize how to total errands on their claim, progress their engine abilities, and boost their self-esteem and certainty. This may moreover offer assistance them superior evaluate circumstances and decide when they have to be inquire for help.

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3. Create basic considering skills

This strategy of learning goes past fair memorizing truths and points of interest. The STEAM approach instructs children how to prepare data viably – think of it as learning how to memorize. Through fun tests, STEAM learning exercises energize children to hone their perception abilities, discover designs, and analyze comes about, and foresees results. Presenting this sort of logical considering to youthful understudies nature essential basic considering aptitudes and makes a difference them gotten to be superior issue solvers.

4. Create new ideas

The world's most noteworthy researchers, mathematicians and engineers utilize imaginative considering discovering imaginative arrangements to the foremost challenging issues. Giving openings for children to be inventive and empowering those to utilize their creative impulses can advantage each perspective of their improvement. STEAM learning empowers imaginative minds to think exterior the box, see things from diverse viewpoints, and utilize instruments and materials in other ways. There's no constrain to a toddler's creative energy, and with a small STEAM, they can ended up one of the most noteworthy minds of their era!

5. Make strides communication skills

For little children and preschoolers, play is the foremost normal way to memorize modern words and expressions. The STEAM approach is help to learning and centres on permitting children to explore and explore with modern materials, instruments and ideas. This actually makes a difference construct their lexicon and move forward their communication abilities in a positive environment. An enhanced vocabulary can offer assistance children share their considerations, suppositions and feelings more viably. This may offer assistance them feel more comfortable talking or bantering with their peers, permitting them to create solid relationships.

6. Aids in tangible development

Before babies may indeed creep, they were difficult at work utilizing their five essential faculties to memorize approximately and associated with their environment: scent, taste, and touch, sound, and locate. In a STEAM environment, youthful learners are empowered to utilize these faculties to investigate, watch and learn. Through fun and locks in exercises, children are presented to unused surfaces, sounds, smells and circumstances – in an environment without desires. This permits them to actually create positive affiliations with modern and distinctive tangible information.

Work in STEM fields

Today's STEM understudies will be mindful for tomorrow's logical disclosures. By taking instructive courses in any of these exciting areas, you'll be on your way to building life-changing arrangements to a few of the world's most squeezing issues. In the event that you're inquisitive about science and math, need a fulfilling and intentional career, and do not modest absent from challenging errands and ideas, at that point one of the taking after STEM positions may be right for you. This list is fair a inspecting of the numerous STEM occupations that exist in today's fast-paced, technology-based world. In expansion, the employments recorded in each

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field are regularly intrigued; for case, a statistician must use a combination of numerical, logical and technological skills to be fruitful. The aptitudes understudies create through STEM give them with a establishment for victory in school and past. Boss request for STEM capabilities and aptitudes is high and will proceed to extend within the future. As of now, 75 percent of occupations within the quickest developing businesses require specialists with STEM skills.

Online intuitively teaching

The modern instructional method includes making a difference understudies discover reason, energy, and experimentation in a field that will fuel their want to memorize and proceed learning. Online intelligently learning apparatuses like G Suite and Google Classroom can offer assistance clear the way for dynamic learning that permits understudies to share profitable data, extricate key thoughts from unused fabric, and organize a mental system. These collaborative instruments are also aligned with STEM instruction, which centres on real-world problem understanding, mental risk-taking, trial-and-error issue understanding, collaboration, and inherent inspiration. These intelligently instruments permit instructors to collaborate with understudies within the learning handle, which is basic for problem-based, student-centred learning. Intuitively online learning implies going past the inactive one-way hubs of perusing, tuning in and observing inactive substance. It includes extricating the precise substance you need and controlling it, instead of fair holding up for data and processing it.

Intelligently online learning

Ways to form virtual learning more interactive

1. Make a buddy system.
2. Match understudies based on their geographic locale to guarantee time zone consistency.
3. Inquire them to construct on each other's work
4. Make an educational module that permits for peer discussion.
5. Make more real-time classroom surveys.

Active learning strategies in STEM

Active learning happens when understudies lock in with learning materials through action-based strategies such as bunch work, hands-on ventures, and problem-solving exercises as restricted to detached or transferable exercises such as perusing, tuning in to an address, or observing a video demonstration.

Reasons to consider majoring in STEM

There are numerous reasons to consider a STEM field. Underneath are a few of them:

1. Challenging field of consider. On the off chance that understudies need an engaging field of ponder that’s challenging, STEM is the way to go.
2. Higher paying career. A STEM offer understudies a chance for superior paying occupations. In 2021, the Bureau of Work Measurements found that STEM occupations had about twofold the yearly middle wage compared to the national normal for all occupations.

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3. Make a distinction. STEM gives understudies with the apparatuses to apply themselves to real-world issues and create inventive arrangements to those problems.
4. Voyaging. STEM majors regularly have ponder overseas programs that permit understudies to consider and conceivably work abroad.
5. Work security. STEM abilities are looked for after in numerous occupations and exchange well to a assortment of occupations. Most STEM areas require thorough issue fathoming and basic considering abilities that are valuable in nearly any occupation.

STEM Educational Programs

STEM majors can be any science, innovation, designing, or math major. This implies that person colleges have distinctive definitions of what tallies as STEM in their educational modules. The taking after areas of consider are regularly STEM programs: computer science, gadgets and other technology-related disciplines, designing science, common and physical sciences, and life sciences.

Makes strides Basic Considering Skills

An intelligently STEM educational programs comprises of learning modules which test a student's basic considering abilities. This may be done with the assistance of a role-playing recreated situation. Simulation-based scenarios can be created where understudies ought to perform certain assignments and make choices and after that see comes in real-time. By making game-based learning modules, distributers and teachers can empower understudies to discover arrangements and illuminate issues. It is evaluated that most of the occupations within the future will require math and science abilities, hence, creating these skills from a youthful age will certainly advantage understudies as they can sharpen them over the a long time and maybe ace it by the time they are prepared for a job.

Students to Memorize and Enhance with Increased Reality

Augmented reality was once a novel never-seen-before concept, but presently it has become too common, with instructive organizing consolidating AR advances in K-12 instruction. AR makes virtual learning conceivable in a totally risk-free environment. In numerous schools, AR innovation is being utilized right from the rudimentary level to form learning more curiously and to clarify essential concepts in an locks in and immersive way. It can play an important part in clarifying complex concepts in building and science. Designing understudies can see and learn the working of a machine or mechanical autonomy. They can at that point attempt and work around the increased screen, make changes and test conceivable outcomes and after that take the try to the real-world through a real demo.

The takings after areas are frequently included as STEM

The majors are bookkeeping, human studies, financial matters, medication, nursing, political science, brain research and social sciences in different areas. The US Division of Country Security (DHS) keeps up a list of STEM majors that it updates regularly. Concurring to DHS, a STEM field is one that's included within the Office of Education's Classification of Instructive Programs scientific classification and incorporates designing, natural sciences, arithmetic, physical sciences, or related fields.

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Conclusion

STEM emphasizes the advancement of coherent and critical considering by permitting understudies to memorize and get it things from a real-world viewpoint. STEM instruction has prepared understudies with the abilities essential to succeed in their careers, be it works, business, to investigate learning methods that have demonstrated viable. The obligation of the teacher/facilitator is to direct and oversee understudies within the classroom so that understudies are effectively locked in basic considering an issue understanding, ordinarily with the objective of limiting instructor input from what is considered conventional instruction. Broadly talking, the work of instructors is to assist understudies learn by giving information and making a circumstance in which understudies can and will learn viably. An instructor plays a fundamentally part in a student's life, giving bolster, creating information and aptitudes, and supporting interest and imagination. Instructors direct understudies to attain their scholarly objectives and construct sound connections with others automatically student society will be more effective.

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INNOVATIVE TEACHING METHODS REVOLUTIONING THE 21ST CENTURY FOR EDUCATION

Sivapriya.M
Student Teacher, Thiagarajar College Of Preceptors

Abstract

In the rapidly changing landscape of the 21st century, education is evolving to meet the demands of a technologically advanced and globally interconnected society. Traditional teaching methods are being supplanted by innovative approaches that empower students to become active participants in their learning journeys. This article explores a diverse array of cutting-edge teaching methodologies that are revolutionizing the educational landscape. At the forefront of these innovations is the flipped classroom model, where students gain exposure to new material through pre-class resources, allowing class time to be dedicated to interactive activities and personalized guidance. Project-based learning immerses students in real-world challenges, fostering critical thinking, problem-solving, and collaboration skills. Gamification harnesses the motivational power of game elements, making learning more engaging and rewarding. Additionally, blended learning seamlessly integrates digital instruction with face-to-face teaching, catering to diverse learning preferences. Inquiry-based learning cultivates intellectual curiosity by encouraging students to explore topics through questioning and investigation. Collaborative learning techniques emphasize teamwork and collective knowledge-building, preparing students for the cooperative nature of modern work places. Cutting-edge technologies, such as virtual and augmented reality, offer immersive and interactive learning experiences, bringing abstract concepts to life. Design thinking nurtures innovative problem-solving through a human-centered approach, while personalized learning tailors instruction to individual needs and learning styles. Interdisciplinary learning transcends subject boundaries, promoting well-rounded thinking and understanding by embracing these innovative teaching methodologies, educators can create dynamic learning environments that equip students with the essential skills and mindset necessary to thrive in the rapidly evolving 21st century.

Keywords: *Innovative Teaching Methods, 21st-Century Skills, Student-Centered Learning, Active Learning, Critical Thinking, Problem-Solving, Collaboration.*

Introduction

In the rapidly evolving landscape of the 21st century, traditional teaching methods are no longer sufficient to equip students with the necessary skills and knowledge to thrive. The modern world is characterized by rapid technological advancements, globalization, and an ever-increasing pace of change. To navigate these complexities, students require a diverse set of skills that extend beyond mere content knowledge. Educators are continuously seeking innovative approaches that engage students, foster critical thinking, problem-solving abilities, and prepare them for the challenges of a dynamic world.

This thematic article delves into various cutting-edge teaching methods that are revolutionizing the educational landscape. These innovative approaches are designed to transform the traditional classroom into a dynamic, student-centered environment where learning is active, engaging, and tailored to individual needs. By exploring methods such as flipped classrooms, project-based learning, gamification, blended learning, and more, this article showcases how educators can leverage technology, collaborative experiences, and real-world applications to cultivate essential 21st-century competencies.

These innovative teaching methods not only aim to impart knowledge but also nurture critical thinking, creativity, communication, and collaboration skills. They empower students to become active participants in their learning journeys, fostering a growth mindset and a love for lifelong learning. By embracing these cutting-edge approaches, educators can equip students with the tools and mindset necessary to thrive in an ever-changing world, ensuring they are well-prepared for future academic, professional, and personal challenges.

Aim

The aim of these innovative methods include:

- Increasing student engagement, motivation, and active participation.
- Developing critical thinking, problem-solving, creativity, and collaboration abilities .
- Tailoring learning to individual needs, interests, and learning styles.
- Preparing students for future jobs and life with essential skills.
- Using technology productively to enhance the educational experience.
- Making learning more relevant, interactive, and applicable to real-world situations.

Overall, these teaching innovations aim to move away from traditional one-way lecturing. Instead, they put students at the center as active participants in their own learning journeys.

Objectives

- Introduce and explain various innovative teaching methods that are transforming education.
- Highlight the objectives, advantages, and importance of each innovative teaching method.
- Emphasize the development of 21st-century skills, such as critical thinking, problem-solving, collaboration, and adaptability.
- Explore the role of technology integration and personalized learning experiences in innovative teaching approaches.
- Underscore the importance of fostering student engagement, motivation, and a love for lifelong learning.

Importance

21st Century Skills

The flipped classroom nurtures essential 21st-century skills, such as critical thinking, problem-solving, collaboration, and self-directed learning. These skills are crucial for success in today's rapidly changing world.

Student-Centered Learning

This approach aligns with the shift towards student-centered learning, where students take an active role in their education. It empowers them to take responsibility for their learning and fosters a growth mindset.

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Personalized Learning Experiences

By catering to individual learning needs and styles, the flipped classroom creates personalized learning experiences, which can lead to improved academic performance and increased student satisfaction.

Effective Use of Technology

The flipped classroom leverages technology to enhance the learning experience. It integrates digital resources, such as videos, simulations, and online assessments, into the learning process, preparing students for the digital era.

Innovative Teaching Methods for the 21st Century

Teaching methods are changing to better prepare students for the modern world. Traditional teaching styles alone are not enough anymore. Students need to develop skills beyond just knowing information. They need abilities like critical thinking, problem-solving, communication, and collaboration. Educators are using new, innovative teaching approaches to help students build these essential abilities. These methods make learning more active, engaging, and relevant for students.

The Flipped Classroom

The flipped classroom is one innovative teaching approach. In this model, students first learn the new material outside of class time. They may watch video lectures or read online resources to gain the initial exposure to concepts. The class time is then used for active learning activities rather than lectures.During class, students work on projects, activities, and exercises related to the material. They can get personalized guidance and support from the teacher as needed. This setup allows students to first learn at their own pace. Class time becomes dedicated to applying their knowledge through practice and interactive experiences.

The benefits of the flipped classroom include:

- More engaging and interactive class time.
- Students control pace of instruction before class.
- Teachers can provide more personalized attention in class.
- Promotes active learning instead of passive listening.
- Uses technology to facilitate flexible pre-class learning.

Overall, the flipped model shifts the traditional instructional approach. Students become more actively involved in building their understanding.

Project-Based Learning

Another innovative approach is project-based learning. With this method, students work over extended periods on specific projects or challenges based in real-world scenarios.

For example, students might design an eco-friendly planned community. Or they could develop a business plan for a new product idea. Whatever the project, it allows students to apply their learning in a very hands-on, practical way.To complete their projects, students must research, problem-solve, work collaboratively, and create end products or solutions.

Key skills developed include:

- Critical thinking to analyze information.
- Problem-solving abilities.
- Communication and presentation skills .
- Teamwork and collaboration.
- Time management.
- Connecting learning to real-world applications.

Through tackling these involved projects, students don't just memorize facts. They use their knowledge in meaningful, productive ways to accomplish goals.

Gamification for Learning

Gamification takes inspiration from the motivating elements of games and applies them to learning activities. Game components like scoring points, earning badges, competing on leaderboards, and leveling up get incorporated. This makes the learning process more like a game experience. Students get rewarded through fun visual feedback as they progress and achieve accomplishments. Even simple features like adding narrative storytelling can increase learner engagement.

The key advantages of gamification include:

- Makes learning feel more like playing a game.
- Visual rewards increase motivation .
- Can create a sense of progress and accomplishment.
- Encourages continued effort through challenges.
- Appeals to many students' existing interests in gaming.

Overall, gamification aims to make educational activities more inherently enjoyable and compelling for students. The psychology of games gets applied productively.

Blended Learning Environments

Blended learning involves strategically combining online digital instruction with periodic in-person classroom sessions. Some content and activities get delivered virtually, while other components take place face-to-face.

In a blended model, students might:

- Complete self-paced online modules and videos.
- Attend classroom sessions for instructor-guided lessons.
- Collaborate with classmates through group discussions online and in-person.
- Submit assignments both digitally and in class.

Blended learning offers an ideal balanced approach for many educators. It allows them to leverage technology and online capabilities. But it maintains the benefits of personal guidance and classroom community.

This flexibility makes blended learning a strong model for differentiated, personalized instruction as well. Students can learn in the modalities that work best for them.

Inquiry-Based Learning

Rather than just absorbing information delivered by instructors, inquiry-based learning puts students in the role of active questioners and researchers. This approach aims to develop self-

directed learning abilities. In Inquiry-based learning, students identify their own questions and areas of curiosity related to topics. They then investigate these avenues through research, experimentation, and analysis to find potential answers or conclusions.Teachers serve as facilitators during this inquiry process. They provide guidance and help steer students toward relevant resources and next steps in their investigations.

Key aspects of inquiry-based learning:

- Students develop motivating questions to explore.
- They design procedures and processes for research .
- Instructors facilitate rather than directly deliver content.
- Students construct knowledge through personal exploration.
- Promotes critical thinking and analytical skills.

While teachers provide oversight, students take charge of their own learning pathway when exploring specific topics through inquiry.

Collaborative Learning Strategies

Many innovative teaching approaches emphasize collaboration between students. The ability to effectively work with others is an essential skill for the modern workforce.

Collaborative learning involves students joining together in groups, often to complete activities or projects jointly.

As they collaborate, students:

- Share ideas and insights with each other.
- Explain and communicate their thinking processes.
- Distribute responsibilities among team members.
- Negotiate agreements on decisions.
- Create shared understanding through discussion.

This collaboration can happen during in-class group work sessions facilitated by instructors. In addition to the core subject matter, students develop vital interpersonal abilities through collaborative exercises, including:

- Teamwork and coordination.
- Active listening and perspective taking.
- Conflict resolution and compromise.
- Giving and receiving feedback constructively.

Collaborative learning makes education a communal, social experience in addition to an individual one.

Immersive Technologies: VR and AR

Emerging technologies like virtual reality (VR) and augmented reality (AR) are transforming how students can learn and interact with educational content. These technologies create immersive digital experiences. With virtual reality, students enter fully simulated 3D environments using headsets and controllers. These simulations allow students to explore recreated settings like historical events, other planets, or the human body at a cellular level.

Augmented reality overlays digital visuals onto the actual physical spaces students see. For example, AR could project a 3D model of the solar system in the middle of a classroom that students can manipulate and observe from different perspectives.

These technologies provide highly interactive and engaging ways to:

- Experience representations of abstract concepts.
- Safely practice procedures in risk-free simulations.
- Visualize complex spatial and structural relationships.
- Experiment with scenarios that can't be done physically.

As VR and AR capabilities advance, their value as innovative teaching tools continues expanding across subjects.

Design Thinking Process

Design thinking equips students with strategies and processes for innovative problem-solving. This creative approach follows specific phases:

1. Empathize - Deeply understanding the needs and perspectives of those facing the issue.
2. Define - Clearly articulating the core problems and challenges.
3. Ideate - Generating a multitude of potential solutions through brainstorming.
4. Prototype - Building preliminary models to explore and test ideas.
5. Test and Refine - Getting feedback, then iterating on prototypes.

Students apply design thinking to develop products, services, or experiences centered on solving real human needs. It promotes skills like:

- Empathy and perspective-taking.
- Creative and outside-the-box ideation.
- Analyzing issues from multiple angles.
- Building physical prototypes to evaluate solutions.
- Adapting ideas through cyclical testing and improvement.

By guiding students through this human-centered design process, it nurtures their innovative mindsets and problem-solving abilities.

Personalized Learning Approaches

Given the diversity of student needs, interests, and learning styles, many educators embrace personalized learning models. Rather than taking a one-size-fits-all approach, instruction gets tailored to individual students as much as possible.

Methods of personalization include:

- Customized learning plans identifying optimal pathways.
- Adaptive digital platforms that adjust content dynamically.
- Flexible pacing allowing students to accelerate or decelerate.
- Learner profiles and data to guide targeted strategies.
- Choice in how students engage with materials and demonstrate mastery.

The overarching goal of personalized learning is to provide more customized experiences, motivating and engaging for each unique student. It aims to facilitate growth by meeting students where they are personalization leverages digital tools but can also happen through more hands-on learning activities matched to student needs and preferences.

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Interdisciplinary Learning Connections

Increasingly, educators recognize the value in guiding students to make interdisciplinary connections between different subject areas. The real world requires synthesizing insights across multiple domains of knowledge.

Interdisciplinary projects may bring together concepts from fields like:

- Science and mathematics.
- Social studies and language arts.
- Technology and engineering.
- Art and design.
- And more subject combinations.

For example, students may need to analyze scientific data using statistical models while communicating findings through persuasive writing. Or they might study sociological factors alongside environmental impacts when developing solutions for sustainability issues.

Merits

Increased Engagement: By offloading direct instruction to pre-class materials, class time becomes more interactive and engaging. Students are actively involved in their learning process, fostering greater motivation and retention.

Differentiated Instruction

The flipped classroom allows teachers to differentiate instruction more effectively. With students accessing the content independently, teachers can provide targeted support and challenge students at their appropriate levels during class.

Flexible Learning

Students can access the pre-class materials at their convenience, accommodating different learning styles and schedules. This flexibility is particularly beneficial for students who need more time to grasp concepts or those with conflicting commitments.

Efficient Use Of Time

By offloading direct instruction to pre-class materials, class time is optimized for higher-order thinking activities, leading to a more efficient use of time and resources.

Discussion

Using innovative teaching methods represents a major shift in how education is approached. These new techniques offer many benefits beyond traditional instruction. Educators can create engaging learning environments tailored to meet diverse student needs.

A key advantage is helping students develop essential skills for the 21st century. As the world grows more complex, students need skills like critical thinking, problem-solving, creativity, communication and collaboration - not just content knowledge. The innovative methods nurture these crucial competencies. The approaches also align with student-centered learning principles. They empower students to actively participate through inquiry and hands-on application. This promotes a mindset of lifelong learning to navigate our ever-changing

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world.Technology integration is central to many innovative teaching methods. From flipped classrooms to virtual reality, they leverage digital tools to enhance learning experiences and prepare students for the digital age. Personalized models customize instruction to individual interests and styles. Additionally, the interdisciplinary connections fostered are highly relevant today. Students learn to synthesize knowledge across subjects to understand complex issues. This cross-curricular ability is vital for solving real-world challenges.

Conclusion

In the 21st century, the adoption of innovative teaching methodologies is not merely a choice but a necessity. These cutting-edge approaches equip students with the essential skills, mindset, and knowledge required to thrive in an ever-changing world. By fostering active engagement, critical thinking, collaboration, and technological proficiency, educators can create dynamic learning environments that empower students to become lifelong learners and innovative problem-solvers.While the implementation of these innovative methods may present challenges, such as resource allocation, professional development, and systemic shifts, the potential rewards are profound. By embracing these transformative approaches, educators can revolutionize the educational experience, preparing students not just for academic success but for the multifaceted challenges and opportunities that await them in their future endeavors.

Ultimately, the integration of innovative teaching methodologies represents a commitment to providing students with a holistic and future-ready education – an education that nurtures their intellectual curiosity, unleashes their creative potential, and empowers them to navigate the complexities of the 21st century with confidence and resilience.

Certainly, here are some potential book, journal, and online references related to the content on innovative teaching methods.

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YOGA AND HEALTH EDUCATION: BRIDGING THE GAP TOWARDS HOLISTIC WELLBEING

V. Ishwarya, M. Iswarya & M.Bhuvanadevi
Student Teachers
Thiagarajar College of Preceptors, Madurai

Abstract

The growing prevalence of chronic diseases and mental health concerns necessitates a paradigm shift in health education. This paper explores the potential of integrating yoga practices within health education curriculums. Yoga, an ancient Indian philosophy, offers a holistic approach to well-being encompassing physical postures (asanas), breathing techniques (pranayama), meditation, and ethical principles. Research suggests that yoga can improve physical fitness, stress management, and mental health. This paper will discuss the scientific evidence supporting the benefits of yoga for various health conditions. It will then propose a framework for incorporating age-appropriate yoga practices and theoretical knowledge into health education programs for different age groups. By integrating yoga, health education can empower individuals to take charge of their well-being and cultivate lifelong healthy habits.

Keywords: *Yoga, Health Education, Holistic Health, Well-being, Mind-Body Integration*

Introduction

Health education plays a crucial Role in empowering individuals to make informed choices about their health. However, the focus often lies on physical activity and disease prevention, potentially neglecting other aspects of well-being. Yoga, a time-tested practice originating in India, offers a holistic approach to health, encompassing physical postures (asanas), breathing exercises (pranayama), meditation, and relaxation techniques. Integrating yoga into health education programs holds significant promise for promoting holistic well-being. The word 'Yoga' is derived from the Sanskrit word 'Yuj' which means link / Union On the other hand 'Yuj' means conjoin of Jeevatma (individual soul) and Paramathma (Supreme self) .The disturbance caused by external objects results in distractions within our minds. At this stage, the realization of the true self is not present, but through success in yoga, according to the teachings of Patanjali Yoga Sutra, manifestations of self-awareness are attained ."Yoga," when approached with simplicity and ease in mind, is the practice that aligns the body and soul, providing tranquillity for both physical and spiritual well-being, or simply the path that leads us to inner peace and balance. Yoga is Fundamentally a spiritual practice founded on a highly delicate science that seeks to achieve harmony between mind and body. It is both an art and a science that promotes healthy living. The word "yoga" comes from the Sanskrit root yuj, which means "to join," "to yoke," or "to unite". According to Yogic teachings, practicing Yoga leads to the merging of individual and global consciousness. According to current physicists, everything in the cosmos is only a manifestation of the same quantum firmament. A yogi who achieves a state of freedom, known as Mukti, nirvana, kaivalya, or moksha, is said to be "in Yoga". For years yoga was considered a fringe practice embraced mostly by celebrities and “New Agers.” But today millions of Americans from young children to seniors in their eighties and nineties are practicing yoga. And that’s good news because this mind-body practice actually has the power to help your health in dozens of different ways. Yoga is more than just a workout—it’s actually a combination of four components: postures (like tree pose), breathing practices, deep relaxation, and meditation that can transform your health on many different level.

Principles of Yoga

Yoga represents a way of life. Yoga is a science, not a religion, that brings together the mind, body, and spirit. It is also an art of living in the proper manner. Yoga practices are extremely practical and can be applied at any time. This is why Yoga has been practiced for thousands of years and remains relevant now. This practical science can be divided into five main principles.

Proper Relaxations

In contemporary times, we are measured by how much we can accomplish in the shortest amount of time. This forces us to be constantly moving. This continual mobility causes our bodies and minds to become overworked and anxious. Proper relaxation is another crucial component that we must implement into our daily routines to allow the body and mind to replenish and revitalize. Rest and relaxation help to calm the entire system. When we are in this situation, it can be tough to calm the system, and sleeping is also difficult and ineffective. Yogic relaxation techniques, such as savasana, assist to soothe the body and mind by retraining them to relax.

Proper Exercise

To maintain the body strong, flexible, and healthy, proper exercise is required. Asanas are the physical poses or exercises in yoga. The purpose of asanas, which are mild stretches, is to lubricate the joints, muscles, tendons, ligaments, and other body parts. Additionally, they aid in enhancing circulation, releasing bodily stress, boosting flexibility, and toning the neurological system. The proper way to perform an asana is to move slowly, consciously, and deliberately. The favourable effects extend to the development of the intellect in addition to the physical body. Most people struggle to achieve mental calmness. Asanas are the first thing we do to assist relax the mind and lay a solid foundation for the other exercises.

Proper Breathing

Because of our contemporary lifestyles, many of us forget how to breathe. At best, our breathing becomes extremely shallow. All of our cells and tissues require oxygen to function properly. Without an appropriate amount of oxygen, our cells and tissues weaken, which leads to sickness. Deep breathing produces an excess of oxygen, which promotes cell and tissue health. Impurities leave our bodies as we exhale. A lack of thorough exhalation does not effectively remove pollutants from our bodies. Shallow breathing does not provide enough oxygen and does not eliminate enough pollutants. As a result, the system becomes toxic, creating an ideal condition for disease development. With proper breathing practices (pranayama), we may train the body how to breathe again. Pranayama not only purifies. The result is a toxic system, which is a perfect environment for diseases to form. With proper breathing techniques (pranayama) we can teach the body to breathe again.

Proper Diet

Our health and well-being are slightly influenced by the foods we eat. A plant-based diet is best for maximum health for several reasons. It makes it possible for the body to get the most out of food, water, air, and sunlight. It also encourages good health and is simple to absorb. A

Yogic diet is uncomplicated, organic, and healthful. Yogic eating promotes greater health and a peaceful, yet keen mind because food has a subtle effect on us.

Positive thinking and Meditation

Our body is driven by our thinking. Maintaining the best possible health for our bodies requires a steady and peaceful mind. Contemplating positively contributes to mental clarity and inner tranquillity. We perceive the world differently when we alter our attention from negative to good thoughts. Negative events no longer have as much of an impact on us and we begin to view things more positively. Incorporating a daily meditation practice, in addition to positive thinking, helps maintain mental clarity and focus.

Aims and Objectives

This paper aims to

- Highlight the potential of yoga as a complementary approach to existing health education programs.
- Discuss the multi-dimensional benefits of yoga for physical and mental health.
- Review existing research on the efficacy of yoga for specific health conditions.
- Advocate for further research and practical implementation strategies for integrating yoga into health education.

Seven chakras in our human body

The seven chakras are energy points in the body, aligned in a straight line that runs along the spine, starting from the base of the spine to the crown of the head. Each chakra is associated with certain organs, emotions, and areas of your life. They are believed to influence health and well-being. Here's a list of the seven chakras, their locations, and their associations:

Root Chakra (Muladhara) The root chakra, also known as Muladhara, is located at the base of the spine. It serves as a basis for your life, allowing you to feel grounded and capable of overcoming obstacles. Your root chakra controls your sense of security and stability.

Sacral Chakra (Svadhisthana) The sacral chakra, also known as Svadhisthana, is positioned immediately below the belly button. This chakra controls your sexual and creative energies. It is also tied to how you relate to your own and other people's emotions.

Solar Plexus Chakra (Manipura) The solar plexus chakra, also known as Manipura, is located in your stomach. It is responsible for confidence and self-esteem, as well as making you feel in command of your life.

Heart Chakra (Anahata) The heart chakra, also known as Anahata, is located in the center of your chest, close to the heart. It's no surprise that the heart chakra is all about our ability to love and be compassionate.

Throat Chakra (Vishuddha) The throat chakra, or Vishuddha, is located in the throat. This chakra deals with our ability to speak verbally.

Third Eye Chakra (Ajna) Ajna, the chakra of the third eye, is situated between your eyes. This chakra is responsible for your strong intuition. This is so because intuition is under the jurisdiction of the third eye. It is connected to imagination as well.

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Crown Chakra (Sahasrara) The crown chakra, or Sahasrara, is placed on top of your head. Your Sahasrara reflects your spiritual connection with yourself, others, and the universe. It also influences your life's purpose.

It's important to note that the concept of chakras is part of Eastern traditional medicine. However, many people find that focusing on chakras can help them improve their emotional and spiritual well-being.

Eight limbed yoga

Yoga encompasses many types, including Raja Yoga, Bhakti Yoga, Karma Yoga, Jnana Yoga, Kundalini Yoga, Shiva Raj Yoga, Vasi Yoga, Laya yoga, and Ashtanga Yoga . Ashtanga Yoga, also known as the Eight-Limbed Yoga, derives its name from the Sanskrit words "Ashta," meaning eight, and "Anga," meaning limbs. It refers to the eight components or stages outlined by Patanjali in his Yoga Sutras. These eight limbs are:

1. Yama (ethical disciplines)
2. Niyama (self-observances)
3. Asana (physical postures)
4. Pranayama (breath control)
5. Pratyahara (withdrawal of the senses)
6. Dharana (concentration)
7. Dhyana (meditation)
8. Samadhi (absorption or enlightenment)

Ashtanga Yoga is a systematic approach to spiritual growth, with each limb building upon the previous one, ultimately leading the practitioner towards self-realization and liberation.The person who understands and comprehends each of these eight steps is considered a true yogi. The first five steps are part of Bahiranga Yoga, also known as external yoga, while the last three steps are part of Antaranga Yoga, or internal yoga.

Day to day life in yoga

Yoga goes beyond just the physical postures (asanas). It's a philosophy that can permeate your entire day, promoting mindfulness and well-being. Here's how to weave yoga into your daily life:

1. On the Move

Mindful Commute Whether you walk, cycle, or take public transport, use the time for mindful breathing. Focus on your breath and observe your surroundings without judgment.

Stretch Breaks At work, set a timer for short breaks. Do some simple stretches at your desk or take a walk to loosen up and refresh your mind.

2. Off the Mat

Yogic Diet Yoga emphasizes a balanced, mindful approach to eating. Focus on whole foods, fruits, and vegetables, and pay attention to your body's hunger cues.

Yogic Speech Yoga encourages truthfulness and kindness in communication. Speak with intention and avoid negativity.

3. Inner Harmony

Mindful Moments Take a few mindful breaths throughout the day. Pause before reacting to a situation and choose your response consciously.

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Gratitude Practice Before sleep, reflect on things you're grateful for. This cultivates a positive outlook.

Yoga in education

Yoga in Teaching Research on Yoga in Education with Children in Europe found that the children were more focused, calm, and composed after practicing two asanas and one pranayama at the start and end of the class than their counterparts in other classes who were not practicing yoga and who were destructive, restless, violent, and distracted.

- Boost concentration and mental fortitude.
- Improves recall and retention of memories.
- Improved mental faculties and original thought.
- Improved ability to solve problems and make decisions improved processing of information aids in ignoring distraction.
- Keep up a positive interpersonal rapport both between the teacher and the students.

Benefits of Yoga in Health Education

Yoga offers a range of benefits that complement traditional health education approaches

Physical Health Yoga improves strength, flexibility, balance,and cardiovascular health .

Mental Health Yoga practices like pranayama and meditation can reduce stress, anxiety, and depression.

Mind-Body Connection Yoga fosters awareness of the mind-body connection, promoting self-care and overall well-being .

Stress Management Yoga provides tools for managing stress, a significant contributor to various health issues .

Chronic Disease Management Studies suggest yoga can effectively manage chronic conditions like chronic pain, diabetes, and hypertension .

Importance of integrating yoga

Traditional health education can benefit from incorporating yoga for several reasons

1. **Holistic approach** Yoga addresses physical,mental,and emotional well-being, complementing existing health education models.
2. **Empowerment** Yoga practices equip individuals with tools for self -care and stress management, fostering a proactive approach to health.
3. **Accessibility** Yoga can be adapted to various fitness levels and abilities, making it widely applicable in educational settings.

Role of teacher towards yoga

- The teacher must analyze each student's psychological differences.
- Each student has a unique psychological impediment to learning, remembering, and recalling.
- Teachers must be mindful of when to talk and when to stay silent, as both speech and silence are modes of instruction.
- During the interval of silence, have the youngsters play a game of noticing their own breath and counting backward from 15 to 1.
- Encourage students to complete a basic yoga practice every day.

Role of student towards yoga

- Students should comprehend the value of yoga and meditation and incorporate it into their daily lives.
- Students should be forthright with their teachers and parents about the stress and load they are feeling.
- Students can take the initiative to notify others about its benefits.

Achievement of yoga

Yoga and ayurveda, both of which originated in India, have evolved into medicinal sciences. Practiced around the world. Medical tourism: people from all over the world visit India for yoga education and ayurvedic treatment .It gained recognition and is now recognized as International Yoga Day on June 21st of each year. The cheapest and most inexpensive option for everyone.

Review of Research

A growing body of research supports the efficacy of yoga in promoting health. A meta-analysis of randomized controlled trials found that yoga practices significantly improved anxiety and depression . Similarly, research suggests yoga can effectively manage chronic low back pain and improve sleep quality .

Conclusion

Integrating yoga into health education programs offers a promising avenue for promoting holistic well-being. Further research is needed to explore the long-term effects of yoga interventions and develop effective implementation strategies. By bridging the gap between traditional health education and a holistic approach, we can empower individuals to achieve optimal physical, mental, and emotional health.

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PERCEPTION TOWARDS FLIPPED CLASSROOM AMONG SECONDARY TRAINEE TEACHERS

Dr. S. Raja Kumar
Assistant Professor
Thiagarajar College of Preceptors, Madurai

Dr. C. Shirley Moral
Assistant Professor, Department of Education
Madurai Kamaraj University

Abstract

The current research aims to determine the perception of flipped classrooms among secondary trainee teachers. The tool Perception Towards Flipped Classroom Scale (PTFCS) was used for the study. The tool was constructed and validated by Kumar S, Raja and Moral C, Shirley (2021). A sample of 323 was randomly collected from the secondary trainee teachers from the various B.Ed. Colleges in Tamil Nadu and the Normative survey method was adopted for the study. The findings of the study show the level of flipped classroom was moderate. The demographic variables Gender and Stream are not significant at 0.05 level but the other two demographical variables Qualification and Residential Area are significant at 0.05 level.

Keywords: *Perception, Flipped Classroom, Secondary trainee teachers.*

Introduction

The conventional learning process is turned on its head in a flipped classroom. The time allotted in class is for discussion and participatory projects; lectures are offered outside of class for private review. The following are the main aims of flipping:

- To enable the classroom to be an active learning circumstance
- To make the students learn at their own pace.
- To enable the classroom with effective learning circumstances

Students can check the information at the most convenient time and location for them by moving passive learning content to an at-home situation. Additionally, they have access to all the prerequisite knowledge before class, feeling prepared and equipped to engage in activities that are interactive and collaborative.

Students can review information at the most convenient time and location for them by moving passive lecture material to an at-home situation. Additionally, they have access to all the prerequisite knowledge before class, feeling prepared and equipped to engage in interactive learning activities. Students are required to apply the course content during teacher-led exercises and discussions. In-depth applications of the material, group projects, knowledge tests, or free time for individual tasks can all be done in class, with the added benefit of having an instructor and other students nearby for cooperation and problem-solving. The crisis increased interest in the flipped classroom model because it usually combines online and in-person instruction. Whether it occurs entirely in a virtual classroom, a hybrid model, or a wholly in-person learning setting, a flipped classroom can accommodate a mix of synchronous and asynchronous learning.

Review of Related Literature

Brown and Johnson (2024) researched Exploring Student Perceptions of Flipped Classroom: A Qualitative Study. This qualitative study investigated students' perspectives on flipped classrooms. Findings revealed that students appreciated the flexibility and interactive nature of flipped learning but expressed concerns about workload management.

Lee et al. (2023) studied Teachers' Perceptions of Flipped Classroom Implementation: A Comparative Study. Teachers' perceptions of implementing flipped classrooms were examined across different grade levels. Results indicated variations in teacher attitudes, with secondary school teachers expressing more positive views compared to elementary school teachers.

Aidoo, Benjamin et.al. (2022). Examined the study Perceptions of Ghanaian Student Teachers on Benefits and Challenges of the Flipped Classroom: A Case Study. During the 2020/2021 academic year, the perspectives of student teachers on using the flipped classroom approach were investigated in three Ghanaian colleges of education. Data was collected from 143 student teachers using an open-ended questionnaire. The responses were analysed qualitatively using content analysis. In addition, a focus group interview was conducted to delve deeper into some of the issues. By utilising self-paced and collaborative learning, the flipped classroom approach gave students the feeling that they were in control of their learning. The approach also improved their conceptual understanding and learning abilities. In addition, the student teachers faced three interconnected challenges, including inadequate ICT infrastructures such as poor internet connectivity, a lack of ICT skills, and an increased workload. The flipped classroom approach can have a positive impact on student's learning, but educators who plan to use it should consider the adequacy of the available ICT infrastructure.

Ergulec, Funda & Kara, Ahmet & Eren, Esra. (2022). Studied The impact of flipped learning on the relationship between self-regulated online learning and academic procrastination. To understand the relationships between flipped learning, self-regulated online learning and academic procrastination, this study constructs a mediation model to examine the impact of flipped learning on pre-service teachers' self-regulated online learning behaviours and academic procrastination. A total of 396 pre-service teachers enrolled in a university in Turkey participated in the study, 306 (77.3%) of the participants were female and 90 (22.7%) were male. Three different data collection tools were used in the study: Flipped Learning Scale, Self-Regulated Online Learning Questionnaire, and The Scale of Academic Procrastination. Path analysis technique was used to analyze the data. While learning support, a dimension of the flipped learning scale, predicts self-regulated online learning in a significant and positive way, self-regulated online learning predicts academic procrastination in a significant and negative way, according to the study. Students' self-regulated online learning increases by 0.25 units for every unit increase in learning support ($t = 5.05$; p.001). A one-unit increase in self-regulated online learning, on the other hand, reduces students' academic procrastination by 0.54 units ($t = -12.80$; p.001). Furthermore, self-regulated online learning fully mediates the relationship between learning support and academic procrastination.

Abuhmaid, Atef. (2020). Teachers' Perceptions on the Impact of Flipped Learning on Student Learning and Teacher's Role in Jordanian Schools. The current study looked into Jordanian teachers' perceptions of the impact of flipped learning on student learning, teachers' roles, and implementation challenges. Teachers' perceptions of their gender, experience, and teaching subjects were investigated. The study included all of the (126) teachers who had

already implemented flipped learning and were considered innovative in their schools because they were the first to implement flipped learning in their teaching practises in Amman, Jordan's capital. All participants completed a questionnaire on teachers' perceptions of flipped learning, which included (37) items in three dimensions: flipped learning's impact on student learning, the teacher's role, and challenges to its implementation. The research was carried out during the second semester of the 2018/2019 academic year. To answer the research questions, means, standard deviations, MANOVA, and Scheffe's test were used. The study's findings revealed that teachers have a generally positive attitude toward the flipped learning model, believing that it improves student learning and transforms teachers' roles. Furthermore, female teachers were more likely to believe that flipped learning improves student learning, transforms teachers' roles in the classroom, and poses challenges.

Edwin Musdi et al. (2019) conducted a study on Students' perception of flipped classroom learning. To learn about students' perceptions, a flipped classroom learning session should be followed by a semi-structured interview and questionnaire. Students at SMA Pembangunan Kota Padang are given a semi-structured interview and a questionnaire. The findings indicate that students are intrigued by this approach. This occurs because students can learn the material whenever and wherever they want and wherever they wish.

Shih, Wen & Tsai, Chun-Yen. (2017). Studied the research on Students' perception of a flipped-classroom approach to facilitating online project-based learning in marketing research courses. Students' perceptions of a flipped-classroom approach to facilitating online project-based learning (FC-OPBL) in a marketing research course at a technical university were investigated in this study. This integrated strategy aimed to improve both teaching quality and learning efficiency. Sixty-seven students enrolled in a marketing research course were polled. To understand the students' perceptions of the teaching strategy used during the learning process, mixed methods research was used, including a questionnaire, semi-structured interviews, online learning notes, and online discussions. FC-OPBL may improve students' learning effectiveness, motivation, and interest in learning, as well as encourage diverse development and teamwork, according to the findings. Finally, recommendations for flipped classroom research and instruction are made.

Need and Significance of the Study

The flipped classroom is a learning method that allows schools and teachers to reduce direct instruction while increasing one-to-one interaction in their teaching practice. This approach leverages technology by making substantial supplemental teaching materials available to students online. This liberates classroom time that would otherwise be used for lecture notes. The survey also inquired as to how the flipped classroom can build and maintain student learning and what steps can be taken to boost flipped classroom configurations. The survey combined qualitative and quantitative research methods to gain a more comprehensive understanding of how learners responded as a group and as participants. It will cater to the capabilities of students at various levels and make the class more accessible. It also allows teachers to get to know their students better. It focuses on student distinctiveness and assists teachers in approaching each student individually. As a result, the investigator has decided to conduct a study on "Perceptions towards the flipped classroom among secondary trainee teachers."

Statement of the Problem

As computer-based instructional tools become more widely accessible and popular, teacher educators have discovered a means to 'flip' their classroom by utilising technology to teach the content to students outside of the classroom and to adopt active learning strategies within the classroom. This has helped instructors enforce active-learning lessons more effectively without losing content (Lage, Platt & Treglia 2000; Bishop & Verleger 2013). For further the researcher to investigate the perception towards the flipped classroom. Hence the researcher also has taken up a study on **"PERCEPTION TOWARDS FLIPPED CLASSROOM AMONG SECONDARY TRAINEE TEACHERS".**

Definitions of the Term

The researcher used the following terms for the current research.

Perception: Based on the experience, awareness, comprehending and perceiving the information through sensory organs.

Flipped Classroom: Flipping the class through the technology and learning management system. In general, the learning happens at home and students practice such as Homework, assignments and what they have learned through the conventional method. It differs in the different models of the flipped classroom.

Secondary Trainee Teachers: The Students, who are studying B.Ed. themselves considered as Secondary Trainee Teachers.

Objectives

- To find out the level of perception towards flipped classroom among secondary trainee teachers.
- To find out the significant difference if any, in the scores of the perception towards flipped classroom of secondary trainee teachers with reference to background variables such as Gender, Qualification, Stream and Residential area.

Hypotheses

- The level of perception towards flipped classroom is high among secondary trainee teachers.
- There is no significant difference between the male and female scores in the perception towards the flipped classroom with respect to gender.
- There is no significant difference between the UG and PG students in the perception towards the flipped classroom with respect to their Qualifications.
- There is no significant difference between the Arts and Science students in the perception towards the flipped classroom with respect to their Stream.
- There is no significant difference between the Rural and Urban students in the perception towards the flipped classroom with respect to their Residential area.

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Methodology
Design: Descriptive
Method: Normative
Technique: Survey

Sample and Sampling Technique

The sample consisted of 323 secondary trainee teachers who were doing B.Ed. programme from various colleges of education in Tamil Nadu. Using a simple Random sampling Technique was adopted for the study.

Tools

The tool Perception Towards Flipped Classroom Scale (PTFCS) was used for the study. The tool was constructed and validated by ***Kumar S, Raja and Moral C, Shirley (2021).*** The scale consisted of forty-three items on a five-point scale of strongly agree [5], agree [4], neutral [3], disagree [2], and strongly disagree [1] for positive statements and negative statements score is strongly agree [1], agree [2], neutral [3], disagree [4], and strongly disagree [5].

Statistical Techniques Used

The following analysis was applied to the current research.
Descriptive analysis: Mean & Standard Deviation - Descriptive statistics were used to describe the sample with reference to the variables taken for the study.
Differential analysis: t-test - Independent Samples t-test to find the significance of the difference between two categories

Analysis of the Data
Analyze the first Hypothesis

Table 1: Level of Perception Towards Flipped Classroom

Level		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	48	14.9	14.9	14.9
	Moderate	235	72.8	72.8	87.6
	High	40	12.4	12.4	100.0
	Total	323	100.0	100.0	

The first hypothesis, the level of perception towards flipped classroom is high among secondary trainee teachers. From the above table level of perception towards flipped classroom value was 14.9%, 72.8% and 12.4% with reference to low, moderate and high. It is noticed that perception towards flipped classroom was moderate. Hence, the null hypothesis was rejected.

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Analyze the second hypothesis

Table 2: The t-test Results of comparison of Male and Female in the perception towards flipped classroom with respect to gender.

Gender	N	Mean	SD	df	t	P	Remarks
Male	46	166.22	21.21	321	0.38	0.70	Not Significant p > 0.05
Female	277	164.94	19.37				

The second hypothesis, there is no significant difference between the male and female scores in the perception towards the flipped classroom with respect to gender. The above table 2 found that "(a) there is no significant difference between Male (M=166.22, SD=21.21) and Female (M=40.73, SD=3.91) students in terms of perception towards flipped classroom scores t(321)=0.38, p=0.70. Hence the null hypothesis is accepted.

Analyze the third hypothesis

Table 3: The t-test Results of comparison of UG and PG students in the perception towards flipped classroom with respect to the Qualifications.

Gender	N	Mean	SD	Df	t	P	Remarks
UG	205	167.34	19.00	321	2.65	0.00	Significant p < 0.05
PG	118	161.28	20.15				

The third hypothesis, there is no significant difference between the UG and PG students in the perception towards the flipped classroom with respect to their Qualifications. The above table shows that there is a significant difference between UG (M=167.34, SD=19.00) and PG (M=161.28, SD=20.15) students in terms of perception towards flipped classroom scores t(321)=2.65, p=0.00 with respect to the qualification. Hence, the null hypothesis is rejected.

Analyze the fourth hypothesis

Table 4: The t-test Results of comparison of Arts and Science students in the perception towards flipped classroom with respect to the Stream.

Stream	N	Mean	SD	df	t	P	Remarks
Arts	125	165.54	18.87	321	0.43	0.66	Not Significant p > 0.05
Science	198	165.49	20.11				

The third hypothesis, there is no significant difference between the arts and science students in the perception towards the flipped classroom with respect to their Stream. It is found that

there is a significant difference between arts (M=165.54, SD=18.87) and science (M=165.49, SD=20.11) students in terms of perception towards flipped classroom scores t(321)=0.43, p=0.66 with respect to the qualification. Hence, the null hypothesis is accepted.

Analyze the fifth hypothesis

Table 5: The t-test Results of comparison of Rural and Urban students in the perception towards flipped classroom with respect to the Residential area.

Gender	N	Mean	SD	Df	T	P	Remarks
Rural	151	158.61	18.44	321	2.46	0.00	Significant $p < 0.05$
Urban	172	171.82	21.74				

The third hypothesis, there is no significant difference between the rural and urban students in the perception towards the flipped classroom with respect to their Residential area. The above table shows that there is a significant difference between Rural (M=158.61, SD=18.44) and Urban (M=171.82, SD=21.74) students in terms of perception towards flipped classroom scores t(321)=2.46, p=0.00 with respect to the residential area. Hence, the null hypothesis is rejected.

Findings

- The level of perception towards flipped classroom is moderate among secondary trainee teachers.
- No significant difference between the male and female scores in the perception towards the flipped classroom with respect to gender.
- A significant difference between the UG and PG students in the perception towards the flipped classroom with respect to their Qualifications.
- No significant difference between the Arts and Science students in the perception towards the flipped classroom with respect to their Stream.
- A significant difference between the Rural and Urban students in the perception towards the flipped classroom with respect to their Residential area.

Discussion and Conclusion

Teachers are critical to the adoption and implementation of educational initiatives. What teachers perceive and practise should be central to any future educational planning. The current study sought to investigate secondary trainee teachers' attitudes toward the flipped classroom model in B.Ed. colleges, as well as their impact on students' learning, the teacher's role, and perceived challenges. The findings revealed differences in trainee teachers' perceptions of flipped learning between UG and PG, as well as rural and urban trainee teachers. Even though flipped learning was implemented by a higher percentage of UG and urban trainee teachers than PG and rural trainee teachers, they may feel overwhelmed by the extra time and effort required to adopt new initiatives on top of the responsibilities and commandments they already have at home. The study confirmed previous research by Aidoo, Benjamin et.al. (2022). The

approach also improved their conceptual understanding and learning abilities. In addition, the student teachers faced three interconnected challenges, including inadequate ICT infrastructures such as poor internet connectivity, a lack of ICT skills, and an increased workload. The flipped classroom approach can have a positive impact on student's learning, but educators who plan to use it should consider the adequacy of the available ICT infrastructure. self-regulated online learning fully mediates the relationship between learning support and academic procrastination Ergulec, Funda & Kara, Ahmet & Eren, Esra. (2022).

Abuhmaid, Atef. (2020). findings revealed that teachers have a generally positive attitude toward the flipped learning model, believing that it improves student learning and transforms teachers' roles. Furthermore, the teachers were more likely to believe that flipped learning improves student learning, transforms teachers' roles in the classroom, and poses challenges. Based on the findings, it is suggested that more research be conducted to capture teachers' perspectives on similar educational issues. Furthermore, additional qualitative studies on flipped learning implementation are recommended in order to gain a better understanding of its implementation. Furthermore, encouraging and supporting teachers who are willing to take risks and try new paths in their practises can open up new avenues for education.

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SUPER BRAIN YOGA: A TOOL FOR ACADEMIC ASCEND

V. Varsha
B Ed Student Teacher, Thiagarajar college of preceptors, Madurai

Abstract

This abstract explores the potential of Super Brain Yoga as a holistic approach to promote mental wellness among students. Super Brain Yoga is a simple yet powerful technique that combines specific physical movements with focused breathing to synchronize the brain hemispheres, improve neural connectivity, and enhance cognitive function. It involves particular physical motions combined with focused breathing. Super Brain Yoga is a daily activity that attempts to increase emotional well-being, memory, focus, and general stress and anxiety reduction for pupils. In order to promote mental wellness in educational settings, this abstract looks at the theoretical underpinnings of Super Brain Yoga as well as its physiological effects on the brain. It also emphasizes how accessible and useful Super Brain Yoga can be in helping students achieve positive mental health outcomes, which will ultimately improve their academic performance and general quality of life.

Introduction

A healthy body is the foundation of a healthy mind. Simple brain-boosting activities can help kids become more intelligent, sharper, have better eyesight and creativity, have better communication skills, feel more confident, and improve their brain function. Brain gym workouts are what these are called. Exercises in the brain gym involve a variety of activities that improve coordination in the children's head, limbs, ears, and eyes. Worldwide school systems use Brain Gym, particularly in the preschool years, to help young children learn and comprehend concepts more quickly. The early years of a child's life are when the majority of brain growth takes place. When brain gym activities are introduced to toddlers at this age, the advantages will be substantial.

Knowing the Relationship between the Mind and Body

This strong and complex link between our mental, emotional and physical health is known as the mind –body connection. It is the notion that both our physical and mental health is influenced by one another. Our bodies frequently react to stress and anxiety by tensing up giving us migraines, or even having stomach problems.

However, when we are at peace and content, our bodies feel refreshed and relaxed.The secret t o realizing our greatest potential for happiness and health is realizing this link.We may access t his power and reach optimal wellbeing by developing awareness and using practices that encou rage harmony and balance between the mind and body.

Brain Gym Exercises and Their Impact on the Mind-Body Connection

Brain Gym is based on the principle that physical activity is essential for optimal brain func tion. Movement improves our ability to focus, remember things, and think clearly overall because it activates different regions of the brain. The purpose of brain gym exercise is to strengthen the connections between the right and left hemispheres of the effects of daily stress and tension, and enhance cognitive abilities such as thinking, learning and concentration.

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Preschoolers should be introduced to the following brain gym exercises:

- **Brain Buttons:** these are used to increase blood flow to the brain, which aids in attentio n and concentration in children.
- **The Thinking Cap** assists in enhancing a child's short-term memory, peripheral vision, and hearing.
- **The Cross Craw:** It helps pupils burn off extra energy and focus on the teacher's lecture
- **Hook Ups** is a relaxing activity that improves concentration in pupils.
- **Elephant Trunk:** enhances cognitive function, short- and long-term memory, and attention span in kids.
- **Super brain yoga:** is a basic brain-recharging workout that involves squats.

Using Super Brain Yoga in Educational Environments

The term "super brain yoga" appears to have been popularized by writer and spiritual teacher Master Choa Kok Sui .Super brain yoga blends breathing techniques with focused movement. For thousands of years, people have utilized mindful movement techniques, including yoga and conscious breathing, to improve their well-being and foster personal growth. The theory behind these techniques is that the left and right hemispheres of the brain are stimulated by applying pressure to the earlobes. The practice's goal is to "transmute the energy that is trapped in the lower chakra to the upper chakras" through squatting. The great Indian Rishis created this method to enhance people's intelligence, based on the theories of prana (energy passage via various chakras) and ear acupuncture. In addition to absorbing, processing, and distributing prana throughout the body, chakras are in charge of ensuring that human metabolic processes run smoothly.

Advantages of super brain yoga in the classroom:

Better attention and Focus:

Super brain yoga incorporates breathing techniques and particular motions that are said to synchronize the left and right hemispheres of the brain, improving attention and focus. This can enhance students' capacity to understand and retain academic material by helping them focus during lectures, study sessions, and exams.

Stress Reduction:

Super Brain Yoga encourages peace and relaxation, which may help pupils manage stress more skillfully. Students can approach their studies with a clearer and more collected perspective when their stress levels are lower because this can help reduce the tension brought on by academic pressures. Because of this, kids might do better on tests and other school assignments.

Improved Memory Retention:

Engaging in this technique can improve recall and memory. Super brain yoga may help with the encoding and retrieval of information, which is important for academic performance, by activating particular acupressure spots on the body and boosting blood circulation to the brain.

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Balanced Energy Levels:

The goal of super brain yoga is to harmonize the body's chakras, or energy centers, which can enhance vitality and energy levels. By practicing super brain yoga, students can become more productive and attentive, which will help them to continue their academic work without being tired or lethargic.

Enhanced Emotional Regulation:

It is believed that super brain yoga calms the mind and emotions, encouraging emotional resilience and balance. Students may be better able to handle academic obstacles and disappointments and retain a positive attitude toward learning and academic performance if negative emotions like worry, impatience, and irritation are reduced.

Improved Classroom Dynamics:

Including super brain yoga sessions in the curriculum can help students feel more connected to one another and more collaborative. Group projects activity cooperation and communication abilities, which enhances the learning environment in the classroom.

Cultivation of Healthy Habits:

Making super brain yoga a regular classroom habit encourages students to recognize the value of exercise and self-care. Students develop lifelong healthy habits by learning the importance of taking quick breaks to revitalize their bodies and minds.

Positive Teacher-Student Relationships:

Super brain yoga sessions give teachers an opportunity to engage with their students outside of the classroom on a more personal level. This can improve rapport and trust between teachers and students in the classroom.

Improved Classroom Management:

You can use super brain yoga sessions to help control behavior and transitions in the classroom. Students can focus better and behave more calmly in class by setting aside a short period of time for breathing and structured movement activities.

Equity and Inclusion:

Super brain yoga is a non-competitive exercise that can be modified to fit the needs of individuals from various backgrounds and ability levels. Since it is inclusive, all kids benefit from a supportive learning environment that fosters equity and a sense of belonging in the classroom.

Promotion of Mindfulness:

By fusing movement with deliberate breathing, super brain yoga promotes mindfulness. In the classroom, mindfulness exercises can support students' growth in self-awareness, emotional control, and empathy—all of which are critical abilities for success in both the classroom and in social situations.

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Conclusion

Promising results have emerged from the investigation on Super Brain Yoga's effectiveness as a possible technique for raising academic achievement in students. It is clear from a review of the literature and empirical research that Super Brain Yoga can have a beneficial effect on a number of cognitive processes, such as focus, memory retention, and general mental agility, when practiced on a daily basis. Additionally, the practice's accessibility and ease of use make it a workable remedy for inclusion in educational contexts. The incorporation of Super Brain Yoga into academic courses or extracurricular activities has the potential to improve students' cognitive functioning and, in turn, their academic performance. When educators look for new ways to enhance students' learning and wellbeing, Super Brain Yoga stands out as a promising option that merits examination and application.

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PRE-SERVICE STUDENT TEACHER'S AWARENESS OF SCHOOL LIBRARY CONDITION

S. Manika Prakash
B.Ed Student Teacher, Thiagarajar College of Preceptors
Madurai District, Tamil Nadu, India

Abstract

Pre-service student teachers at Thiagarajar College of Preceptors in Tamil Nadu's Madurai District participated in a survey to gauge their knowledge of the state of the school library. Data was gathered from 122 people who were chosen by deliberate random sampling using a questionnaire that the researcher created. The findings showed that student teachers had an average awareness level; gender, academic stream, school location, and educational attainment all showed differences in this regard. The study suggested hiring trained personnel to enhance accessibility and functionality in school libraries. It emphasizes how crucial it is to raise future educators' knowledge of and provide them with training on the value of well-maintained school libraries.

Keywords*: School Library, Awareness, Library Usage, Student Teachers, School.*

Introduction

School libraries are essential for developing a love of reading, advancing information literacy, and aiding in students' general academic growth *(Lonsdale, 2003).* But making the most of these priceless resources and keeping them maintained can still be difficult, especially when there aren't enough trained librarians. To guarantee that school libraries genuinely function as the beating heart of educational institutions, it is imperative that librarians and library assistants have the necessary training. Competent librarians are equipped with the know-how and abilities needed to create engaging and varied collections, efficiently arrange and handle materials, and create services and initiatives that are tailored to the particular requirements of the school community *(Lance & Hofschire, 2012).* Their proficiency in instructional cooperation, technological integration, and information management can greatly improve students' educational experiences and foster their academic progress.

Professional librarians may also make a big difference in the promotion of information literacy, a crucial ability in the information-rich society of today. Librarians enable students to become lifelong learners and critical thinkers by teaching them how to find, assess, and use information effectively *(American Association of School Librarians, 2018).* Numerous scholarly investigations have emphasized the beneficial influence of proficient librarians on academic performance. In contrast to schools without skilled library staff, schools with full-time licensed librarians typically had superior reading scores and overall academic achievement, according to a study by *Lance and Hofschire (2012*). The hiring of qualified library workers for school libraries must be given top priority by educational institutions in light of these advantages. By doing this, they may fully utilize these priceless resources, encouraging a love of learning and giving kids the information and abilities they need to succeed in the twenty-first century.

Review of literature

Calvert (2022) analyzed a number of research that looked at the connection between student achievement and school libraries. According to the review, pupils who attend schools with

well-stocked and supported libraries also typically perform better on standardized tests, have higher reading competency, and have stronger research and critical thinking abilities. A comprehensive analysis of the literature was carried out by *Aqili and Mohammadi (2022)* to investigate the function of school libraries as places where kids can feel safe and supported. According to their findings, school libraries may offer more than just academic support; they can also create a supportive atmosphere that fosters social interaction, emotional health and personal development.

Merga (2019) investigated how school librarians specifically contribute to the growth of a reading culture in elementary school pupils. The study emphasized the different approaches librarians take to foster and maintain a love of reading in young students, including book chats, author visits, and reading promotion events. The history of school libraries in the US was examined by *Jones and Zambone (2017),* who also provided insight into how school librarians' roles as mentors and advisors to students have changed over time. Their study emphasized the value of librarians in encouraging lifelong learning and a love of reading.

Needs and Significance

Libraries are essential educational hubs, but their effective utilization and maintenance are often lacking. Qualified librarians and library assistants play a crucial role in enhancing these resources. They curate collections, manage information, and integrate technology into the library experience. They teach students essential skills in information literacy and critical thinking. Librarians also foster a love for reading and intellectual curiosity among students. They collaborate with educators to align library resources with the curriculum, creating a holistic educational environment. Investing in qualified library professionals is an investment in the future of students, ensuring they have the tools and resources needed to thrive in an ever-changing world.

Objectives of the Study

1. To investigate whether gender plays a role in the awareness levels of school library conditions among student teachers at Thiagarajar College of Preceptors, by comparing the differences between male and female participants.
2. To explore if the academic stream, arts or science, influences the awareness of school library conditions among student teachers at Thiagarajar College of Preceptors, and to identify any significant variations between the two groups.
3. To assess the impact of the geographical location of schools, whether rural or urban, on the awareness of school library conditions among student teachers at Thiagarajar College of Preceptors, and to determine if this factor leads to notable differences.
4. To examine whether the education level of schools, specifically high schools or higher secondary schools, affects the awareness of school library conditions among student teachers at Thiagarajar College of Preceptors, and to identify any significant disparities based on this variable.
6. To propose strategies and recommendations aimed at promoting and enhancing the effective utilization of school libraries, as well as advocating for the appropriate appointment of qualified librarians and library assistants in a structured manner.

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Hypotheses

1. There is a significant difference in the awareness about school library conditions between male and female student teachers.
2. The awareness levels about school library conditions differ significantly based on the academic stream (arts or science) among the second-year B.Ed. student teachers of Thiagarajar College of Preceptors during their pre-service training program in schools within the Madurai District, Tamil Nadu.
3. The awareness about school library conditions varies significantly between student teachers exposed to rural and urban school environments.
4. The education level of the school, whether high school or higher secondary, leads to a significant difference in the awareness about school library conditions among the second-year B.Ed. student teachers of Thiagarajar College of Preceptors during their pre-service training program in schools within the Madurai District, Tamil Nadu.

Methodology

Tools Used

A web-based survey instrument, designed using the Google Forms platform, was employed to gauge and raise awareness about the conditions of school libraries during the pre-service training program undertaken by the second-year B.Ed. students of Thiagarajar College of Preceptors in Madurai District, Tamil Nadu.

Population

Sample

The target group for this study comprised 122 individuals enrolled in the second year of the B.Ed. program at Thiagarajar College of Preceptors, situated in Madurai District, Tamil Nadu.

Sampling Technique

The investigator employed a sampling method that involved the random selection of participants from a purposively identified group.

Statistical Tools Used

To analyze the data, the researcher employed various statistical measures, including calculations of the mean, median, and standard deviation. Additionally, an independent samples t-test was conducted to examine potential differences between groups. These analytical procedures were carried out using the SPSS software package, specifically version 22.

Delimitations of the study

1. The study focuses solely on II B.Ed. student teachers enrolled at Thiagarajar College of Preceptors in Madurai District, Tamil Nadu, during their pre-service school program.
2. A sample of 122 students has been selected by the investigator for the study.

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Data Analysis

The data analysis involved the utilization of appropriate statistical techniques such as calculating the mean and standard deviation and conducting t-tests to analyze the data effectively.

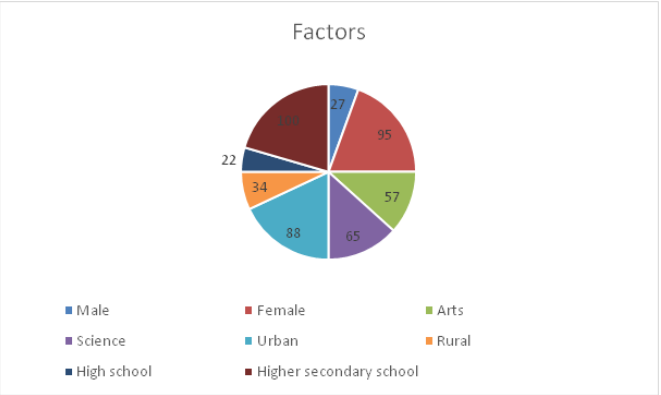

Figure 1: The figure shows the Score, Gender, Stream, Locality, and Educational level of the school among student teachers enrolled

Hypothesis 1

There is a significant difference in the awareness about school library conditions between male and female student teachers.

Table 1: The disparity between Thiagarajar College of Preceptors' male and female student teachers in terms of their pre-service training awareness of the state of the school library

S.No.	Variable		N	Mean	Std. Deviation	Calculated 't' value	Table Value	Relationship
1	Gender	Male	27	44.2222	9.82279	0.712	1.646	Not Significant
		Female	95	42.9474	7.69964			

(At 5% level of significance the table value of 't' is 1.646)

Hypothesis 2

The awareness levels about school library conditions differ significantly based on the academic stream (arts or science) among the second-year B.Ed. student teachers of Thiagarajar College of Preceptors during their pre-service training program in schools within the Madurai District, Tamil Nadu.

Table 2 The difference between the awareness about the school library condition during pre-service training among student teachers of Thiagarajar College of Preceptors in the arts and science streams.

S.No.	Factors		N	Mean	Std. Deviation	T	Table value	Relationship
1	Stream	Arts	57	43.1404	8.86292	0.112	1.646	Not Significant
		Science	65	43.3077	7.61972			

Hypothesis 3

The awareness about school library conditions varies significantly between student teachers exposed to rural and urban school environments.

Table 3 Disparities between the school's rural and urban settings were noted by Thiagarajar College of Preceptor student teachers during their pre-service training in terms of their awareness of the school library.

S.No.	Factors		N	Mean	Std. Deviation	Calculated 't' value	Table Value	Relationship
1	Locality of the School	Urban	88	42.7841	8.09065	0.966	1.646	Not Significant
		Rural	34	44.3824	8.45313			

Hypothesis 4

The education level of the school, whether high school or higher secondary, leads to a significant difference in the awareness about school library conditions among the second-year B.Ed. student teachers of Thiagarajar College of Preceptors during their pre-service training program in schools within the Madurai District, Tamil Nadu.

Table 4 During their pre-service training, differences in the student's awareness of the school library between the high school and higher secondary school settings.

S. No.	Factors		N	Mean	Std. Deviation	Calculated 't' value	Table Value	Relationship
1	Education Level of the School	High school	22	42.5455	8.04586	0.431	1.646	Not Significant
		Higher secondary school	100	43.3800	8.25329			

Findings

2. Table 1 indicates that there is no statistically significant difference between the student teachers at Thiagarajar College of Preceptors, Madurai, who are male and female. Pre-service teachers' awareness of school library conditions was measured during their training by comparing the mean scores of male (m=44.22) and female (m=42.94) student teachers.
3. An analysis of Table 2 indicates that there is no significant difference between student-teachers pursuing arts (mean score = 43.14) and those enrolled in science disciplines (mean score = 43.30) at Thiagarajar College of Preceptors in Madurai. The mean scores for awareness about school library conditions during pre-service training do not exhibit a substantial variance
4. An examination of Table 3 demonstrates that the mean scores reflecting awareness about school library conditions during pre-service training do not diverge substantially

between student-teachers at Thiagarajar College of Preceptors in Madurai, based on whether the schools they attended were situated in urban (mean score = 42.78) or rural (mean score = 44.38) locations.

5. Table 4 reveals that the average scores indicating awareness about the condition of school libraries during pre-service training exhibit there is no significance among student-teachers at Thiagarajar College of Preceptors in Madurai, regardless of whether they were assigned to high schools (mean score = 42.54) or higher secondary schools (mean score = 43.38) for their training.
6. An analysis of Tables 1 through 4 indicates that the computed 't' values for the variables of gender, academic stream, geographic locality, and educational level of the school fall below the critical table value at a 5% level of significance (0.05). Consequently, the alternative hypotheses are accepted, leading to the inference that there is no significant divergence between the mean scores across these variables.

Suggestions:

1. Ascertain that the school library has a proper location and equipment, and that it is more than just a tiny closet or storage area.
2. Create an extensive library of books that meet the needs and interests of students at all grade levels, including storybooks and other reading activities.
3. Select knowledgeable and committed librarians to oversee the upkeep of the library's materials, encourage reading among students and instructors, and offer advice.
4. Make library sessions required in the curriculum so that students can visit the library on a regular basis and use the materials offered.
5. Hold training workshops and awareness campaigns for educators and students to emphasize the value of libraries in encouraging self-learning and a culture of reading.
6. Promote the use of the library as an important learning resource by encouraging teachers to incorporate activities and resources from the library into their lesson plans and curricula.
7. Work together with neighbourhood libraries, groups, or people to plan literary events such as author visits, book drives, and other activities to improve students' library experiences.
8. Create student library groups or committees to include students in the upkeep and promotion of the library, encouraging a sense of accountability and ownership.
9. Continually update and manage the library's collection to make sure it stays current and fits the evolving needs and preferences of the student body.
10. Set aside a sufficient amount of money from the school budget for the ongoing upkeep and growth of the library's infrastructure.

Conclusion

School libraries are essential for encouraging self-learning, fostering a love of reading, and giving pupils access to a multitude of information. Nonetheless, the remarks and observations made by student-teachers during their pre-service training point to a worrying deficiency in many schools' library resources and usage. A coordinated effort by the community, educators, and school administrators is necessary to solve this problem. By applying the suggested

methods, schools may convert their libraries into lively centres of learning, encouraging a culture of reading and providing students with the resources they need for academic and personal growth. A well-stocked and kept school library can make a big difference in students' academic performance and overall learning experience.

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FLIPPED AND BLENDED LEARNING

Janani K
Student Teacher, Thiagarajar College of Preceptors
Madurai, Tamil Nadu, India.

Abstract

Traditional lecture-based learning models are increasingly challenged in the digital age. Flipped and blended learning approaches offer a compelling alternative, leveraging technology to enhance student engagement and cater to diverse learning styles. This paper explores the theoretical foundations of flipped and blended learning, highlighting their key characteristics and benefits. It delves into the practical implementation of these models, including instructional design considerations, technology integration strategies, and effective assessment techniques. The paper then analyses the research landscape, exploring the empirical evidence for the efficacy of flipped and blended learning. Finally, it addresses potential challenges and practical considerations for educators seeking to implement these innovative approaches.

Keywords: *Flipped Classroom, Blended Learning, Instructional Design, Technology Integration, Active Learning.*

Introduction

The traditional classroom model, characterized by teacher-centered lectures and passive student reception of information, is increasingly being challenged by the demands of the 21st century. In a world saturated with information, rote memorization and one-size-fits-all approaches to learning are no longer sufficient. Students need to develop critical thinking skills, problem-solving abilities, and the capacity to adapt to a rapidly changing environment. This necessitates a shift towards more learner-centered pedagogies that prioritize active engagement, collaboration, and personalized learning experiences.

Flipped and blended learning represent two innovative approaches that are transforming the educational landscape. Flipped learning disrupts the traditional lecture-homework cycle by pre-recording lectures or assigning online readings for students to complete outside of class time. This frees up valuable classroom space for active learning activities, such as discussions, problem-solving exercises, and collaborative projects. Blended learning, on the other hand, encompasses a broader spectrum of instructional methods, integrating online learning platforms, digital resources, and face-to-face interactions to create a dynamic learning environment.

This paper explores the theoretical foundations and practical applications of flipped and blended learning. It examines the potential benefits of these approaches for both students and educators, while acknowledging the challenges that need to be addressed for successful implementation. By analysing research on the impact of flipped and blended learning, the paper aims to provide valuable insights for educators seeking to reimagine education in a digital age.

Theoretical Underpinnings

Flipped and blended learning draw inspiration from various theoretical frameworks that emphasize the importance of active learning and student engagement. Constructivism, a prominent learning theory, posits that knowledge is actively constructed by learners as they interact with information and experiences. Flipped classrooms provide students with greater

autonomy over their learning pace and allow them to grapple with new concepts before engaging in collaborative activities in class. This promotes deeper understanding and facilitates the application of knowledge to real-world situations.

Social learning theory, championed by Albert Bandura, highlights the role of social interaction and collaboration in cognitive development. Blended learning environments, which often integrate online discussions, group projects, and peer-to-peer learning activities, create opportunities for students to learn from one another and develop essential communication and teamwork skills.

Self-determination theory, developed by Edward Deci and Richard Ryan, emphasizes the importance of intrinsic motivation for fostering student engagement. Flipped learning allows students to explore topics at their own pace, catering to their individual learning styles and interests. Blended learning environments can further enhance intrinsic motivation by providing students with a sense of autonomy and control over their learning journey.

These theoretical underpinnings provide a foundation for understanding the potential benefits of flipped and blended learning. By fostering active learning, collaboration, and student autonomy, these approaches aim to transform classrooms into vibrant learning communities where students are empowered to take ownership of their educational experiences.

Flipped Learning: Reversing the Script

The flipped classroom approach disrupts the traditional classroom dynamic by "flipping" the roles of lecture and homework. Students gain foundational knowledge by engaging with pre-recorded lectures, online modules, or assigned readings outside of class. This frees up valuable classroom time for active learning activities, such as discussions, problem-solving exercises, collaborative projects, and personalized instruction.

Blended Learning: A Strategic Mix

Blended learning encompasses a broader spectrum of instructional strategies that combine online learning environments with face-to-face instruction. This can involve a variety of online components, including video lectures, simulations, interactive exercises, and collaborative platforms. Blended learning allows for greater flexibility in pacing and content delivery, catering to individual learning styles and needs.

Types of Flipped Learning

1. Conventional Flipped Classroom

When people talk about flipped classrooms, they usually think of the traditional or normal way. This is the first example of a flipped classroom. Here, the core idea is that students have access to learning resources, typically in the form of online videos and content, so they can come to class prepared with a rudimentary understanding of the subject. After that, students apply what they have learned and deepen their understanding in the classroom. This method frequently results in more engaging and dynamic classroom instruction. It allows educators to devote more time to helping students understand concepts and less time to imparting knowledge.

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2. Group-Based Flipped Classroom

Similar to the traditional flipped classroom, a group-based flipped classroom model prioritises group work. This implies that students are divided into groups as soon as they enter the classroom in order to work together to better their comprehension of the subject. By learning how to communicate a concept to their classmates, they can increase their comprehension and push one another. Some educators opt to incorporate collaborative components into the home-learning phase in order to highlight the model's emphasis on groups even more.

3. Debate-Focused Flipped Classroom

The way a debate-focused flipped classroom operates is as follows: students study the first material at home, come to class, and participate in one or more debates with their classmates. Debating has been shown in numerous studies to improve learning results and increase student engagement. By highlighting some of the nuances and opposing points of view surrounding a subject, debates can help deepen comprehension.

4. Discussion-Focused Flipped Classroom

In a flipped classroom that emphasises discussion, students learn about a subject at home, frequently by watching instructional videos. After that, they go to class and have a far more in-depth conversation on the subject, exposing some of its subtleties and helping them to comprehend it from a variety of angles. Nevertheless, this takes place in a more casual setting than one might anticipate from a professional discussion. This method can be particularly helpful in subjects like history, English, politics, and art, where context is important and answers to some issues may not be clear-cut or accurate.

5. Micro-Flipped Classroom

In essence, the micro-flipped classroom combines elements of the traditional and flipped classroom techniques to give teachers more time for traditional lecture-based learning while still offering some of the advantages of flipping the classroom to both teachers and students. A 2017 study on the topic details the advantages of the micro-flipped paradigm, including its independence from subject matter and ability to provide more engaged learning environments in the classroom. Exam scores for students in a micro-flipped classroom were also compared with those in a typical lecture-based classroom in the previously described study. The results showed that the micro-flipped classroom's pupils' course grades improved by two points, and that this strategy's advantages appeared to grow with time.

6. In-Class / Faux Flipped Classroom

The concept of the "digital divide" and what occurs when students do not have consistent, regular, or equitable access to the technology they require at home are the main points of contention for flipped classroom-style courses. This is the goal of the faux flipped classroom, also known as the in-class flipped classroom. The essential methodology remains the same, with the first learning taking place on school computers and being followed by a more hands-on lesson based on online material. Additionally, teachers have the option of showing the learning materials to the entire class or giving the pupils some alone time at the start of the course to

absorb the knowledge. As an alternative, teachers can ask pupils to use the school's computers, but they will still need to complete the preliminary work themselves.

7. Virtual Flipped Classroom

The virtual flipped classroom, as its name implies, is similar to the traditional flipped classroom model in that students initially absorb material from online sources. The main distinction is that subsequent sessions are also conducted virtually online. This basically makes it possible to apply the flipped classroom paradigm to distance learning and hybrid learning courses, as well as to circumstances where attendance in class is not feasible. This can also be used in conjunction with in-person instruction or one-on-one meetings, depending on the circumstances. These can take place on a regular basis or at prearranged intervals to enable teachers to monitor students' development more thoroughly.

8. The Flipped Teacher Approach

Lastly, the flipped teacher model, often known as the double flipped classroom, is among the most unusual instances of a flipped classroom. In order to show that they comprehend the curriculum, students are required to produce educational resources like videos. Similar to the flipped classroom model that emphasises debate and discussion, this method aids in consolidating students' learning. Additional advantages of this strategy include assisting students in honing their technological skills and giving them experience in academic instruction—both of which can be beneficial for individuals who want to work in academia.

Types of Blended Learning

1. *Station Rotation Blended Learning*
2. *Lab Rotation Blended Learning*
3. *Remote Blended Learning*
4. *Flex Blended Learning*
5. *The 'Flipped Classroom' Blended Learning*
6. *Individual Rotation Blended Learning*
7. *Project-Based Blended Learning*
8. *Self-Directed Blended Learning*
9. *Inside-Out Blended Learning*
10. *Outside-In Blended Learning*
11. *Supplemental Blended Learning*
12. *Mastery-Based Blended Learning*

Practical Implementation:

Flipped Classroom Design

Content Delivery: Select appropriate online content, such as video lectures, animations, or interactive simulations, to introduce key concepts outside of class.

Pre-class Activities: Assign short quizzes, discussion prompts, or problem sets to ensure students come to class prepared to engage with the material.

In-class Activities: Dedicate class time to active learning activities, such as group discussions, case studies, or problem-solving exercises.

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Blended Learning Design

Online Learning Platforms: Utilize online platforms for delivering content, facilitating discussions, and providing students with opportunities for self-paced learning.

Digital Resources: Integrate multimedia resources, such as simulations, educational games, and interactive exercises, to enhance understanding and engagement.

Face-to-Face Interaction: Reserve classroom time for interactive activities, collaborative projects, and personalized feedback sessions.

Benefits of Flipped and Blended Learning

Research suggests that flipped and blended learning offer several advantages over traditional instructional methods. These include:

Increased Student Engagement: By replacing passive lectures with active learning activities, flipped and blended learning strategies encourage students to take a more proactive role in their own learning.

Differentiation: The flexibility of these approaches allows instructors to tailor learning experiences to individual student needs and learning styles. Online resources can provide additional support for struggling students, while advanced learners can delve deeper into the material at their own pace.

Improved Content Delivery: Technology can be used to present complex concepts in a clear and engaging way. Lectures and tutorials can be paused, rewound, and reviewed at the student's convenience.

Development of 21st Century Skills: Flipped and blended learning environments promote the development of critical thinking, problem-solving, collaboration, and communication skills – essential skills for success in the digital age.

Enhanced Student Engagement: By replacing passive lectures with active learning activities, flipped and blended learning foster deeper engagement with the material. Students have the opportunity to apply their knowledge and learn through collaboration and problem-solving.

Personalized Learning: Flipped and blended approaches allow for a more personalized learning experience. Students can access learning materials at their own pace, revisit challenging concepts, and seek additional support as needed.

Improved Critical Thinking Skills: Active learning activities in flipped and blended classrooms push students to analyse information, evaluate evidence, and develop critical thinking skills.

Technology Integration: These approaches promote the effective integration of technology into the learning process, equipping students with essential digital literacy skills.

Flexibility and Accessibility: Blended learning offers flexibility in terms of scheduling and content delivery. This caters to students with diverse needs and learning styles, and can be particularly beneficial for those with busy schedules or geographical constraints.

Implementation Strategies

Flipped and blended learning must be carefully planned and implemented to be effective. Here are some key factors:

Instructional Design: Educators need to redesign their courses to effectively integrate flipped and blended elements. This may involve creating engaging pre-class materials, developing active learning activities, and ensuring alignment between online and in-person components.

Technology Integration: The selection and integration of technology tools plays a crucial role. Educators need to choose tools that are user-friendly, support the learning objectives, and align with the overall pedagogical approach.

Assessment Strategies: Traditional assessment methods may need to be adapted to evaluate student learning effectively in flipped and blended environments. This may involve incorporating formative assessments throughout the learning process, along with summative assessments to gauge overall understanding.

Selection of Online Resources: Educators need to curate high-quality online resources that align with learning objectives and student needs.

Development of In-Class Activities: Face-to-face classroom time should be dedicated to activities that promote application, analysis, and synthesis of knowledge.

Assessment and Feedback: Assessment strategies need to be adapted to the blended learning environment. Online quizzes, collaborative projects, and student presentations can be used to evaluate student learning.

Teacher Training: Educators require training and support to effectively use technology and design engaging learning experiences within the flipped and blended learning frameworks.

Research and Evidence

A growing body of research supports the efficacy of flipped and blended learning approaches. Studies have shown that these models can lead to improved student outcomes, such as higher test scores, increased engagement, and enhanced critical thinking skills [Provide citations here]. However, it is important to acknowledge that the effectiveness of these models depends on various factors, including the quality of implementation and the specific learning context.

Challenges and Considerations

While flipped and blended learning offer significant benefits, there are also challenges to consider. These include:

Technology Access: Not all students have equal access to reliable technology and internet connectivity. Educators need to find alternative solutions for students who lack the necessary resources.

Teacher Time Commitment: Developing and implementing flipped and blended learning lessons can require more time and effort from educators than traditional methods.

Assessment Challenges: Developing effective assessment strategies for blended learning environments can be a complex task.

Teacher Training and Support: Educators need adequate training and support to effectively implement these strategies and integrate technology seamlessly into their teaching practices.

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Digital Divide: Unequal access to technology and reliable internet connectivity can create an obstacle for some students. Educators need to be mindful of these disparities and develop alternative learning strategies when necessary.

Time Management: Flipped and blended learning may require more upfront planning and time investment from educators in the initial stages of implementation.

The Future of Flipped and Blended Learning

Flipped and blended learning are continuously evolving as new technologies emerge and pedagogical practices are refined. Looking ahead, we can expect to see:

Increased Personalization: Learning experiences will become even more personalized as technology allows for greater individualization of instruction and support.

Adaptive Learning Platforms: The use of adaptive learning platforms that adjust content and pace based on individual student needs will become more widespread.

Emergence of New Technologies: Virtual reality, augmented reality, and artificial intelligence have the potential to further transform the flipped and blended learning landscape.

Conclusion

Flipped and blended learning represent transformative pedagogical approaches that empower students to become active participants in their learning journeys. By harnessing the power of technology and fostering learner-centered environments, these models can enhance engagement, deepen understanding, and cultivate essential 21st-century skills. As educators navigate the ever-evolving educational landscape, embracing and adapting flipped and blended learning strategies holds immense potential for reimagining education for the digital age.

Summary

This paper explores flipped and blended learning, two innovative approaches that are gaining traction in the digital age. Flipped learning flips the traditional lecture-homework cycle, moving direct instruction outside of class time and dedicating classroom time to active learning. Blended learning integrates online learning environments with face-to-face instruction to create a dynamic learning experience.

The paper explores the theoretical underpinnings of these approaches, citing constructivism, social learning theory, and self-determination theory. It then dives into the practical implementation of flipped and blended learning, outlining instructional design considerations, technology integration strategies, and effective assessment techniques.

Research suggests that flipped and blended learning can lead to improved student engagement, differentiation, content delivery, development of 21st-century skills, and personalized learning. However, challenges include technology access, teacher time commitment, assessment, and the digital divide.

The paper concludes by looking ahead to the future of flipped and blended learning, where increased personalization, adaptive learning platforms, and the emergence of new technologies hold the potential to further revolutionize education.

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AUGMENTING EDUCATION, EMPOWERING CHANGE - THE TRANSFORMATIVE POTENTIAL OF AR

J.S. Satyasrivani
Thiagarajar College of Preceptors, Madurai

Abstract

Augmented reality provides an opportunity to reshape the education and drive social change. It also offering new possibilities for enhancing educational experience. AR can reach the gap between theory and practice and enabling student to visualize complex concepts in real time. From dissecting frog in Biology to exploring historical landmarks in Social Studies, AR creates immersive and interactive learning environments. In the field of education AR holds immense promise for transforming traditional teaching methods and empowering learners with immersive and engaging educational experience. This paper explore the transformative potential of AR in education, examining its impact on student engagement, learning outcomes and social change. By creating a stimulating and interactive learning experience, AR can catch curiosity and empower students to take ownership of their learning journey. By manipulating AR technologies, educators can create dynamic and personalized learning experience that foster critical thinking, collaboration and creativity, ultimately preparing students to develop will in a rapidly evolving digital world.

Keywords: *Augmented Reality, Education, Transformative Potential, Empowerment, Change.*

Introduction

AR stands at the forefront of Technological innovations, offering a gateway to transformative educational experiences. The classroom of yesterday filled with textbooks and rote memorization, is on the cusp of revolution. Imaging learning isn't just from books and lectures but by bringing things to life right before your eyes!. It's like adding cool 3D objects, sounds and information to the real world you see. This can totally change how we learn, making it more fun, exciting and easier to understand even tricky subjects. AR is emerging as a powerful tool, not to replace traditional methods but to augment them. AR has the potential to transform education from a passive experience to an active, engaging and immersive one. This introduction explain how AR can transfer education from something you just read about to something you can experience for yourself.

Aims and Objectives

This paper aims to analyse how AR can be used to visualize abstract concepts and enhance understanding in specific academic disciplines and to examine how AR can empower students to take a more active role in their learning and become self-directed learners.

Operational Definition of AR

Augmented Reality (AR) is a technology that superimposes digital information, such as images, videos, or 3D models, onto the real-world environment, typically viewed through a device like a smartphone, tablet, or AR glasses. AR enhances the user's perception of reality by blending digital content with the physical world in real-time, allowing for immersive and interactive experiences. It is used in various fields, including gaming, education, healthcare, retail, and manufacturing, to provide users with enhanced information, visualization, and engagement.

Transformative Learning with AR

AR's transformative potential lies in its ability to:

Making the Invisible Visible: Ever wondered what's inside a cell or how dinosaurs looked? AR can show you 3D models and animations, making complex stuff easy to understand. Complex scientific concepts like molecular structures or historical events can be brought to life through AR overlays, allowing students to interact and manipulate these elements in a three-dimensional space.

Learning by doing, not Memorizing: AR lets you interact with things. Imagine exploring ancient Rome by walking through recreated streets or performing virtual experiments in science class. It's like having a super cool virtual reality field trip, all while staying in the classroom.

Boost Engagement: Static textbooks and rote memorization can be a recipe for disengagement. AR injects dynamism into the learning process. Interactive lessons with 3D models, simulations, and gamified elements can boostup students' curiosity and propel them to actively participate in their learning journey. It enhances students understanding and retention of complex topics.

No two Students Learn the Same Way: AR can cater to different learning styles. Visual learners can see things come alive, while those who learn best by doing can manipulate virtual objects. It's like having a personalized learning experience for everyone. Students interact with AR at their own pace and receive, fostering a deep understanding of the material.

Cultural and Global Awareness: AR promotes students to explore different cultures, language and perspectives. It makes virtual tour and historical recreation. Also promotes cultural understandings and global awareness. By integrating AR into education students get valuable technical skills also.

By interacting with AR elements, students become investigators and explorers. Imagine virtually dissecting a virtual heart in biology or conducting a simulated experiment in chemistry. This fosters critical thinking, problem-solving skills, and a deeper understanding of complex concepts.

Empowering Students through AR

This technology transcends the limitations of traditional methods, transforming passive learners into active participants in their own educational journey. Here's a detailed exploration of how AR empowers students:

Student Centered Learning: AR transcends static presentations and textbooks. Students can manipulate 3D models, conduct virtual experiments, or explore historical sites through AR overlays. This active engagement fosters a sense of ownership over learning, transforming them from passive observers to active investigators.

Shifting the Focus to "How" from "What": Traditional methods often prioritize rote memorization and expel of facts. AR empowers students to delve deeper, focusing on the "how" and "why" behind concepts. Imagine virtually dissecting a frog in biology and understanding its intricate functions, or conducting a simulated chemical reaction to observe its properties. This shift cultivates critical thinking and problem-solving skills.

Learning through Exploration and Discovery: AR experiences are interactive and often involve trial and error. Students can experiment and explore virtual environments without fear of failure. This fosters a sense of confidence and encourages them to take risks, leading to deeper understanding and self-directed learning.

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Developing a Growth mindset : AR allows students to learn from their mistakes in a safe and controlled environment. Virtual simulations can provide opportunities for students to analyse their actions, adjust their approach, and try again. This fosters a growth mindset, encouraging students to embrace challenges and view them as opportunities for learning.

Facilitating Group Work and Problem-Solving: AR experiences can be designed to be collaborative. Students can work together on virtual projects, conduct experiments in teams, or explore historical sites collectively. This fosters communication skills and teamwork, preparing students for a world that thrives on collaboration.

Enhancing Peer-to-Peer Learning: AR provides opportunities for students to share their experiences and collaborate on projects. Students can learn from each other's insights and perspectives, fostering a sense of community and shared learning.

Feedback and Reflection: AR provides immediate feedback and opportunities for reflection, enabling students to monitor their progress, identify areas for improvement, and set goals for their learning. Whether it's receiving real-time feedback on AR activities or reflecting on their experiences through digital journals or portfolios, students develop metacognitive skills and self-regulation strategies that support active learning and growth.

By empowering students through AR, we cultivate a generation of active learners who are not afraid to explore, experiment, and take ownership of their education. This paves the way for a more engaging, effective, and empowering learning experience for all. AR goes beyond simply presenting information; it empowers students to take an active role in their learning.

Challenges and Considerations

The transformative potential of AR is undeniable, but challenges remain. AR holds immense promise for revolutionizing education. However, this transformative potential is accompanied by challenges that need to be addressed to fully realize its benefits. Here's a closer look at the hurdles we face in augmenting education:

Accessibility and Equity

Cost: AR devices and well-developed AR content can be expensive. This raises concerns about equitable access, especially in under-resourced schools. We can't ensure all students have the opportunity to experience the benefits of AR.

Digital Divide: Not all students have access to reliable internet connections or personal devices. This digital divide can worsen existing inequalities in education and limit the reach of AR-based learning experiences.

Technical Considerations

- **Device Limitations:** Current AR technology often relies on smartphones or tablets, which might have limitations in processing power, battery life, and display quality. These limitations can hinder the effectiveness and immersive nature of AR experiences.

Technical Support: Integrating AR technology into classrooms requires robust technical infrastructure and ongoing support. Schools may need to invest in training for teachers and technical staff to ensure smooth implementation and troubleshooting of AR tools.

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Pedagogical Integration

Effective Content Development: Creating high-quality, engaging, and curriculum-aligned AR content is crucial. Teachers may need professional development opportunities to learn how to effectively integrate AR into their lesson plans and ensure it complements, rather than replaces, traditional methods.

Teacher Training and Support: Many teachers may not be familiar with AR technology or lack the confidence to effectively utilize it in their classrooms. Providing adequate training and support is essential to empower teachers to leverage AR's potential.

Health and Safety Concerns

Eye Strain and Dizziness: Extended use of AR devices can lead to eye strain, headaches, and dizziness. Developing guidelines for safe usage and incorporating breaks into lessons is crucial to mitigate these health concerns.

Distraction and Misuse: The immersive nature of AR experiences can be distracting, potentially hindering learning. Ensuring clear learning objectives and proper classroom management is essential to prevent misuse of AR technology.

The challenges associated with AR integration in education should not overshadow its transformative potential. By addressing these concerns through collaborative efforts, we can leverage AR to empower students, foster deeper engagement, and create a more dynamic and inclusive learning environment.

Conclusion

The title, "Augmenting Education, Empowering Change - The Transformative Potential of AR" aptly captures the essence of this revolutionary technology in education. AR holds the power to fundamentally transform the way we learn. With AR, the future of education holds limitless possibilities for empowering learners, driving positive change, and shaping a more equitable and sustainable world. By embracing its transformative potential, we can create a more dynamic, inclusive, and empowering educational experience for all students.

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INCIDENTAL LEARNING

S.S. Swathi
B.Ed student, Thiagarajar College of Preceptors

Abstract

Incidental learning refers to knowledge and skills acquired unintentionally, as a by- product of everyday activities. Unlike formal education, there's no set curriculum or goal to learn. This type of learning is often unstructured and spontaneous, relying on observation, interaction, and experience. It can be surprisingly effective, fostering essential skills like critical thinking and problem-solving. The benefits extend beyond just knowledge; incidental learning can influence attitudes, social interactions, and even self-awareness. However, harnessing the power of incidental learning can be tricky. Because it's unintentional, it can be difficult to measure or plan for. Yet, by creating stimulating environments and fostering curiosity, we can encourage incidental learning throughout life.

Keywords: *(Unintentional learning, Unplanned learning, Observational learning, Implicit learning, Situated learning, Informal learning, Everyday learning)*

1. Introduction

Incidental learning is the unconscious acquisition of knowledge and skills through everyday activities. It's the learning that happens on the side, as a by-product of something else we're doing. Incidental learning is a powerful tool that we use throughout our lives. It's how children learn so much so quickly, and it's a major contributor to our understanding of the world around us. It's the learning that happens by the wayside, while we're busy living our lives. In the coming sections, we'll delve deeper into this fascinating phenomenon, exploring how it works, the benefits it offers, and how you can harness its power to become a lifelong learner.

2. Incidental Learning: Unintentional Acquisition of Knowledge

Incidental learning refers to the unconscious or unplanned acquisition of knowledge and skills. It occurs as a by-product of everyday activities, rather than through deliberate study or instruction. This type of learning is prevalent throughout life, from childhood games and social interactions to workplace tasks and hobbies.

Here are some key points about incidental learning:

- **Unintentional:** The learner doesn't have the explicit goal of acquiring knowledge.
- **Contextual:** Learning is tied to the specific situation or activity.
- **Observational:** Often involves watching and imitating others.
- **Experience-based:** Knowledge is gained through hands-on engagement.

Incidental learning offers a powerful way to develop a wide range of abilities, from social skills and cultural awareness to language proficiency and practical know-how. Understanding this process can help educators and individuals alike create environments that foster continual, lifelong learning.

3. Aims of Incidental Learning:

Enhance Knowledge and Skills: The overall aim is to broaden a learner's knowledge base and skillset through unplanned exposure to information and experiences in everyday life.

Develop Curiosity and Exploration: Incidental learning fosters a natural curiosity and desire to explore new things. This can lead to deeper engagement with the world around us.
Support Naturalistic Learning: By leveraging everyday situations, incidental learning creates a more natural and engaging way to acquire knowledge, potentially making it more relatable and memorable.

4. Objectives of Incidental Learning:
Improve Language Skills: Exposure to new vocabulary and conversation in daily interactions can enrich language development.
Refine Social Skills: Through incidental learning, individuals can pick up social cues, communication styles, and appropriate behavior in different situations.
Strengthen Critical Thinking: Encountering new information and situations can prompt learners to analyze, question, and make connections, fostering critical thinking skills.
Increase Problem-Solving Abilities: As people navigate unexpected situations, incidental learning can help them develop problem-solving strategies.

5. Benefits of Incidental Learning:
Efficiency: Incidental learning can be quicker than sitting down to study. By absorbing information through daily activities, you can learn new things without dedicating large chunks of time. Imagine learning a new recipe by helping out in the kitchen, or picking up a new language by watching foreign movies with subtitles.
Enjoyment: Often, incidental learning is more engaging than formal learning. Activities like playing games or reading interesting articles can be fun while still being educational. This makes learning less stressful and more likely to stick.
Retention: Since incidental learning is tied to real-world experiences, the information is often better retained. When you learn something through practical application, you're more likely to remember it compared to memorizing facts out of a textbook.
Motivation: Because it's not formal, incidental learning can be more motivating. There's no pressure to perform or meet deadlines, which can make the learning process more enjoyable and sustainable.
Accessibility: Incidental learning is available to everyone, regardless of background or resources. Learning can happen anywhere, anytime, as long as you're open to new experiences and pay attention to your surroundings.

Overall, incidental learning is a powerful tool that can complement formal education and expand your knowledge base in a fun and effective way.

6. Different ways of Incidental Learning:

Incidental learning doesn't have specific types, but rather refers to the way we learn unintentionally. It happens when we're engaged in an activity that is not focused on learning, but we pick up new information or skills along the way. Here are some examples of how incidental learning can occur:

Exposure: We learn through exposure to new information or experiences. For example, a child who overhears their parents talking about politics might learn new vocabulary or concepts about government.
Observation: We learn by observing others. For instance, a child might learn how to ride a bike by watching their sibling or friend.
Trial and error: We learn through trial and error, or figuring things out by experimenting. For example, someone might learn how to cook by following a recipe and making mistakes along the way.
Play: We learn through play. Children learn a lot about the world around them through play, such as social skills, problem-solving skills, and creativity.
Daily routines: We learn through every day routines. For example, someone might learn how to take care of a pet by feeding it, walking it, and cleaning up after it.
Incidental learning is an important part of our overall learning and development. It allows us to acquire new knowledge and skills without having to put in a lot of effort. It can also be a very enjoyable way to learn, as we are not focused on the learning itself but on the activity at hand.

7. Integration of Education in Incidental Learning:

Incidental learning, can be a powerful tool in education. Here's how educators can integrate it into the classroom:
Create Engaging Activities: Design lessons that are fun, interactive, and relevant to students' interests. This will naturally pique their curiosity and lead to incidental learning beyond the core curriculum. Imagine a history class that simulates a historical event through role-playing. Students might learn social etiquette, negotiation tactics, or even basic economics unintentionally while playing their roles.
Incorporate Real-World Applications: Connect classroom learning to everyday experiences. Field trips, guest speakers, and project-based learning are all great ways to expose students to real-world scenarios where they can apply their knowledge and incidentally pick up new skills or information. For instance, a science class testing water quality in a local stream might learn about community activism, data collection, and responsible citizenship along the way.
Embrace Technology: Use educational games, simulations, and virtual reality to create immersive learning experiences. Students might learn critical thinking, problem-solving, or even foreign languages without even realizing it as they focus on completing the game's objectives.
Encourage Collaboration: Set up group projects and discussions where students can learn from each other. In these interactions, students might pick up new vocabulary from their peers' explanations, develop communication skills through expressing their ideas, or learn different perspectives on a topic.
Leverage Student Interests: Allow students to explore their passions through independent projects or elective courses. When students are genuinely interested in a subject, they're more likely to absorb incidental knowledge along the way. A student engrossed in a photography project might incidentally learn about light and shadow, composition techniques, or even different historical periods through their chosen subject matter.

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By incorporating incidental learning, educators can create a more well-rounded learning experience that fosters a love of learning and helps students develop a broader range of skills and knowledge.

8. Incidental Learning in the Stage of Infancy:

Infants are prime examples of incidental learners! Their entire world is new and fascinating, and they soak up information through their senses and interactions with their environment. Here's how incidental learning plays a crucial role in infancy:

Language Acquisition: Babies learn language by listening to the speech around them. They start by picking up on sounds, rhythms, and intonation, then gradually build their vocabulary and grammar skills. Everyday conversations, songs, and stories all contribute to this.

Social Skills: Infants learn about social cues and interactions by observing adults and other children. They see how people greet each other, take turns, and express emotions. This helps them develop their own social behavior.

Cause and Effect: Through play and exploration, babies learn about cause and effect. They discover that dropping a toy makes a noise, pushing a button activates a light, or crying gets them attention.

Motor Skills: From rolling over to grasping objects and eventually walking, infants develop motor skills through incidental learning. They practice and refine their movements as they interact with their surroundings.

Here are some things to keep in mind:

Rich Environment: Provide a safe and stimulating environment for babies to explore. This could include a variety of toys with different textures and sounds, safe household objects to manipulate, and plenty of opportunities for social interaction.

Narrate Experiences: Talk to your baby as you go about your day. Describe what you're doing, name objects, and sing songs. This helps them connect words with their experiences.

Repetition is Key: Babies learn best through repetition. Expose them to the same experiences and routines consistently so they can solidify what they're learning.

By understanding incidental learning, caregivers can create a rich and stimulating environment that fosters a baby's natural curiosity and helps them learn and grow.

9. Recommendations for Teachers in Incidental Learning

Incidental learning, though unintentional, can be a powerful tool for teachers. Here are some recommendations for teachers to harness the power of incidental learning in their classrooms:

Create a Rich Learning Environment: Surround students with materials and activities that spark curiosity and exploration. This could include books, puzzles, science experiments, and manipulatives that allow students to learn by doing.

Integrate Learning Across Subjects: Weave connections between different subjects whenever possible. For instance, a history lesson could incorporate geographical concepts or a math lesson could involve creative writing a story with money problems.

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Encourage Questioning and Discussion: Foster a classroom environment where students feel comfortable asking questions and discussing their ideas. This not only clarifies concepts but also allows students to learn from each other's perspectives.
Use Games and Simulations: Games and simulations can be a fun and engaging way for students to learn incidentally. They can practice skills, solve problems, and learn new information without even realizing it.
Connect Learning to Real-world Applications: Show students how what they are learning is relevant to their lives outside the classroom. This can be done through real-world examples, guest speakers, or field trips.
Provide Opportunities for Reflection: After activities, have students reflect on what they learned, even if it wasn't the initial goal. This helps solidify their understanding and make connections to prior knowledge.

By incorporating these recommendations, teachers can create a classroom environment that fosters incidental learning and helps students develop a lifelong love of learning.

10. Recommendations for parents in incidental learning

Incidental learning is a powerful tool for kids, as it allows them to pick up new skills and knowledge without feeling like they're being taught. Here are some recommendations for parents to nurture incidental learning:
Create a rich environment: Surround your child with age-appropriate books, toys, and materials that spark curiosity and exploration. This could be anything from building blocks and puzzles to picture books and art supplies.
Embrace everyday routines: Turn everyday tasks into learning opportunities. Singing songs while cleaning, counting items while shopping, or pointing out letters on cereal boxes are all ways to integrate learning into daily routines.
Let them explore: Provide opportunities for your child to explore their surroundings safely. Whether it's going for a walk in nature, visiting a museum, or simply playing in the park, new experiences expose them to new information and ideas.
Ask open-ended questions: Instead of simply telling them things, ask questions that encourage them to think and observe. This will help them make connections and develop critical thinking skills.
Engage in conversations: Talk to your child about what they're seeing and doing. This reinforces what they're learning and helps them process information.
Play together: Playing games with your child is a fantastic way for incidental learning. Board games can teach strategy and social skills, while pretend play allows them to experiment with different roles and situations.
Be a role model: Children learn by observing adults. Show your own curiosity about the world and a willingness to learn new things. This sends a positive message about the importance of lifelong learning.

Remember, incidental learning is most effective when it's fun and engaging. By incorporating these tips into your daily routine, you can help your child learn and grow naturally.

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11. Conclusion

Incidental learning is basically picking up knowledge unintentionally, like absorbing new words while reading a novel or learning social cues while playing games. It's a powerful tool for boosting knowledge and skills without even trying. Incidental learning, while powerful for unconsciously acquiring knowledge and skills, has limitations. It can be slow, uncontrolled, lead to superficial understanding, and even expose you to inaccurate information. However, it shouldn't be discounted. The most effective approach is to find a balance between actively seeking knowledge and being open to the unplanned learning experiences that enrich our lives.

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ENHANCING LEARNING OUTCOMES THROUGH EFFECTIVE ASSESSMENT PRACTICES

K. Prianka, S. Reetha & G. Radhapriya
Student Teachers, Thiagarajar College of Preceptors, Madurai

Abstract

This paper explores effective assessment practices that bring out creative learning outcomes. It involves various strategies and methodologies to assess students, measure their understanding and progress, provide timely and constructive feedback, and foster a supportive assessment culture. Through assessment practices, we can achieve educational goals and understand students' learning outcomes. Teachers should implement and integrate appropriate assessment practices to achieve learning targets. This approach involves both qualitative and quantitative data of students. By implementing this method, educators can create a positive environment and analyze the continuous improvement of students' success.

Keywords: *Enhancing, Learning, Effective, Assessment & Practices*

Introduction

Effective assessment practices play a vital role in evaluating students' learning outcomes. First, we have to understand the purpose of assessment, then the methods, principles, and challenges of assessment. The term 'Assessment' means gathering information to make a judgement. Assessment for learning is a method used to find out the standard of the individual learner. The support needed for the teacher to find out the students and where they need to improve, and how best they perform in every assessment. Much of this evidence will come from the assessment. Assessments are mainly used to give important feedback to students on their learning, to identify whether students have understood what they have learned, or if any requirements are needed for their future learning.

Scope of Effective Assessment Practices

- It involves measuring students' understanding, checking the learning, guiding instruction, providing feedback, and evaluating.
- The assessment helps to identify the students' capacity, including their strengths and weaknesses in learning.
- It involves the identification of every individual in learning. Principles of assessment: Assessment should be relevant, understandable, and fair for the students.
- It should contain instructional goals and learning outcomes.
- Methods of assessment: Assessment methods depend on the learning objectives, context, and the preferences of educators. Common methods include tests, exams, quizzes, etc.
- Each method has its strengths and limitations. Challenges in assessment: It includes ensuring alignment with curriculum standards. It should avoid bias among the students.
- The challenges require proper planning, professional development, and commitment to continuous improvement.

Aims and Objectives

- The main aim of assessment is to measure students' learning, and the objective is to set a course and curriculum. Get students' feedback by assessment.
- It's essential for students' growth and understanding. Provide healthy guidance instructional design to better support students' learning.
- Decision-making is very important in assessment. It can inform educational policies, resource allocation, and curriculum development.
- Assessment helps to evaluate the effectiveness of teaching. Here the achievement is the students' reflection on their creativity, self-learning thoughts.
- By evaluating the assessment, teachers can know the students' areas of weakness, needs, and provide better guidance.

Purpose of Effective Assessment Practices

Assessment is the bridge of teaching-learning cycle. Assessment has the specific purpose of teachers' response. It helps to conduct an effective assessment for the students.

- What do I want my students to learn?
- How will my students get there?
- How will I know when my students get there?

The main purpose of assessment is to enhance students' knowledge. We have the opportunity to show students' multi-dimensional expression towards society. Assessment gives them the opportunity to deliver their own thoughts. It teaches the power of meaningful learning, and students understand the value of skills, coordination, etc. Assessment provides self-evaluation for students to choose their right platform. Every assessment result analyzes various thoughts of the students. Assessment helps to develop the students' self-evaluation. They can predict their score based on previous performance and current outcomes. The purpose of assessment is to indicate students' discipline and classroom control. Assessment can provide rewards and punishments to encourage students. It's a tool for controlling students' behavior by providing feedback on learning to reduce student motivation.

Characteristics

Assessment helps to develop the students' self-evaluation. They can predict their score based on previous performance and current outcomes. The purpose of assessment is to indicate students' discipline and classroom control. Assessment can provide rewards and punishments to encourage students. It's a tool for controlling students' behavior by providing feedback on learning to reduce student motivation. Effective assessment assists learning in that it focuses on learning and effort to implement strategies. The facilities have two sides: one inside and one outside the classroom. Effective assessment has many purposes and methods, while providing a clear description of specific achievement expectations that have been assessed. There are four achievements within those expectations. This assures that evaluators understand and remain aware of what they are assessing.

It is congruent with the instructions. It is based on authentic tasks, and a wide range of tools and methods have been used in assessment. It is based on criteria that students have to

know and understand. Students are also involved in a collaborative process. Students are focused on what they learn and do.

Focused objective: Elucidate the intended applications of the assessment outcomes. Specify the target audience whose needs the assessment aims to fulfill educators, curriculum designers, and policymakers.

Appropriate technique: Employ an evaluation methodology aligned with the assessment objectives (e.g., essays, direct inquiries, multiple-choice, or comprehensive investigations). Offer a comprehensive selection of questions covering the spectrum of potential inquiries.

Effective sampling: Attain high-quality results with minimal investment of time and resources. Provide reliable insights into the respondent's performance across all possible tasks.

Unbiased and accurate evaluation: Disclose potential sources of inference and error that could influence the development and execution of the assessment.

Approaches for Effective Assessment Practices

Formal/Formative assessment: Formal assessments are like exams and standardized tests. Formative assessments are about tracking progress and providing feedback during the learning process.

Oral examination: In this, students' understanding is assessed through oral presentations.

Self-assessment: This helps students encourage self-learning and reflect on their own learning by setting proper goals and evaluating their own work.

Peer assessment: Students evaluate each other's work among their peers and provide constructive feedback to help improve each other.

Portfolio assessment: It consists of a collection of a student's work compiled and evaluated. It helps in the students' learning journey and allows for reflection on both strengths and areas needing improvement.

Authentic assessment: Assess students on real tasks, projects, or problems that are relevant to daily life scenarios and the future.

Performance assessment: It includes observation and assessing student’s performance about the task and activities that demonstrate their skills and knowledge.

Homework: Allowing students to apply their knowledge what they have learned in class. It brings out the thinking abilities and helps to understand the concept clearly.

Technology based assessment: Many online quizzes or interactive classes help to understand the concept easily.

Tools and Methods for Effective Assessment Practices

To create comprehensive student profiles in language arts, educators acknowledge the intricate and interconnected nature of language acquisition. They employ various assessment methods across multiple instances to collect comprehensive data on each student's development.

Student profiles in language arts often engage both students and teachers in data collection and assessment. The provided chart delineates assessment areas alongside corresponding assessment instruments, tools, and methodologies.

G DATA- ATHERING PROFILE

Observation of Processes	
Teacher: • checklists • conferences and interviews • anecdotal comments and records • reviews of drafts and revisions • oral presentations • rubrics and marking scales	**Students:** • reflection logs • self-assessment instruments and tools (e.g. Checklists, rating scales, progress charts) • peer-assessment instruments and tools (e.g. Peer conference records, rating scales)
Observation of Products and Performances	
Teacher: • written assignments • demonstrations • presentations • seminars • projects • portfolios • student journals and notebooks • checklists • rubrics and marking scales	**Students:** • reflection logs • self-assessment instruments and tools • peer-assessment instruments and tools • portfolio analysis
Teacher: • paper-and-pencil tests (e.g. teacher-made tests, unit tests, essay-style tests) • performance tests and simulations • rubrics and marking scales	**Students:** • reflection logs • self-assessment instruments and
Classroom test	
Teacher: • paper-and-pencil tests (e.g. teacher-made tests, unit tests, essay-style tests) • performance tests and simulations • rubrics and marking scales	**Students:** • reflection logs • self-assessment instruments
Division and provincial standards tests	
Teacher marker: • rubrics and marking scales	

Suggestions for Effective Assessment Practices

The passage outlines effective strategies for assessment, including clear objectives, diverse methods, authentic tasks, and meaningful feedback, all aimed at promoting student learning and success while ensuring fairness and equity for all learners.

Clear learning objectives: Begin with proper instructions to the students. It ensures clear understanding of what is being assessed.

Variety of assessment methods: Teacher should be used in the classroom, such as quizzes, projects, presentations, and discussions. This develops diverse learning styles and provides a better view of students.

Authentic task: where teachers provide assessments that mirror real-world tasks or are relevant to the subject content enhance the practical application of knowledge.

Formative and Summative assessment: Formative assessment provides feedback during the learning process, and Summative assessment evaluates overall learning outcome.

Feedback: Feedback should be specific, actionable, and focused on improvement and it should encourage student motivation as well.

Opportunities for reflection: It shows the students' reflections on their learning, promotes metacognition, self-regulation, and self-evaluation.

Fairness and equity: Teachers ensure assessments and evaluations are fair, unbiased, accommodating, and diverse for each student and background.

Advantages of effective assessment practice

The passage outlines effective strategies for assessment, including clear objectives, diverse methods, authentic tasks, and meaningful feedback, all aimed at promoting student learning and success while ensuring fairness and equity for all learners**.**

Informing instructional design: Assessment provides valuable instruction to the students. It also reveals the students' strengths and weaknesses, informing teachers' instructional strategies and curriculum design to better meet students' needs.

Feedback for learning: Assessments collect feedback from the students. This helps students understand their progress and improve the areas where they lack, fostering a growth mindset and enhancing learning outcomes.

Personalized learning: Assessment helps to identify individual learning styles. It enables teachers to recognize the individual needs of students and promote personalized learning.

Monitoring progress: Assessments help in tracking students' progress over time, allowing educators to identify students' capacities, celebrate students' achievements, and ensure continuous improvement.

Accountability: Assessments provide a means to evaluate educational effectiveness at various levels.

Diagnostic insights: Assessment can diagnose specific learning difficulties and support strategies to address individual student needs.

Curriculum alignment: Assessment ensures alignment between instructional goals, standards, and curriculum content, helping to maintain coherence and consistency in educational programs.

Engagement and motivation: Assessment provides motivation and promotes active participation to foster a positive learning environment.

Data Informed decision making: Assessment data provides evidence to inform decision-making processes at various levels, leading to effective educational practices.

Promoting Lifelong Learning skills: Through various assessment formats, such as projects, presentations, and portfolios, students develop skills like critical thinking, problem-solving, communication, and collaboration, preparing them for lifelong learning and success beyond the classroom.

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Conclusion

To create comprehensive student profiles in language arts, educators acknowledge the intricate and interconnected nature of language acquisition. They employ various assessment methods across multiple instances to collect comprehensive on each student's development. Student profiles in language arts often engage both students and teachers in data collection and assessment. The provided chart delineates assessment areas alongside corresponding assessment instruments, tools, and methodologies.

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REVOLUTIONIZING LEARNING: A CRITICAL ANALYSIS OF AI INTEGRATION IN EDUCATION

S. Pooja
B.Ed. Student Teacher, Thiagarajar College of Preceptors
Madurai, Tamil Nadu

P. Shanmuga Priya
B.Ed. Student Teacher
Thiagarajar College of Preceptors, Madurai, Tamil Nadu

Abstract

In the field of education, artificial intelligence (Al) is indispensable. The purpose of this study is to review the use of artificial intelligence in education in the digital age. This review essay involved a narrative synthesis as well as a thorough literature review. Books and research articles on EBSCO, Google Scholar, Scopus, Web of Science, and Science Direct were the sources of the literature and information. Peer-reviewed, published, English-language studies that provided a clear definition of artificial intelligence in the field of education met the inclusion requirements. In order to summarise and publish the results, five impartial reviewers evaluated search results, extracted data, and set the research' quality. Artificial intelligence has already been used in the field of education. Artificial intelligence implementation is a crucial and strategic component of educational growth. Furthermore, artificial intelligence is increasingly being utilised as a digital assistant. They aid teachers and students in a variety of ways, including providing pupils with access to a diverse choice of learning materials tailored to their unique learning requirements and disciplines. However, there are some problems linked with advances in artificial intelligence, such as safety, security, and privacy. As a result, artificial intelligence technologies have both beneficial and bad effects on the educational sector. As a result, academic achievement will be superior. In the future, more explanations and explicit findings may be provided by qualitative research, such as interviews, or quantitative analysis, such as online questionnaires. The consequences could help school officials, instructors, and students better identify and apply suitable measures for improving educational achievement through Al.

Keywords: *Artificial Intelligence (AI), Education, Learning, Digitalization, Technology.*

Introduction

In this advanced time of the modern upheaval 4.0, practically movements of every kind of human existence can't be isolated from the utilization of data innovation (IT) as an empowering influence for other exercises and administrations. IT is presently not simply a device and is currently a necessary part that should be possessed. Its progression, which essentially works with human existence exercises, has come about in a high dependence on the presence of data innovation (Rahmatullah et al., 2022). What's more, since innovation assumes a substantially more huge part in the computerized time than it did in past ages, the present age is mechanically educated. The ascent in education, joined with late mechanical progressions, has brought about extending innovation in training. These are the ages entering the homeroom today, going from recent college grads to Gen-Z, and they all offer unmistakable qualities that characterize their age. These ages hope to effectively be participated in their learning and don't perform well as latent students. Thus, innovation should be embraced in the present schooling, and educators should integrate innovation into their understudies' learning

The use of IT in the implementation of education by a modern educational institution at the level of a world-class university has become an obligation, given that the performance of education in the context of public services necessitates good governance that ensures transparency, accountability, efficiency, and effectiveness of education. Because of the awareness of the importance of information and communication technology (ICT), which is one of the main pillars of human civilisation's development today, the seriousness of management underpins the application of ICT in the implementation of all educational activities (Rahmatullah et al., 2022). Rapid advances in big data and artificial intelligence technologies have profoundly impacted all aspects of human society, including the economy, politics, science, and education (Luan et al., 2020). Artificial intelligence (AI), a machine-based technique with algorithmic power for making predictions, diagnoses, recommendations, and decisions, has gained prominence in the educational community in recent years due to its potential to support learning in various contexts. With diverse applications such as intelligent tutors for content delivery, feedback provision, and progress supervision, the field of AI in education has demonstrated technological advances, theoretical innovations, and successful pedagogical impact (Chen et al., 2022). Therefore, the adoption of artificial intelligence (AI) in the education industry is a critical topic.

Aims and Objectives

Aims

- To critically assess the current state of AI integration in educational systems.
- To identify the strengths and limitations of AI applications in various educational context. To explore the potential impact of AI on teaching methodologies and learning outcomes.
- To examine the ethical considerations surrounding the use of AI in education.
- To propose recommendations for the effective implementation of AI technologies in educational settings.

Objectives

- Conduct a comprehensive literature review on the use of AI in education.
- Analyze case studies and examples of AI applications in different educational domains.
- Evaluate the effectiveness of AI-driven tools for personalized learning and adaptive assessment.
- Investigate the role of AI in addressing educational challenges such as access, equity, and inclusivity.
- Examine the implications of AI for educators' roles and professional development.
- Assess the privacy and data security implications associated with AI-driven educational platforms.
- Identify best practices and guidelines for integrating AI technologies into educational institutions.
- Explore the potential future developments and trends in AI-driven education.
- Engage with stakeholders, including educators, students, policymakers, and technologists, to gather diverse perspectives on AI in education.

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- Synthesize findings and insights to inform recommendations for policymakers, educators, and education technology developers.

Operational Definition of Artificial Intelligence

Artificial intelligence (AI) technology has a long history and is constantly changing and Growing. It focuses on intelligent agents, devices that perceive their surroundings and take Actions to maximise their chances of success (Shabbir & Anwer, 2018). The term "artificial Intelligence" conjures up images of supercomputers, which are computers with enormous Processing capabilities, including adaptive behaviour, such as the inclusion of sensors and other Stuff that allow them to have human-like cognition and functional abilities, and thus improve The supercomputer's interaction with humans (Chen et al., 2020).

Artificial intelligence is the ability of a computer program to learn and think. Everything that involves a program doing something that people would typically think would require the intelligence of a human is considered artificial intelligence (Mitchell, 2019). Furthermore, artificial intelligence is the simulation of human intelligence operations by computers, specifically computer systems. AI excels at specific tasks and changes almost every sector of a country's economy by allowing computers to make sound decisions that lead to more efficient operations (Dong et al., 2020; Limna, 2022).

AI has been applied in many practical fields. In addition, intelligent computers are transforming society as computers and robots become more intelligent. AI is now present in almost every aspect of people's daily life (Li et al., 2018). AI also allows people to work smarter, which leads to better business outcomes. Still, it also necessitates the development of new competencies and capabilities, ranging from technological expertise to social and emotional skills, as well as creative abilities (Limna, 2022). The benefits of AI are enormous, and it has the potential to revolutionise any professional sector . Hence, the adoption of artificial intelligence is regarded as critical in industry 4.0. Since its inception, it has brought numerous opportunities and challenges to various sectors. Many AI-powered technologies have been developed with the potential to significantly improve the economy by improving the quality of life in many sectors.

Artificial Intelligence in Education

Artificial Intelligence in Education over the last twenty-five years, there has been significant progress in AI in education (Roll & Wylie, 2016). AI has been widely used in education since the advancement of computing and information processing techniques. AI in education creates new opportunities, potentials, and challenges in educational practices (Ouyang & Jiao, 2021). AI in education focuses on making significant advances in educational techniques through real-world trials and the development of standard modular prototypes in statistical reasoning, data visualisation, and learning analytics (Alam, 2021). One of the most important goals of AI in education is to provide personalised learning guidance or support to individual students based on their learning status, preferences, or personal characteristics (Hwang, 2014; Hwang et al., 2020). AI in education also aims to use AI to facilitate the instruction process (e.g., understanding and facilitating computer-supported collaborative learning through discourse analysis and achieving performance prediction through educational data mining), during which instructors are critical, and their acceptance of AI is vital. However, since AI is a relatively new

concept for instructors, less-experienced instructors frequently struggle to execute effective, on-the-spot responses to analytics from AI-enabled applications, resulting in their reluctance and lower acceptance of AI.

Thus, improving instructors' acceptance of AI systems appears critical Academics, educators, policymakers, and professionals must work together to address the new opportunities and challenges of the big data explosion and AI revolution. They must collaborate to develop all learners' necessary competencies and skills for twenty-first-century work, driven by the knowledge economy (Luan et al., 2020). The adoption of AI in education has created new opportunities for developing more effective learning activities and better technology-enhanced learning applications or environments. There are several essential aspects of AI technology in education, such as teacher Feedback, automatic grading system, adaptive learning, distance learning, and so on .

Teacher feedback is the student evaluation of the teacher. It is a Feedback method that has long been used in education. Despite the transition from paper to online surveys, little progress has been made in feedback. Because student evaluation of teaching is frequently the most valuable source of information, it must be prioritised. Modern technologies, such as AI-powered conversation robots, machine learning, and natural language processing offer exciting opportunities to improve feedback quality (Holstein et al., 2019; Peters, 2019). The automatic grading system is a professional computer program based on AI that simulates a teacher's behaviour to assign grades to student tasks in an educational setting. It evaluates student knowledge, analyses responses, provides feedback, and creates personalised training programs. This program is used in many artificial intelligence education apps. The system automatically provides the learner evaluation score during the learning test. This method can assist teachers in better understanding their students' learning situations while students are more aware of their learning achievement and mastery of knowledge. AI is also critical in distance learning. The application of AI in distance education attempts to explore the use of computers to bridge the gap between students and educators. Artificial Intelligence technology can support distance education, or different intelligent systems can be used to improve distance education.

Benefits of AI in Education

AI is transforming the education sector by personalizing learning, providing educators with valuable data, and automating tasks. Here are some of the benefits of AI in education:

Personalized learning: AI can tailor educational content to the individual needs of each student, ensuring they are challenged and engaged.

Improved efficiency: AI can automate administrative tasks, grading, and data analysis, freeing up educators to focus on more strategic initiatives.

Real-time feedback: AI-powered tutors can provide students with immediate feedback on their work, helping them to identify and address knowledge gaps.

Accessibility: AI can be used to create adaptive learning environments that cater to students with different learning styles and abilities.

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Disadvantages of AI in Education

AI in education also comes with some potential drawbacks, such as:

Dehumanization of learning: Overreliance on AI could lead to a sterile learning environment that lacks the human touch and emotional connection that teachers provide.

Bias and discrimination: AI algorithms can perpetuate existing biases if the data they are trained on is skewed. This can lead to unfair outcomes for students from marginalized groups.

Technical dependence: AI systems are susceptible to technical glitches and require robust support infrastructure. Dependence on AI could disrupt learning if these systems malfunction.

Limited scope: AI may struggle with complex concepts or nuanced topics that require human understanding and creativity.

Challenges of AI in Education

The upsides of artificial intelligence applications in schooling are immense and differed (Owoc et al., 2019).Numerous instructive settings are progressively conveying a few computer based intelligence applications controlled by AI frameworks and calculations, like customized learning frameworks, robotized Appraisals, online entertainment destinations, and prescient examination apparatuses. These computer based intelligence applications have shown guarantee in helping educators and understudies in more ways than one, including giving guidance in blended capacity homerooms, giving understudies nitty gritty and ideal criticism. On their composing items, freeing instructors from the weight of knowing it all and giving.Them more space to help their understudies while they are noticing, talking about, gathering data in their cooperative information building processes, etc (Akgun and Greenhow, 2021; Miao et al., 2021). Person to person communication locales associate understudies and educators.

Through virtual entertainment outlets, like Facebook. Web-based entertainment coordination can advance understudies' Dynamic learning, coordinated effort abilities, and associations with networks outside the homeroom.Chatbots can likewise be tracked down via web-based entertainment stages because of the different simulated intelligence frameworks (Kim et Al., 2019; Krutka et al., 2019). Customized learning frameworks, otherwise called versatile learning Stages or shrewd coaching frameworks, are commonplace and significant uses of man-made intelligence to help understudies and educators. These applications give understudies admittance to different learning materials In light of their particular advancing necessities and subjects (Akgun and Greenhow, 2021). Versatile Learning is additionally one of the most encouraging advantages of simulated intelligence in training. While the conventional study hall instruction model keeps on being one-size-fits-all, computer based intelligence fueled versatile learning. Frameworks are intended to boost learning productivity.

Recommendations

Artificial intelligence technologies have positive and negative effects on education. Thus, it is critical to prioritise artificial intelligence in education and implement appropriate strategies to meet teachers' and students' needs and expectations through AI technologies.

Longitudinal Studies: Monitor the impact of AI adoption in education over an extended period of time to identify patterns and long-term consequences.

Comparative Analysis: Examine the efficacy of various AI tools and systems in learning environments to ascertain which strategies produce the greatest results for teachers and students. Examine the ethical ramifications of integrating AI in education, taking into account concerns about algorithmic bias, data privacy, and equitable access to AI resources.

Teacher Training Programme: Provide training courses that will give teachers the abilities and information they need to successfully apply AI tools in the classroom and incorporate them into the curriculum.

Student involvement Studies: Investigate how AI can be utilised to improve students' motivation and sense of involvement in the classroom.

Applications for Special Education: Look at the ways that AI, such as adaptive technologies and personalised learning experiences, can be used to serve children with special education requirements.

Policy Suggestions: Provide legislators evidence-based suggestions for incorporating artificial intelligence (AI) into frameworks for educational policies so that regulations foster innovation while preserving the welfare of students.

Collaborative Research Initiative: Encourage interdisciplinary research and the co-creation of AI solutions suited to the particular requirements of the education sector by fostering collaboration between researchers, educators, policymakers, and technology developers.

Conclusion

To sum up, using artificial intelligence into education has both benefits and drawbacks that need to be carefully considered. While artificial intelligence (AI) presents chances to improve teaching effectiveness, personalise learning, and yield insightful knowledge through data analytics, it also raises issues about privacy, equity, bias, and the possibility of dehumanising the educational process. To make sure that AI in education serves the interests of both students and teachers, a critical analysis of its application in the classroom necessitates a comprehensive study of its ethical, social, and pedagogical consequences. In order to fully utilise AI's promise while minimising its risks, continued research, discussion, and ethical frameworks are crucial as the technology develops and becomes increasingly incorporated into educational environments.

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DATA PRIVACY AND DIGITAL RIGHTS

V.S. Deviaishwarya
Student teacher, Thiagarajar College of Preceptors, Madurai

V. Punithavalli
Student teacher, Thiagarajar College of Preceptors, Madurai

Abstract

Mankind has benefited greatly from technological advancements, but these advancements also pose a threat to our freedoms. The right to security is a developing concern as mechanical time advances and incorporates information that is always accumulated and prepared in the commercial center. A few unlawful practices, such as information extortion, deception reaching, cyber badgering, etc., have developed as a result of digitalization. Clients' private information can, as often as possible, be misused when it is provided to websites for advanced organizing, commerce, interaction insights firms, state organizations, and others. There is no unequivocal enactment throughout the country that administers the obtaining, filing, reconnaissance, recording, getting to, preparing, dispersion, support, etc. of information. This paper is an endeavor to consider issues including the right to protection and information investigation in an advanced age. The paper investigates the issue of security by dissecting it from two diverse points of view. To begin with, the chapter gives respect to the state's control of reconnaissance, and the chapter recognizes the concerns of clients concerning their right to protection as perceived beneath the Competition Act, 2002, and concludes with motivations that can be drawn from the universal controls and points of reference in the circle.

Introduction

You may have come across the expression "Data is the new oil". This means that data is a valuable asset that marketers seek to generate maximum profits. They are usually not upgraded and must be turned into valuable items. Moreover, we are now part of a strong digital economy where everyone is reduced to digital. Information is better than opinions; It is popular because it is reliable and predictable. Based on current data, you can predict future results, understand the best business practices, create better strategies, etc. However, this can be very dangerous if the data is not processed properly. Information is certainly powerful on its own, but it needs legal assistance to be verified. Then came data protection and privacy laws, and India recently passed a long-awaited law on the subject. This article discusses everything related to privacy and data protection laws in India.

Data Privacy

Information security primarily refers to an individual's ability to control the amount of private data about them that is shared with others. This personal information may include their name, location, contact information, or online and offline behavior. Just as someone may wish to keep a conversation private, many internet users want to control or prevent certain types of personal data collection. As internet usage has increased over the years, the importance of data privacy has also grown. Websites, applications, and virtual entertainment platforms often need to gather and store personal data about users to provide services. However, some applications and platforms may exceed users' expectations for data collection and use, leaving them with less privacy than they realized. Other applications and platforms may not provide sufficient protection for the data they collect, which can lead to a data breach that compromises user privacy .

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Rationale for Data Privacy Importance

In numerous areas, protecting privacy is viewed as a crucial basic human right. Laws are established to ensure the safety of data and safeguard that right. Data privacy is essential to gain people's trust and confidence in online engagements. Companies take measures to protect data and show their clients that they are trustworthy and can be relied upon with their information.

Individual information can be abused in various ways on the off chance that it isn't kept hidden or, on the other hand, on the off chance that individuals don't know how their data is utilized: Hoodlums can utilize individual information to cheat or pester clients. Elements might offer individual information to publicists or other external gatherings without client assent, which can bring about clients getting undesirable showcasing or promoting. At the point when an individual's exercises are followed and observed, this might limit their capacity to articulate their thoughts openly, particularly under harsh legislatures. For people, any of these results can be destructive. For a business, these results can hopelessly hurt their standing, as well as bringing about fines, sanctions, and other legitimate outcomes. Notwithstanding this present reality ramifications of protection encroachments, many individuals and nations hold that security has characteristic worth: that security is a basic liberty crucial to a free society, similar to one side to free discourse.

The Value of Personal Data

The Worth of Individual Information Individual information holds gigantic worth in the present data-driven society. It tends to be utilized for designated publicizing, statistical surveying, and now and again, even impact political suppositions. Understanding the worth of individual information is fundamental to ensuring people know about the dangers and go to suitable lengths to protect their data.

Protecting Data in the Digital Age

In today's digital age, protecting personal information has become a crucial concern. It requires a combination of individual responsibilities and robust data security measures. People should exercise caution while sharing their personal data online, and only provide it to trusted sources. Additionally, organizations and government bodies must implement effective data security regulations and online privacy measures to safeguard individuals' sensitive data from unauthorized access or breaches. By doing so, they can help build trust and confidence among users and ensure their privacy is respected and protected.

Information protection is not a solitary idea or approach. All things being equal, it's a discipline including rules, practices, rules, and devices to help association layout and keep up with required degrees of protection consistency. Information protection is by and large made out of the accompanying six components:

Lawful structure: Winning regulations are ordered and applied to information issues, like information protection regulations.

Policies: Laid out business rules and approaches to safeguard workers and client information protection.

Practices: Best-rehearses set up to direct IT framework, information security, and assurance.

Outsider affiliations: Any outsider associations, for example, cloud specialist co-ops, that interface with information.

Information administration: Guidelines and practices used to store, secure, hold, and access information.

Information security is a subset of the more extensive information insurance idea. It incorporates conventional information insurance - - like information reinforcements and debacle recuperation contemplations and information security. The objective of information assurance is to guarantee the proper protection and security of delicate business information while keeping up with the accessibility, consistency, and unchanging nature of that information.

Need for Data Protection and Data Privacy Laws in India

We can't deny any longer that we live in a computerized age where everything is on our screens. From our information to our money, from films and tunes to shopping, each area has been digitized. In such a digitalized world, data ends up being critical. In this time of digitalization, when all that has been moved to our computerized gadgets, our own and non-individual data has likewise been shipped. Accordingly, the dangers to our information security have expanded multifold. India is an economy that is developing immediately, and with that development, the significance of our delicate information has additionally been perceived.

Data Protection and Data Privacy

There are two aspects to this: data privacy and data protection. Data privacy describes when, how, and to what extent personal consumer information may be shared and disclosed. Personal information includes name, address, race, telephone number, marital status, etc. may contain. With internet usage increasing over the years, there is an urgent need for privacy legislation. On the other hand, data protection is the legal protection of data against loss, damage or corruption. As data is collected on an unprecedented scale, a serious challenge arises in protecting data collected from unauthorized sources.

Evolution of Data Protection Laws

Data security is not an afterthought. It dates back to the Dewayne Law of 1604, which decreed that everyone's place was in their own palace and castle. The idea of data security started here and lawyer Mr. It was revived thanks to the article “Rights to Protection” by Samuel Warren and Louis Brandeis, which found that the security of the right to protection is paramount. Basis. Personal wealth in peak season. Later in 1984, security was legalized by the Universal Declaration of Human Rights (UDHR) and the statute of article 12(4). Then, in 1980, the Organization for Economic Co-operation and Development (OECD) Conservation and Transfer Act was passed. It consists of personal data. Countries began implementing data security regulations as soon as Germany did so in 1970. General Data Protection Regulation The General Data Protection Regulation (GDPR) came into force on 25 May 2018, amending data security and data protection regulations. In the Indian context, privacy has been a matter of dispute in the judiciary; While some claim that privacy is a fundamental right, others do not recognize it as a right under Article 21 of our Constitution. Finally, in 2017, the famous K.S. Puttaswamy v. Union of India (2018) stated that the fundamental right to privacy is protected

by Article 21. Information Technology Act (2000), Indian Penal Code (1860) etc. We have already deleted certain sections by. Privacy. But there was a specific, comprehensive rule on this matter. Finally, after seven years of labor and trying to pass a privacy law, India passed a comprehensive data protection and privacy law on August 9, 2023.

The Need for Data Protection and Privacy Laws Can Be Summarised As Follows

It ensures the protection of personal and non-personal information. Data privacy laws aim to protect the safety and security of personal and non-personal information. These laws specify how data is collected and processed, the reasons for giving consent to individuals, the sanctions that will be applied if companies do not protect data as required by law, etc. determines.Creates

Strong Trust: These laws are also important because they create a strong foundation of trust among people. When companies prioritize the privacy of users' data and use their data carefully, they demonstrate their willingness to protect their data, which helps customers build better and stronger relationships with that company.

Preserves right to privacy- As we said earlier, the Constitution of India recognizes the right to privacy as a fundamental right. This means that everyone has the right to access their personal data. This allows them to choose how they want their data to be used and when to withdraw their request or refuse to have their data processed.

Increased digital footprints- India is home to over a billion people, and it is no surprise that a large portion of the population is connected to the internet. The widespread use of social media such as YouTube, Instagram and TikTok has left people alone with digital devices on the internet. If not handled correctly, a digital infrastructure will be needed where our information and history can be made public.

Lack of awareness- The lack of understanding of data privacy in our country is another reason for the enactment of such laws. People use the internet all the time, but they don't understand the rules behind it. Then they fail to understand the consequences of their actions. Once such laws are in place, there will be greater awareness of the importance of privacy on the Internet, and it will be easier to educate people about their rights and responsibilities when working on the internet.

Prevents data breaches, identity thefts, etc.- With the increasing number of people who have joined the digitization process, there are higher chances of any offense being committed, such as fraud, identity theft, data breaches, etc. Data privacy laws play a crucial role in putting such mechanisms in place that would help prevent these offenses.

Promotes innovation and economic growth- A country with strong data protection laws can develop a legal framework that balances individual rights with digital development. As new companies gain traction, the importance of data privacy will increase. If data protection measures are strong, more countries and companies will consider investing in our facilities.

Maintains the children's privacy- In addition, due to the necessary data protection legislation, children are more active on all digital platforms. Issues of rights and entitlements require special attention, as they differ greatly from normal data collection. Many games easily collect various information about children in order to play their games, and children are unaware of some of the consequences. Good legislation ensures not only that data is protected but also made public.

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Data ethics- These laws regulate not only the purpose of data processing and collection but also the behavior of the data. Data ethics are the principles that ensure that data collection and processing is ethical, fair and transparent, and that processing is voluntary and non-discriminatory.

Rights of the individuals- Data protection laws only empower individuals in one way. They have the right to know, collect, store and transfer their information and are entitled to compensation in case of errors. In case of any information leakage, they will be paid full compensation. It establishes effective procedures for resolving complaints and ensures that people are aware of their rights regarding their data.

Facial recognition and surveillance- New technologies such as facial recognition and surveillance have also raised many concerns regarding the privacy of people's data. This policy addresses these issues and collects data from responsible individuals.

As individuals' internet usage increases, information security regulations are expected to gain increasing importance in various sectors of the world. They need guidance to help them gain confidence in the modern world. How your information is collected, used, transferred, stored, deleted, etc. They need to know. They want to understand how to protect the families they interact with or purchase from through these guidelines. The right to privacy is recognized as a fundamental right under Article 21 of the Constitution of India. Data breeches put personal information at risk, including sensitive information such as financial information, medical records, and contact records.

Purpose of Digital Rights

Computerized freedoms are just an expansion of the privileges set out in the General Statement of Common Liberties by the Unified Countries as applied to the web-based world. Its primary goal is to ensure admittance to the Web, keeping away from the supposed computerized partition, and legitimate utilization of the organization as a typical resource having a place with the entire of mankind. Nonetheless, the absence of global agreement past a goal on common freedoms on the web has driven every country to foster its own computerized privileges sanction.

Types of Digital Rights

Although each country is developing its own Digital Rights Charter, there are some general guidelines that all countries follow and which we review below:

Universal and equal access: People should be able to access the Internet regardless of their income, their geographical location, or their disabilities. The UN Human Rights Council recognizes in a report that the right of access is essential to freedom of opinion, and cities such as Mexico City already have programs to establish a free Internet network.

Freedom of expression, information and communication : These fundamental human rights are threatened online when the government blocks websites or social media, violates the right to free association communication or content, and violates freedom of expression and information.

Privacy and data protection : Citizens must have control over who stores their data and be able to delete it at any time. The right to privacy is threatened on the Internet by the theft of credentials, the appropriation of personal data, their use for financial gain, etc.

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Right to anonymity : The right to anonymity and confidentiality of communications is particularly threatened in countries that prohibit the transmission of encrypted messages necessary for secure online commerce. .

Right to be forgotten : This is the right to have your personal information removed from online searches, databases and archives. Currently, the European Union has included the GDPR as a 'right to erasure' and this has already been implemented in other countries such as Argentina, the USA, South Korea and India.

Protection of minors : Governments must not only protect children online and from child pornography, but also ensure that companies take security measures that do not jeopardize children's rights.

Intellectual property : Authors should be recognized and remunerated for their work, while ensuring free access to public domain works.

Digital Rights in India

Computerized freedom in India are not as spread out or organized as in other regions of the planet. Examples have been seen when the public authority has attempted to acquire guidelines and codify these freedoms. For instance, the "Information Assurance Bill" is still in its making and is supposed to be postponed sooner in the Parliament of India. Different High Courts, as well as the High Court of India, have specified the inborn presence of a couple of computerized freedoms inside the ongoing Central Privileges present in the Constitution of India. For instance, the "Right to Get to the Web" is a key right accessible to Indian residents under the accompanying articles:

Article 19: Right to freedom of Speech, Expression, Peaceful Assembly, Form Associations/Unions, Move Freely, Reside, Profession etc.

Article 21: Right to Life and Personal Liberty

Article 21A: Right to Education

Similarly, the “Right to Privacy” comes under the broader ambit of Article 21 too

Conclusion

All in all, shielding information security is fundamental in our undeniably associated world to maintain computerized freedoms. Finding some kind of harmony between development and assurance is significant to guarantee people's privileges are regarded while encouraging innovative progressions. Straightforwardness, responsibility, and proactive measures are critical to building trust and keeping a solid computerized environment for everybody.

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YOGA AND HELATH EDUCATION

M. Suresh Babu
Ph.D Scholar, Department of Educational Planning and Adminsistration, TNTEU

Dr. P. Subramanian
Assistant Professor, Department of Educational Planning and Administration, TNTEU

Abstract

The aim of health education is to help people achieve health by their own actions and efforts. Health education begins therefore with the interest of people in improving their condition of living and aims at developing a sense of responsibility of their own health betterment as individuals and as members of families, communities or governments says World Health Organisation.

Good Health is a prerequisite to human productivity and the development process .A healthy community is the infrastructure upon which to build an economically viable society. The progress of society greatly depends on the quality of its people. Health is man's greatest possession for it lays a solid foundation for his happiness. Charaka, the renowned physician said 'Health is vital for ethical, artistic, material spiritual development of man'. It has been rightly said that health mind is in healthy body. Therefore, the student of higher education must be made aware of importance of health and so health education must be imparted to students the unhealthy practices like smoking drinking taking of drugs etc., would make the life of youth miserable.

The concept of positive health and lifelong learning are relatively new concepts, which need to be promoted. Yoga helps in the overall development of the personality of an individual is achieved through higher education using an affective domain in addition to cognitive skills.

Keywords: *Health, Yoga, Health Education, Yoga Education*

Introduction

Health education aims at promoting the greater possible fulfillment of inherited powers of the body and the mind and the happy adjustment of individuals to society. It is educational approach to health problems and as such is concerned with practical measures for the promotion of health and the control and treatment of disease.‖–WHO. It has been rightly said that healthy mind is in healthy body. For this health education must be imparted to students otherwise the unhealthy practices like smoking, drinking, taking of drugs, etc. would make the life of youth miserable. Health Education is the sum of experiences that favorably influence habits, attitudes and knowledge relating to individual, community and racial health. Health Education has been an integral part of the functions of health personnel since time immemorial to educate the people pertaining to factors that influence their health.

Importance of Health

Good Health is a prerequisite to human productivity and the ―development‖ process. It is essential to economic and technological development. A healthy community is the infrastructure upon which to build an economically viable society. The progress of society greatly depends on the quality of its people. Unhealthy people can hardly be expected to make any valid contribu tion towards developmental programmes.

Wealth becomes useless And Intelligence cannot be applied.‖ As such good health must be a primary objective of national development programmes.World Health Organisation also said,

—The aim of health education is to help people achieve health by their own actions and efforts. Health education begins therefore with the interest of people in improving their condition of living and aims at developing a sense of responsibility of their own health betterment as individuals and as members of families, communities or governments.

Definition of Health

The World Health Organisation defined as —a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity.Thus, good health is a synthesis of physical, mental and social well-being. As stated is First Five Year Plan – —Health is a positive state of well-being in which harmonious development of mental and physical capacities of the individuals lead to the enjoyment of a rich and full life. It implies adjustment of the individuals to his total environment—physical and social‖ Dr E.Berthet, Secretary-General of the International union for Health Education Paris, defines health We no longer ought to define health only in terms of sickness, but rather in relation to the harmonious development of every individual's personality. After all, it represents a balanced measure of a person's total potentials whether biological, psychological and social; and to the notion of individual health we should add the concepts of family and community health.

Significance of Health Education

Health education must be imparted keeping in mind latest developments in the field of health. Life is changing fast and the individuals must be educated in the new technology. Effective health education, therefore, requires a continuous stream of knowledge, development of the people's ability to absorb it, and decisions taken based on a constantly changing body of information. Health education helps to

7. Provide a person with appropriate knowledge to enjoy decent health
8. Create in him an interest in his own health and well-being and also health of his family members and those living in his surrounding
9. Provide knowledge about the occurrence and spread of disease and also preventive measures
10. Create in him a desire to support health education programmes in his area
11. Have change in his habits and attitudes
12. Inculcate positive values to improve his health
13. Modify his customs and behavior
14. Enjoy personal hygiene and nutrition
15. Impart knowledge of modern medicine and use of health services
16. Educate about mental health
17. Educate about human physiology, communicable diseases, alcohol and drugs
18. Provide knowledge of environmental sanitation.

Making a change in knowledge, habits, attitude and customs is not easy. It is a difficult process. Health education programmes must involve a lot of motivation to break the person's habits and attitudes etc and bring him into a desired practice. In this aspect, spiritual dimension is highly influential to have desired behavioral change. Here comes the Yoga education, a holistic value for health education as one of the method of health education.

Yoga Education

Yoga helps in the overall development of the personality of people. The concept of positive health and lifelong are relatively new concepts which need to be promoted. An overall development of the individual is intended to be achieved through higher education using an affective d omain in addition to cognitive skills. India, known for its wisdom, has given us the Upanishads, the quintessence of the Vedas, and a saga of knowledge. From these books of knowledge – Vedas, Upanishads, Yoga texts – are emerging new rays of hopes that are essential to face the new revolution. Dr. Hiroshi Nakajima, Director-general of WHO, in a message to the assembly of Youth said, ―Unprecedented challenges face the youth of today and the young people may be given the opportunities to demonstrate their creativity, energy and commitment to solving their own problems and helping to build a healthy future for the entire community in which they live.‖

The two major challenges of this era of science and technology – viz. stress and pollution have become the true triggers for the new revolution. If pollution is working at the material front to direct man towards better ecological and appropriate technology, the challenge of stress is shaking the very foundations of the matter- based objective approach of science. As we glide through the decades of transition, our understanding is bound to encompass a greater spectrum of the universe – life, mind, psyche, etc.

The following are the problems of the students of higher education

19. Aimless life.
20. Lack of interest in studies.
21. Lack of enthusiasm and eagerness.
22. Affluent environment leading to alcoholism, smoking, gambling, etc.
23. Irregular food habits.
24. Lack of exercise and games.
25. Lack of reading habits.
26. Lack of peace.

Meaning of Yoga

Yoga has been the culture of ancient India and the ancient civilization of the world, and it is going to be culture of tomorrow. It is the science of today which we have to learn, which we have to accept, and which we have to understand. It is a science which deals with the developments of the human personality and which leads to the awakening of untapped energy sources within the brain and mind. Ancient rishis, saints and sages have been talking about it for the last fifty thousand years. They spoke about it, not as a religion or philosophy, but as a way of life that could lead to the development and awakening of our consciousness and energy. Asana remove the physical discomfort accumulated during a day at the office sitting in a chair, hunched over a desk. Relaxations techniques help maximize the effectiveness of ever-diminishing time off. In an age of mobile phones, beepers and twenty-four hour shopping, yogic practices make great personal and even business sense. The word yoga is derived from the Sanskrit root ‗yuj' meaning ‗to unite', ‗to combine', and ‗to integrate', which means total integration of the physical, mental, intellectual and spiritual aspects of the human personality. Yoga is a way of life, propounded by Patanjili in a systematic form. Yoga is an exact science. It

aims at the harmonious development of the body, the mind and the soul. Yoga is the turning away of the senses from the objective universe and the concentrations of the mind are eternal life in the soul of spirit. Yoga is the discipline of a mind, senses and physical body. Yoga helps in the co-ordination and control of the subtle forces within the body.

Yoga brings in perfection, peace and everla sting happiness; one can even have increased energy, vigor, vitality, longevity, resistance, calmness, and good sleep at times by the practice of Yoga. The practice of Yoga will help people to control the emotions and passions and resistance power increases and removes the disturbing elements from mind. It will enable them to keep a balanced mind and remove fatigue and get concentration, self-sufficiency, impertinence, pride, luxury, name, fame, self-assertive nature, abstinence, idea of superiority, evil company, laziness, over eating, meat eating, over work, attachments, too much talking, smoking, drinking are some of the obstacles in the path of Yoga.

Steps in Yoga

The science of Yoga has its roots in Upanishads, Vedas, Bhagavad-Gita, Yogavashishta of Vashista, Hathayoga Pradipika, and the Yoga Sutras of Patanjali. Patanjali called it Astana Yoga, i.e, science having eight limbs or constituents, viz, 1. Yama 2. Niyama 3. Asana 4. Praanaayaama 5. Prathyaahaara 6. Dhaarana 7. Dhyaana 8. Samadhi.

These can be practiced and experienced by every person individually. So that they reap the benefits of yoga.

Conclusion

The concept of positive health and lifelong learning are relatively new concepts, which need to be promoted. Yoga helps in the overall development of the personality of an individual is achieved through higher education using an affective domain in addition to cognitive skills. Yoga deals with the problems of human nature and human psychology through a vast repertory of practical methods th at aim towards purification, regulation and awakening of human potential. At present, yoga is passing through a momentous period of growth consolidation and expansion with its rapid integration into modern society.

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THE IMPACT OF IMMERSIVE TECHNOLOGIES ON SOCIAL DEVELOPMENT OF DIGITAL NATIVES

Dr. S. Lenin
Assistant Professor, Manomaniam Sundaranar University

Ms. S. Jebasheela Jenifer
Research scholar, Manomaniam Sundaranar University

Abstract

Digital natives, the generation growing up in the digital era, face unique social challenges due to their heavy reliance on digital platforms for social interaction. This reliance has led to diminished face-to-face communication, reduced empathy, and difficulties in forming deep connections. To counter these issues, Dreamscape Learning utilizes immersive technologies like Virtual Reality, Augmented Reality, and Gamification to create virtual environments that simulate real-world social situations. By engaging in these simulations, digital natives can develop and reinforce positive social behaviors such as improved communication, empathy, conflict resolution, and cultural awareness. Dreamscape Learning thus seeks to tackle the social obstacles faced by digital natives by leveraging digital tools to offer immersive learning experiences.

Keywords*: Dreamscape Learning, Digital natives, Social Behaviour, Social Interaction*

Introduction to Dreamscape Learning

Dreamscape Learning is a revolutionary approach to education, targeting the social development of digital natives amidst the pervasive influence of technology. As digital platforms offer convenience, they also pose challenges like reduced face-to-face communication and empathy, hindering interpersonal connections. Dreamscape Learning flips this narrative, utilizing immersive technologies like Virtual Reality, Augmented Reality, Gamification and simulations to create life like social scenarios for learning and practicing crucial skills. Its ultimate aim is to cultivate positive social behaviors, such as improved communication, empathy, conflict resolution, and cultural sensitivity, essential not just for personal growth but also for thriving in a globally connected professional landscape.

Digital Natives in Digital Media

Digital natives, having grown up surrounded by digital technology, exhibit unique social behaviors influenced by their digital experiences. They heavily rely on digital communication channels like text messaging, social media, and email, often preferring them over face-to-face interactions. This can lead to concise messages with the use of emojis or GIFs to express emotions. They are adept at multitasking, engaging in several activities simultaneously, such as texting while consuming media or browsing social platforms during lectures. Social media plays a significant role in their social lives, where they connect, share updates, and seek validation, impacting their self-esteem and social perceptions. Seeking immediate responses and gratification, they prioritize activities that provide instant feedback. Through social media, they curate their digital identities, shaping how they present themselves and perceive their self-worth.

Dreamscape Learning as Transformative Capabilities

Dreamscape Learning creates interactive virtual environments where digital natives can collaborate, communicate, and engage with others in meaningful ways. These platforms encourage active participation, group discussions, and collaborative problem-solving, fostering teamwork and communication skills beyond traditional digital communication channels. It educates digital natives about the ethical use of digital technology. This includes topics such as online privacy, cyber bullying prevention, digital footprints, and responsible social media usage. Through simulations and scenarios, learners can practice making responsible choices in digital environments. It helps learners to think critically and empathetically by presenting complex social scenarios and dilemmas in virtual environments. Through role-playing exercises and decision-making simulations, digital natives can develop analytical skills, perspective-taking abilities, and a deeper understanding of diverse viewpoints. This promotes empathy, tolerance, and respectful communication in digital interactions. Dreamscape Learning leverages experiential learning methodologies, allowing learners to actively engage with content and apply knowledge in realistic situations. This hands-on approach enhances retention, problem-solving skills, and adaptability, preparing digital natives to navigate real-world social challenges effectively.

Technological Integration

Technological integration in Dreamscape Learning refers to the strategic incorporation of various cutting-edge technologies such as virtual reality, augmented reality, gamification, and artificial intelligence into the learning experiences offered by the platform. Here's a detailed explanation of how each of these technologies is utilized to enhance social skills development and communication strategies:

Virtual Reality (VR)

VR technology immerses users in a computer-generated environment, providing a sense of presence and interactivity. Dreamscape Learning utilizes VR to create realistic virtual social scenarios where users can engage in simulated real-world interactions.

For social skills development, VR allows users to practice communication, empathy, conflict resolution, and cultural sensitivity in a safe and controlled environment. They can experience different social contexts and receive feedback based on their actions, facilitating learning through experience.

Augmented Reality (AR)

AR overlays digital information onto the real world, blending virtual elements with the physical environment. Dreamscape Learning may use AR to enhance social learning experiences by adding digital cues, prompts, or interactive elements to real-world scenarios.

AR can be particularly effective in scenarios where users need to navigate social cues or cultural nuances in their immediate surroundings. It can provide contextual information or guidance during social interactions, promoting learning in authentic contexts.

Gamification

Gamification involves incorporating game elements, mechanics, and dynamics into non-game contexts to enhance engagement and motivation. In Dreamscape Learning, gamification

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techniques are integrated into social simulations to make learning more enjoyable and interactive.

By introducing challenges, rewards, progress tracking, and competition elements, gamification motivates users to actively participate in social skill-building activities. It can also provide instant feedback, encouraging users to improve their communication strategies and empathy levels.

Artificial Intelligence (AI)

AI technologies, such as natural language processing (NLP) and machine learning algorithms, can be integrated into Dreamscape Learning to create intelligent virtual characters or chatbots that simulate realistic social interactions.

AI-driven simulations can adapt to users' responses, personalize learning experiences, and provide tailored feedback based on users' strengths and areas for improvement. This personalized approach enhances the effectiveness of social skills development by addressing individual learning needs.

Impact and benefits of Dreamscape learning on digital natives

Improved Social-Emotional Learning (SEL)

Dreamscape Learning's immersive simulations and social scenarios provide digital natives with opportunities to develop essential social-emotional skills such as empathy, communication, active listening, and conflict resolution.

Through engaging in virtual interactions, users can practice understanding and managing emotions, expressing themselves effectively, and building positive relationships. This leads to improved self-awareness, social awareness, relationship skills, and responsible decision-making.

Enhanced Problem-Solving Abilities

The interactive nature of Dreamscape Learning's experiences, combined with gamification elements, fosters critical thinking, problem-solving, and decision-making skills among digital natives.

Users are presented with challenges, dilemmas, and scenarios that require them to analyze information, consider multiple perspectives, and devise creative solutions. This process of experiential learning enhances their ability to think critically, make informed choices, and solve complex problems effectively.

Increased Digital Literacy

By utilizing VR, AR, gamification, and AI technologies, Dreamscape Learning enhances digital literacy among digital natives. They become familiar with navigating and utilizing advanced digital tools and platforms in meaningful ways.

Digital natives learn how to interact responsibly and ethically in digital environments, understand data privacy and security concepts, and evaluate digital content for credibility and reliability. This comprehensive digital literacy prepares them for the demands of the digital age.

Cultivation of Adaptable and Collaborative Mindsets

Dreamscape Learning encourages digital natives to develop adaptable and collaborative mindsets by exposing them to diverse social contexts, cultural perspectives, and problem-

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solving scenarios. Digital natives learn to adapt their communication styles and behaviors based on the situation, collaborate effectively with virtual peers or teams, and navigate dynamic and changing environments. This adaptability and collaboration mindset are crucial for success in a rapidly evolving and interconnected world.

Challenges and considerations

Equitable Access to Technology

One of the primary challenges is ensuring that all digital natives have equitable access to the necessary technology and infrastructure to participate in Dreamscape Learning. This includes access to devices like computers, VR headsets, and stable internet connections.

Addressing this challenge may involve partnerships with schools, community centers, or organizations to provide access to technology, as well as considering options for offline or low-bandwidth experiences to accommodate users with limited resources.

Privacy and Ethical Concerns

Implementing immersive technologies and AI in learning environments raises concerns about data privacy, security, and ethical use. Dreamscape Learning must prioritize user privacy and adhere to data protection regulations.

Strategies to address these concerns include implementing robust data encryption and security measures, obtaining informed consent from users regarding data collection and usage, anonymizing user data whenever possible, and regularly auditing and updating privacy policies.

Balancing Screen Time with Real-World Interactions

While Dreamscape Learning offers valuable learning experiences, it's important to balance screen time with real-world interactions to avoid excessive dependence on digital platforms.

Strategies for promoting this balance may include incorporating offline activities, encouraging users to apply learned skills in real-life settings, promoting outdoor or physical activities, and providing guidance on healthy technology usage habits.

Technical Challenges and Maintenance

Implementing and maintaining complex technologies like VR, AR, gamification, and AI require technical expertise and resources. Technical challenges such as software glitches, hardware compatibility issues, and system updates may arise.

Dreamscape Learning must have a dedicated technical support team, regular maintenance schedules, and contingency plans for addressing technical issues promptly to ensure a seamless learning experience for users.

Training and Support for Educators and Facilitators

Educators and facilitators who integrate Dreamscape Learning into their teaching practices may require training and ongoing support to effectively utilize the platform and guide students through immersive learning experiences.

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Providing comprehensive training, resources, and professional development opportunities for educators can enhance their confidence and proficiency in using Dreamscape Learning as an educational tool.

Conclusion

Dreamscape Learning's impact on digital natives extends beyond traditional academic learning, empowering them with essential social-emotional skills, critical thinking abilities, digital literacy, and adaptable mindsets that are essential for personal, academic, and professional success in the 21st century. By proactively addressing these challenges and considerations, Dreamscape Learning can maximize its positive impact on digital natives while promoting responsible and ethical use of technology in education. In conclusion, Dreamscape Learning plays a crucial role in equipping digital natives with the necessary skills and competencies to thrive in a rapidly evolving digital landscape. By focusing on social-emotional learning, problem-solving abilities, digital literacy, and adaptable mindsets, Dreamscape Learning fosters a holistic approach to education that goes beyond traditional academic learning.

Furthermore, by acknowledging and addressing challenges such as equitable access to technology, privacy and ethical concerns, balancing screen time with real-world interactions, technical challenges, and the need for training and support for educators, Dreamscape Learning demonstrates a commitment to responsible and ethical use of technology in education.

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SELF-EFFICACY: A FIRST HAND PERSPECTIVE

R. Kalaichelvan
Ph.D. (Part – time) Research Scholar
Dept. of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai

Dr. P. Subramanian
Assitant Professor
Dept. of Educational Planning and Administration
Tamil Nadu Teachers Education University Chennai

Abstract

A person's confidence in their capacity to finish a task or reach a goal is known as self-efficacy. It includes a person's self-assurance in their ability to manage their conduct, have an impact on their surroundings, and maintain motivation while working towards their objective. Self-efficacy can exist in a variety of contexts and domains, including relationships, the workplace, education, and other crucial areas. Your confidence in your ability to handle different situations is the foundation of self-efficacy. Your level of self-efficacy can have a significant impact on your life, influencing not only how you view yourself but also your potential for success. Psychologists and educators frequently discuss the importance of self-efficacy, which can affect behaviour, motivation, and psychological states among other things. When it comes down to it, our thoughts and feelings are greatly influenced by our confidence in our own capacity for success. It also aids in determining our position in the world, the kind of goals we set, and the method by which we work towards achieving them. In this article, we will discuss the fundamental concept of Self-efficacy as well as role,Sources of Self-efficacy and applications of Self-Efficacy.

Keywords: *Self-Efficacy, Psychological, Behaviour, Motivation*

Introduction

According to Albert Bandura, self-efficacy is "the belief in one's capabilities to organize and execute the courses of action required to manage prospective situations."Self-efficacy is the conviction that one can succeed in a specific circumstance. These kinds of ideas influence people's thoughts, feelings, and behaviours. One of the most researched subjects in psychology is self-efficacy since Bandura's groundbreaking 1977 paper, " Self-Efficacy: Towards a Unifying Theory of Behavioural Change," was released. Self-efficacy has been shown by Bandura and other academics to have an impact on motivation, behaviour, and psychological states. Self-efficacy governs our ability to set and achieve goals as well as how we evaluate our performance.

Role of Self- Efficacy

Almost everyone can name things they would like to change, things they would like to do, and goals they would like to reach. But most individuals also understand that it's not exactly so easy to carry out these plans. According to research by Bandura and colleagues, a person's self-efficacy significantly influences how they approach tasks, goals, and abstacles. Being highly self-sufficient is beneficial. Individuals that have high self-efficacy:

1. Take an increased interest in the things they engage in.
2. Establish a better sense of dedication to their hobbies and activities.

3. Get over disappointments and defeats fast.
4. See difficult issues as jobs to be accomplished.

On the other hand, low self-efficacy can have a variety of negative consequences. Individuals that have low self-efficacy.

1. Steer clear of difficult assignments
2. Think that they are incapable of handling challenging jobs or circumstances.
3. Pay attention to shortcomings and unfavourable results
4. Easily lose faith in one's Own talents.

Major Sources of Self-Efficacy

1. Mastery Experiences

Mastery experiences are the most efficient means of cultivating a robust sense of effectiveness. When we do a task successfully, our self-efficacy increases. Nonetheless, self-efficacy may be weakened or undermined if the task or challenge is not sufficiently addressed. First, rather than relying on hearsay, mastery experiences are grounded in firsthand, personal experience. Consequently, we are able to deduce our future potential by using this concrete proof of our past performance. Second, mastery experiences raise expectations about our capacity to perform well in certain circumstances by enabling us to see clear connections between an effort investment and successful performance (Vroom, 1964). This development is supported by the earlier stages and incremental goals of achievement.

2. Social Modelling

The vicarious experiences offered by social models are the second significant source of self-efficacy. Vicarious experiences are those in which one observes another person accomplish job successfully. One is more likely to internalise at least some of the positive self-beliefs of positive

role models in their lives, particularly those who exhibit a healthy degree of self-efficacy. Older siblings, elder friends, camp counsellors, parents, grandparents, aunts, uncles, teachers, coaches, and employers are examples of social role models.

3. Social Persuasion

Social persuasion is the affirmation and support you get from people regarding your potential and ability. It might increase your self-efficacy by persuading you that you possess the necessary skills for success. You should surround yourself with uplifting, encouraging people who share your aims and values if you want to use social persuasion to better your everyday life. Seek advice and helpful criticism from people with experience and knowledge in your sector. Stay away from depressing and negative people who make you doubt your abilities and value yourself. Finally, give thanks to people who encourage and assist you.

4. Physiological and emotional states

The physical and mental experiences you encounter when confronted with a task or problem are known as physiological and emotional states. Because these states affect how you see your readiness and competence, they can have a major impact on your self-efficacy. It's crucial to control your stress and anxiety levels with breathing exercises, meditation, relaxation techniques, or other coping mechanisms if you want to use these states to enhance your everyday life. In addition, maintaining a healthy diet, getting adequate sleep, working out frequently, and partaking in enjoyable hobbies and activities will all help you feel more upbeat and energised. In addition, identify and confront any unfavourable feelings or ideas that undermine your confidence in yourself, and swap them out for uplifting and powerful ones. Finally, to boost your optimism and confidence, practise self-talk, visualisation, and affirmations.

Applications of Self-Efficacy

Numerous positive aspects of daily life, including stress and adversity resilience, healthy lifestyle choices, increased productivity at work, and academic success, have all been associated with high levels of self-efficacy.

1. Healthy Habits

Health psychologists have found that when people have confidence in their ability to perform healthy behaviours, they are more likely to engage in those behaviours (Bandura, 1988). Self-efficacy also plays a role in encouraging people to make other good lifestyle decisions, such as making an effort to quit smoking or maintain a balanced diet. Health psychologists think self-efficacy can be used for anything one wishes, as long as it is used to support a healthy lifestyle.

2. Academic Achievement

Researchers Mart van Dinther (2011) and many colleagues looked into the relationship between education and self-efficacy. According to their findings, self-efficacy is related to things like the techniques pupils use, the objectives they set for themselves, and their academic success. Stated differently, there exists a correlation between elevated levels of self-efficacy and what is widely seen as positive student life behaviours. This implies that those who have higher levels of self-efficacy may also be more organised and perform better academically.

Conclusion

One of the most important elements influencing encouraging improved It seems to be crucial for teachers to support students in growing their sense of self-efficacy in the classroom. Educators can raise students' efficacy by using a range of practical instructional strategies. Students who encounter repeated failures have lower self-efficacy than those who experience repeated successes. Therefore, it is crucial to give pupils a wealth of experiences and cultivate positive views in them in order for them to grow in confidence in their own abilities.

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PROSPECTIVE TEACHERS' PERSPECTIVES ON ETHICAL CONSIDERATIONS AND CHALLENGES OF LEVERAGING AI AND TECHNOLOGIES FOR LEARNING

Dr. D. Vani Maheswari
Associate Professor in Education
St.Justin's College of Education, Madurai

Abstract

This study investigates the tremendous impact of artificial intelligence (AI) and future technologies on the educational landscape, with a special focus on prospective teachers. As AI continues to integrate into different sectors of society, its function in education becomes more important. This study investigates the implications of AI and technology for teacher training programmes, focusing on both the potential and problems they provide. The study explores how AI-powered tools are transforming educational approaches and classroom management practices. Furthermore, technologies like augmented reality (AR) and virtual reality (VR) provide immersive learning environments, allowing future educators to engage pupils in novel ways. Furthermore, the article investigates the potential of artificial intelligence in supporting teachers with administrative chores including grading assignments, analysing student performance data, and delivering personalised feedback. AI saves educators considerable time by automating routine chores, allowing them to focus on developing their pupils' critical thinking, creativity, and socio-emotional abilities. However, it raises worries about the possible de-skilling of the teaching profession, as well as the importance of educators developing digital literacy and adaptability. Educators can equip the next generation with the skills and competences required to flourish in the digital age by responsibly adopting AI and effectively incorporating technology into teacher training programmes.

Keywords: *Prospective teachers, Ethical considerations, Challenges of leveraging AI, Technology for Learning and Digital Equity.*

Introduction

The integration of artificial intelligence (AI) and advanced technologies into education holds immense promise for enhancing learning experiences. However, alongside the opportunities, there are ethical considerations and challenges that demand careful scrutiny, particularly in the context of prospective teachers engaging with these tools. Despite its transformative potential, the widespread adoption of AI in education raises ethical considerations and challenges. Prospective teachers confront issues related to data privacy, algorithmic bias, and digital equity. This section examines the ethical dilemmas inherent in AI-driven education, emphasizing the importance of responsible AI deployment, ethical decision-making, and equitable access to technology in teacher training programs. This paper explores the ethical dimensions of AI and technology integration in teacher education programs, highlighting the challenges and proposing strategies for ethical decision-making.

Data Privacy and Security:

Data privacy and security are essential issues for prospective teachers as they integrate AI and technologies into classroom settings. Here's a look at their opinions on data privacy and security in this environment.

Understanding Data Privacy and Security

Data Collection: Prospective teachers must comprehend the many sorts of data collected by AI and technological tools in educational settings. This comprises student demographics, academic performance, and behavioural data, as well as data created from interactions with digital platforms.

Data Storage and Management: Prospective teachers should understand how technology vendors and service providers store, manage, and secure student data. This covers things like data encryption, access controls, and adherence to data protection requirements like GDPR or COPPA.

Data Sharing and Third-Party Services: Prospective teachers must understand the consequences of sharing data with third-party services and applications. They should review the privacy policies and terms of service for technological tools used in their classrooms, and verify that student data is only shared with trusted partners in compliance with legal requirements and best practices.

Perspectives of Prospective Teachers:

Protecting Student Privacy: Prospective teachers are responsible for maintaining the privacy and confidentiality of student data. They should be careful to collect only the data required for educational purposes and secure adequate consent from students and parents for the usage of their data.

Educating pupils: Prospective instructors should teach their pupils the value of data privacy and security, and empower them to make educated decisions about their digital footprint. This involves educating kids on how to protect their personal information, identify potential threats, and advocate for their privacy rights online.

Advocating for Policy and Practice: Prospective teachers should push for solid data privacy policies and practices at the school and district levels. This could include participating in data governance conversations, working with administrators and IT personnel to adopt security measures, and improving privacy awareness among colleagues and stakeholders.

3. Addressing Ethical Dilemmas

Balancing Innovation and Privacy: Prospective instructors may face ethical quandaries when using AI and technology into their teaching practices. They must strike a balance between the potential benefits of technology-enhanced learning and the need to preserve student privacy and handle data ethically**.**

Respecting Student Rights: Prospective teachers should respect students' rights to privacy and control over their personal information. They should be open about the data they gather and how it will be used, obtain consent where necessary, and give students options for customising their privacy settings and preferences.

Navigating Legal and Ethical requirements: Prospective instructors should become acquainted with the legal and ethical requirements relating to data privacy and security in education. This involves adhering to data protection regulations, professional rules of conduct, and ethical principles for using technology ineducation.

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To reduce bias in technology use, prospective teachers can promote transparency in AI algorithms and educational technology tools. They should research how algorithms generate judgements, what data they use, and how they may affect students, and then use this knowledge to critically evaluate and choose technology solutions that prioritise justice and transparency.

Bias Mitigation Strategies: Prospective teachers should be conversant with bias detection and correction approaches, fairness-aware algorithms, and model explainability methodologies. They should collaborate with technology developers, researchers, and other stakeholders to identify and address bias in technological solutions utilised in education.

Empowering Students: Prospective teachers can help their students recognise and challenge bias in technology use. Students should be taught critical thinking skills, media literacy, and digital citizenship concepts, which will allow them to critically analyse material, question assumptions, and advocate for fairness and equity in their technology use.

Digital Equity

When integrating AI and technologies into classrooms, prospective instructors must prioritise digital equity and access. Here's a look at their opinions on digital equity in this setting.

1. Understanding Digital Equity.

Access to Technology: Digital equity is ensuring that all students have access to the technology tools and resources they need to fully participate in educational opportunities. This includes access to laptops, tablets, and cellphones, as well as consistent internet connectivity.

Digital Literacy: Another aspect of digital equity is encouraging digital literacy skills among students, teachers, and other stakeholders. This involves being able to use technology successfully for learning, communication, collaboration, and problem solving, as well as thinking critically about digital information and media.

Addressing Inequities: In order to achieve digital equity, current disparities in access to technology and digital skills training must be addressed, particularly among marginalised areas. Prospective teachers should advocate for policies and programmes that encourage fair access to technology and help students develop digital literacy skills.

3. Addressing the Homework Gap and Supporting Home Learning: Prospective teachers should be aware of the "homework gap," in which students who do not have access to technology or internet connectivity at home face a disadvantage in completing assignments and participating in online learning activities. They should collaborate with their schools and communities to provide assistance and resources to close the gap, such as loaner gadgets, mobile hotspots, or alternate offline learning options.

Collaborating with Families: Prospective instructors should work with kids' families to make them aware of available resources and help for using technology and internet connectivity at home. This may include offering training and guidance on how to use technology successfully for learning and communication, as well as cultivating connections with community organisations to give additional assistance as needed.

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Autonomy and Human-Centric Design

Autonomy and human-centered design are critical concerns for prospective teachers as they manage the integration of AI and technologies into educational contexts. Here's a look at their thoughts in this context:

1. Empowering Students through Autonomy in Learning. Prospective teachers should try to empower their pupils by encouraging autonomy in their learning path. AI and technology can help students pursue their interests, define learning objectives, and take control of their education.

Flexible Learning Paths: AI-powered adaptive learning systems allow students to choose their own learning path and speed. Prospective teachers should use these resources to accommodate students' various learning styles and preferences, allowing them to investigate topics in depth and grow at their own pace.

Autonomy in learning allows students to think critically and solve problems. Prospective instructors should provide learning experiences that promote individual inquiry, experimentation, and reflection, allowing students to develop critical skills for lifetime learning and success in a fast changing environment.

2. Human-Centric Design: Prospective teachers should take a user-centered approach to technology integration, focusing on the requirements, preferences, and experiences of students and other stakeholders. Human-centric design entails actively integrating end users in the design process, requesting feedback, and iteratively developing technological solutions to satisfy their requirements.

Human-centric design prioritises accessibility and inclusion, ensuring that technology solutions are useful and beneficial to all learners, regardless of ability or background. Prospective instructors should examine a wide range of user needs and preferences while selecting and building technological solutions to make education more accessible and equal for all.

Ethical Considerations: Human-centric design takes into account ethical implications and potential effects on users' well-being and rights. Prospective instructors should prioritise ethical issues when designing and implementing AI and technology solutions, emphasising openness, justice, and respect for human dignity**.**

3. Perspectives of Prospective Teachers

Facilitating Agency: Prospective instructors should see technology as a tool for promoting student agency and empowerment, rather than a replacement for conventional teaching approaches. They should design learning environments that allow students to make decisions, express themselves, and take responsibility for their learning.

Human-centered design promotes collaboration and co-creation among instructors, students, and other stakeholders. Prospective teachers should work with students to co-design learning experiences that use AI and technology to boost engagement, creativity, and collaboration while instilling a sense of ownership and membership in the learning community.

Human-centric design is an iterative approach that incorporates input and reflection to ensure ongoing progress. Prospective teachers should adopt a growth mindset, experiment with new ideas and technology, learn from triumphs and mistakes, and adjust their techniques to better suit their students' changing needs.

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Professional Responsibility and Ethical Reflection

Prospective teachers must demonstrate professional accountability and ethical reflection as they negotiate the incorporation of AI and technologies into learning environments. Here's a thorough examination of their viewpoints in this context:

1. Understanding Professional Responsibilities

Student Wellbeing: Prospective teachers have a professional responsibility to prioritise their pupils' well-being when using AI and technology for learning. This includes thinking about the potential impact on kids' emotional, social, and cognitive development**.**

Quality of Education: Prospective teachers must ensure that the usage of AI and technologies improves educational quality and student learning outcomes. They should critically assess the efficacy of technological tools and initiatives in accomplishing educational objectives.

Ethical Conduct: Professional responsibility requires adhering to ethical standards and values in all aspects of education, including the use of AI and technology. Prospective teachers should follow ethical principles, protect students' privacy, and promote justice and equity in educational settings.

2. Ethical Reflection in Technology Integration

Prospective instructors should conduct critical reflection on the ethical implications of using AI and technology into teaching and learning. This includes challenging preconceptions, investigating potential biases, and examining the broader societal ramifications of technology use in education.

Ethical Decision-Making: Ethical reflection allows prospective teachers to make educated decisions concerning the use of AI and technology in educational settings. They should analyse the potential benefits and dangers, consider alternative alternatives, and prioritise ethical issues during the decision-making process.

Continuous Learning: Ethical reflection is an ongoing process that necessitates continuous learning and self-awareness. Prospective teachers should stay current on emerging technologies, ethical challenges, and best practices in educational technology, and actively pursue professional development opportunities in this field.

3. Perspectives of Prospective Teachers

Student-Centered Approach: Prospective instructors should approach technology integration from the perspective of their pupils, taking into account their particular needs, preferences, and ethical considerations. They should involve students in decision-making, teach them how to use technology ethically, and establish a supportive learning atmosphere that encourages ethical behaviour.

Collaborative Engagement: Working with colleagues, mentors, and other stakeholders to conduct ethical reflection is beneficial. Prospective teachers should participate in debates, exchange thoughts and experiences, and collaborate on ethical norms, regulations, and practices relating to artificial intelligence and technology in education**.**

Prospective teachers have a social obligation to contribute positively to the ethical use of artificial intelligence and technology in education and society as a whole. They should advocate for ethical ideas and values, raise understanding of ethical challenges, and encourage responsible technology use among students, coworkers, and the general public.

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Conclusion

To summarise, introducing AI and technologies into teacher education curricula has far-reaching implications for the future of learning. Prospective teachers who embrace AI responsibly can leverage its transformative power to improve teaching techniques, customise learning experiences, and promote equal educational opportunities for all students. However, addressing ethical concerns and promoting digital literacy are crucial to ensuring that AI helps educators fulfil the diverse needs of learners in the digital age.To recap, addressing the ethical concerns and issues inherent in the integration of AI and technology in education would require a joint effort from all stakeholders, including future teachers. Prospective teachers can help advance the ethical status of AI-driven education by focusing on data privacy, reducing algorithmic prejudice, fostering digital fairness, and adhering to human-centric design principles.

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TEACHER EDUCATION AND ASSESSMENT IN INDIA

Dr. K. Mummurthi
Educationist, 46, Rajalakshmi Nagar, Chidambaram

Abstract

Education is the foundation of existence and plays a crucial role in shaping and cultivating the purpose of life. It is essential for fostering societal transformation through education, and high-quality teacher education is a fundamental component of any country's educational objectives. The primary objective of teacher education is to cultivate proficiency and capabilities in aspiring teachers, enabling them to fulfill the demands of the teaching profession and adequately prepare for future necessities. To understand the current state of teacher education in India, it is necessary to examine the historical backdrop of teacher education over time and consider the various initiatives and suggestions put forth by the government and policy makers to enhance the quality of teacher education. The University Education Commission, active during the years 1948-49, was a trailblazer in India, conducting a thorough evaluation of existing teacher training programs and proposing recommendations to enhance the flexibility of courses. The commission suggested that the curriculum should be constructed in a way that theory and practice complement one another, with the aim of establishing appropriate schools in connection with training institutions and placing greater emphasis on practical instruction. The Secondary Education Commission (1952-53), chaired by Dr. S. Radhakrishnan, provided numerous recommendations to enhance the education system in India, emphasizing the importance of enhancing the qualifications of teachers and emphasizing the equal importance of their professional training.

Keywords: *Higher Education, Teacher Education, Teaching Profession and Professional Development*

Introduction

Teacher education in India has its roots in ancient times, with the Monitorial system of teacher training established. Since India gained independence, the government and policymakers have been working to improve the quality of teacher education through various plans and concepts. Curriculum Frameworks have been designed to address the requirements and challenges of teacher education in India, and the attainment of these goals can only be achieved through the cooperation of all parties involved, including students, educators, parents, and the community. The Education Commission, also known as the Kothari Commission, was formed between 1964 and 1966 to address the deterioration in education due to the proliferation of educational establishments. The National Education Policy 2020, ratified by the Union Cabinet of India on July 29th, 2020, introduces a novel education framework that prioritizes school education, higher education, and teacher education. The primary objective of the policy is to enhance teacher education in India by granting teachers more authority and encouraging them to choose teaching as their profession.

The effectiveness of these methods depends on the instructor's traits and competencies, as well as the goals, abilities, and psychology principles of the students. Direct experiential learning is crucial for developing students' confidence and problem-solving skills. The concept of varied teaching in diverse classrooms has gained attention in the educational landscape, as it acknowledges the interconnectedness of humans, cultures, and the natural world. It is essential to plan courses with a multicultural classroom in mind, considering syllabi, course assignments, examples, stories, and classroom dynamics. Teachers play a crucial role in managing a diverse student population and must possess sufficient expertise, abilities, and attitudes to effectively

influence students from various backgrounds in various educational environments. The upcoming course will cover various concepts related to teaching diverse learners, techniques for teaching in diverse classrooms, and the preparation of teachers for diverse classrooms. Diversity involves accepting and respecting differences, including color, ethnicity, gender, sexual orientation, socio-economic status, age, physical ability, religious beliefs, political ideas, and other ideologies. The examination of these disparities takes place in a secure, optimistic, and supportive setting, fostering understanding and appreciation for the diverse and multifaceted aspects of each person.

Assessments in Teaching

Assessment in educational programs is crucial for ensuring accuracy, reliability, consistency, and impartiality. Validity ensures that assessment tasks accurately measure students' learning outcomes. Reliability requires clear protocols for development, assessment, scoring, and oversight of assignments. Assessment information should be uniform, uniform, and timely. An all-encompassing and impartial assessment should be formulated to prevent disadvantages for any group or individual. The assessment should align with program objectives and learning outcomes, reflecting the discipline or subject while allowing students to develop diverse skills. The number of assessed activities should be controlled to provide a reliable representation of achievement without burdening faculty or students. Programs should include both formative and summative evaluations, with some programs including diagnostic evaluations. Timely feedback is essential for learning and development, and students should be informed about the nature, extent, and timing of feedback before each assessment activity.

The constructivist framework emphasizes the importance of assessment in evaluating students' progress towards understanding scientific concepts, conducting scientific investigations, and understanding the principles underlying inquiry. This approach is formative, focusing on enhancing student education rather than grading students. Assessment should be tailored to the specific needs and attributes of educators, learners, and scientific subject matter. Effective strategies may not be applicable in different classrooms, and assessment is a continuous and ongoing process. Teachers receive student feedback on their learning, and they then provide feedback on the assessment outcomes and recommendations for improvement. The constructivist approach to assessment is based on the unique needs and abilities of each student.

A seminar is a formal gathering of individuals to discuss a specific subject, often led by a speaker. The purpose is to exchange knowledge and ideas among experts in the field. Seminars can serve multiple objectives or a singular one. For example, they can be educational, such as lectures, where participants actively discuss an academic topic to develop a deeper understanding. Other types of seminars may impart specific skills or knowledge, such as personal finance, web marketing, real estate, or investing. These seminars provide participants with knowledge or suggestions on the discussed topic. The success of all educational endeavors relies on the personal traits, character, educational qualifications, and professional ability of teachers. Teachers deserve a respected position in society, with sufficient and satisfactory remuneration and other terms of employment taking into account their qualifications and duties. Teachers have the right to engage in and publish their own studies and research, as well as express their thoughts and ideas through speaking and writing, on important national and

international matters. Teacher education, especially in-service education, should be given appropriate focus.

Teachers in India have access to various courses, including certification courses in Creative Writing, Teaching of English, and Distance Education, facilitated by non-formal groups. These courses help teachers improve their knowledge and teaching skills, fostering personal growth and empowering them to reach their full potential. The quality of teachers is crucial for students' academic success. The implementation of standard-based reforms has highlighted the importance of educators among policymakers, college and university leaders, teacher education institutions, and the public. Education transforms individuals by helping them develop and acquire information and skills at various levels of socialization. Teachers, known as 'Guru' in India, play a vital role in this process by ensuring a reliable and widespread availability of the 'Guru Force'. Teacher education is designed to equip teachers with the essential skills and information to effectively educate and shape future generations, contributing to society's progress and development.

To be an effective teacher, one must possess sufficient knowledge, abilities, interests, and attitudes towards the teaching profession. This can be achieved through well-designed and efficient pre-service and in-service training programs. Teachers constitute the most extensive professional cohort involved in human development activities, and the education and development of professionals is widely considered a crucial aspect of a given occupation. Teacher education encompasses the acquisition of expertise in subject matter, pedagogy, and instructional approaches, as well as cultivating a passion for learning and commitment to fostering the growth of others. It also involves developing the capacity to inspire and lead others towards future progress.

Teacher education is a crucial element of the education program, encompassing all the tasks and responsibilities involved in becoming a professional educator. Pre-service training programs and induction programs are the primary activities involved in this process. The training of student teachers is crucial for their development as proficient educators. Professional competence in education involves preparing instructors for classroom activities, adapting to various conditions, effective communication, and analyzing students' behavior. A competent educator excels in enhancing communication abilities, implementing effective teaching methods, and exhibiting strong organizational leadership, contributing to the holistic development of children. The efficacy of a teacher is used as a metric to assess their professional competency.

The interdependence between theory and praxis in teacher education is essential. Theory encompasses a comprehensive range of strategies and procedures for teaching behaviors derived from psychological and philosophical notions. It also allows student instructors to engage in critical reflection on their teaching practice within the classroom. However, merely possessing theoretical knowledge may not be sufficient. Student instructors must have the ability to evaluate and differentiate information that benefits their students' growth and progress. The practicum, which involves teaching practice, is the crucial component of the training process for aspiring teachers. It prioritizes practical experiences gained from teaching in real classrooms over their qualifications as instructors. This ensures the amalgamation of practical application and theoretical knowledge. Professional skills encompass the practical use of techniques, strategies, and approaches in real classroom settings. In India, all teacher

education institutions are mandated to incorporate teaching practice as a component of the Diploma in Elementary Education and Bachelor of Education programs.

Assessment plays a crucial role in a student's life, impacting their learning patterns, educational emphasis, and time allocation. It is a systematic procedure that records understanding, abilities, attitudes, and convictions. Assessment can be directed at individual students, the learning community, institutions, or the entire educational system. It serves more than just assigning grades or degrees; it directs students' attention and actively influences their learning process. According to Gibbs (2003), evaluation serves six primary functions: acquiring and maintaining student focus and engagement, creating suitable educational tasks, offering prompt feedback, helping students internalize discipline norms and concepts of equality, creating assessments that differentiate between students or facilitate pass/fail determinations, and presenting evidence to external parties to assess the suitability of course standards. This evidence can be trusted for making decisions.

A significant number of educators find their initial years in the teaching profession to be filled with stress. The attrition rate for teachers who either do not enter the profession after finishing initial training or who quit the field after their first teaching job is substantial. Several nations and regions have implemented extensive support systems to assist novice instructors during their initial years in the teaching profession. A peer network is a platform where individuals can provide mutual support and engage in peer learning. Insights from educational professionals, such as assisting novice teachers in connecting their college knowledge to real-life classroom situations, and promoting self-reflection among all teachers through the practice of journaling, are valuable. Research indicates that these programs have the potential to enhance the longevity of novice teachers in the field, enhance their teaching effectiveness, and foster their personal and professional welfare.

Ongoing professional growth and learning are essential for teachers to remain current and continue to progress. Continuous Professional Development (CPD) activities should adhere to principles such as being distributed across time, involving collaboration among participants, incorporating active learning methods, being conducted in group settings with teachers, and including opportunities for practice, coaching, and follow-up. Quality assurance is crucial in both state and private education systems, and evaluations of teacher performance can be done in several ways. The 'no fault' approach is considered satisfactory because it involves carefully identifying, assessing, and addressing flaws through the supply of resources. A test or examination is a formal evaluation used to assess the knowledge, ability, aptitude, physical fitness, or classification of a test taker in many subjects. Tests can be conducted verbal, written, computer-based, or hands-on and vary in style, level of strictness, and specific demands. Formal assessments often yield a numerical grade or a score, which can be interpreted in relation to a standard or benchmark.

Examinations conducted in written form are conducted using physical or digital mediums, such as paper or computer screens. Test takers have the option to respond to individual questions by writing or typing their answers in the designated place on the test or in a separate form or document. Proficiency in numerous constants and scientific terminology is necessary in certain examinations, such as those in Chemistry or Biology, to accurately respond to inquiries. The selection of a style or format for generating a written test by a test developer is typically

arbitrary due to the absence of a universally fixed standard for testing. However, several testing approaches and formats have gained greater popularity compared to others.

Test formats used by educators and test designers include multiple choice examinations, categorization matching, complete format, composition items, brief response or essay inquiries, and essay items. Multiple choice questions are used to assess different levels of learning and evaluate a test taker's ability to assimilate information. They also provide feedback to the individual taking the test, explaining the rationale behind erroneous distractors and correct answers. However, there are challenges associated with using multiple choice questions, such as the need for substantial administrative effort, restricting test takers from demonstrating their knowledge beyond provided options, and encouraging guessing or approximation.

Categorization tasks involve providing a certain phrase and asking the test taker to link various attributes with the correct term. The completion format requires the test taker to recall and provide the correct term that matches the given distinguishing features. Fill-in-the-blank tests can be classified into simplified versions and word banks, with the most arduous form being an open-ended fill-in-the-blank exam lacking a word bank. Composition elements, such as short answer or essay questions, require the test taker to construct a written response that fulfills the criteria of the item. These tests can examine complex learning objectives and strategies used to address the provided question but present difficulties for examinees in making educated guesses and showcasing writing skills. Teacher education focuses on the responsibilities of teacher educators, student teachers, subject matter, and instructional techniques. The competence of teacher educators is vital for the efficacy of programs and the implementation of pedagogical inputs. The main objective of teacher education is to train and cultivate proficient teacher educators, providing them with essential knowledge, mindset, and skills to effectively carry out their teaching profession.

Conclusion

Teachers play a crucial role in the teaching and learning environment, aiming to help students discover their talents, reach their full potential, develop strong character, and cultivate desirable social and human values. They must actively participate in curriculum renewal, ensuring that the curriculum remains relevant to societal and individual needs, and addressing concerns and imperatives arising from changing national development goals and educational priorities. Teachers must be attentive and aware of the social circumstances surrounding education, including inequalities in students' backgrounds and broader national and global contexts. They should also consider national efforts to achieve fairness, equality, social justice, and excellence. To meet these expectations, TE must include elements that allow student teachers to effectively care for and engage with children they have an affection for. These elements include understanding children within social, cultural, and political frameworks, viewing learning as a quest for significance derived from personal encounters, grasping the process of learning, and considering knowledge generation as an ongoing and dynamic process of introspective learning. Teachers must remain open-minded and continuously acquire knowledge.

The importance of understanding knowledge as a result of collective teaching and learning experiences, rather than a textbook. It emphasizes the need for personal accountability and active participation in societal improvements. The primary goals of pre-service training include

equipping teachers with a comprehensive understanding of education's goals, fostering comprehension of child growth and development, and delivering educational content that engages and motivates students. Effective communication and psychomotor skills are also developed to foster positive relationships with children, facilitating their learning both within and outside the classroom. The text also highlights the importance of understanding and empowering individuals to facilitate the comprehensive development of children under their supervision. The initial phase of training aims to familiarize newly appointed teachers with the institution's procedures and activities, often accompanied by a period of difficulty. Die preparation is necessary to equip new staff members with the necessary skills and knowledge to fulfill their tasks and obligations. A methodical approach can serve multiple objectives.

Assessment plays a crucial role in learning by evaluating and measuring students' progress, understanding, and performance. It helps teachers understand students' comprehension levels, enabling effective instruction and providing valuable feedback. Assessment as learning involves students gaining a deep understanding of their learning methods, allowing them to adapt and enhance their learning. This approach encourages students to take greater ownership of their learning journey. Evaluating learning provides information to students, instructors, parents, and the wider educational community about the level of achievement reached at a specific moment, allowing for recognition of success, improvement strategies, and ongoing support for further development. Assessment should be strategically designed with its intended objective in mind, and the interpretation and utilization of acquired information are essential for its designated objective. The evaluation process should be carefully balanced to support and enhance student learning. Assessment principles are essential for evaluating student performance in educational programs. They ensure validity, dependability, uniformity, and fairness. Validity ensures that assessment tasks accurately evaluate students' achievement of learning outcomes. Reliability requires clear, easily understood procedures for assignment creation, evaluation, grading, and moderation. Information regarding assessment should be clear, consistent, and timely.

A comprehensive and fair evaluation should be designed to avoid disadvantage for any group or individual. Assessment should align with program objectives and desired learning outcomes, accurately representing the characteristics of the discipline or subject while allowing students to develop various skills and talents. The number of evaluated tasks should be easily managed, providing a reliable representation of accomplishment without overwhelming faculty or learners. Each program should incorporate both formative and summative assessment to effectively meet assessment objectives. Diagnostic evaluation may be incorporated in some programs. Timely feedback is crucial for fostering learning and progress. Students have the right to receive feedback on their submitted formative and summative tasks, but it is essential to communicate the nature, scope, and timing of the feedback to students before each assessment activity.

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THE ROLE OF DIGITAL PEDAGOGICAL RESOURCES IN TEACHING EFFICACY

M. Kannan
Ph.D. Research Scholar,
Department of Educational Planning and Administration,
Tamil Nadu Teachers Education University, Chennai
teachkannan@gmail.com

Dr. P. Subramanian
Assistant Professor,
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University, Chennai
subramanitnteu@gmail.com

Abstract

Education is the prominent part in human and society development as like as teaching profession is help to develop the teaching skills among teachers. An individual teacher exists himself / herself the effective or skilled teacher they have used digital pedagogical resources in their teaching process. The aim of this article is to explore the role of digital pedagogical resources for teaching efficacy. the following digital teaching resources used to enhance teaching efficacy among teachers, such as ICT, Radio, Television, Computer, Mobile, Internet, Wikis, Social Media (facebook, youtube, twitter, telegram, google classroom, google meet, zoom meet, open education resources, MOOC, SWAYAM, etc). Additionally, this paper describe about the meaning and definition of the digital pedagogy and teaching efficacy and advantages of teaching efficiency. The suggestion of this article to provide the digital pedagogical resources to educational institutions for to develop the teaching efficacy are teaching competencies amount teachers

Keywords: *Digital Resources, Digital Pedagogy and Teaching Efficacy.*

Introduction:

The digital pedagogical resources in teaching is a paramount role it offers many advantages including access to a wealth of numerous information, enhanced effective teaching and learning experience among teachers and learners, improved collaboration work and cost effectiveness. The effectiveness of digital pedagogical resources fully dependent on the effective teachers and create the digital teaching tools for who have insufficient pedagogical competencies in their teaching activities. The digital pedagogical platforms and online educational applications are helps to enhance teachers' pedagogical competencies, professional development and performance. Additionally it explores that an improving educational quality. The aim of this article is to takes place the role of digital pedagogical resources in teaching efficacy.

Digital pedagogy: Meaning and definitions

Digital pedagogy is refers to the skill of embedding digital technologies into teaching so that they enhance learning, teaching, curriculum and assessment (Kivunja, 2013).

Digital pedagogy means the use of electronic resources / elements to enhance or improve the experience of education (Croxal, 2012).

Digital pedagogy cannot be considered only as the use of digital technologies within teacher-directed approaches. Rather it also includes practices in which IOT is used to enable learners' collaboration, creation and active use of information (Prestridge ,2012).

Digital pedagogical resources having numerous tools for teaching process especially ICT tools. ICT is very essential to teaching and learning activities for effective teaching and learning. And ICT is helps to teachers to improve their teaching competencies as like as it assists to students to enhance their comprehend learning and application knowledge.The pedagogical digital competencies are connected to teachers' knowledge, skills and attitudes in relation to digital technology, learning theory and context. According to From (2017) stated that the Pedagogical digital competencies are new dimension of contemporary teachers' pedagogical skills and competencies.

Characteristics of digital pedagogy

- The idea of a digital pedagogy should rotate the educational community and collaboration.
- It should bring intervention to remise our old teaching habits and practices of collaboration and come up with digital pedagogical resources.
- Digital pedagogical resources should be an integral part of teaching.
- Digital pedagogical resources are connected with teaching and learning process.
- Digital pedagogical application is used to alternate the traditional teaching competencies for innovative and effective teaching activities.

Teaching efficacy: Meaning

A judgement of teaching efficacy is to assess the teachers' capacity in teaching situations / teaching performance in their class. As reported by Belia(2014) the teaching efficacy is the levels of confidence teachers have in their ability to guide students to success. It includes helping students learn, building effective programs for students and effectively changing student learning.

Teaching efficacy: **Definition**

Teaching efficacy is a judgement of his or her capabilities to bring about desired outcomes of students engagement and learning, even among those students who may be difficult or unmotivated. (Bandura,1977 & Armor., et al. 1976).

Teachers teaching competencies to have an impact on a students' learning activities, and to create the teachers' confidence in their ability / competencies to teach difficult or unmotivated lesson. And also teachers teaching efficacy helps to rectify the students' learning difficulties.

Advantages of teaching efficacy

- Teaching efficacy is helps to teachers to teach their lesson comprehensively and effectively.
- Teaching efficacy is assists to improve the teachers' teaching competencies for reflective teaching.

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- Teaching efficacy is providing the enthusiastic teachers and students in (teaching and learning) classroom activities.
- Teaching efficacy is to rectify the teaching constraints among teachers in their classroom activities.
- Teaching efficacy is to create the collaborative teaching for students and develop the good relationship among teachers and learners.

Categories of Teaching Efficacy

The teaching efficacies have the following categories, such as

- Teaching efficacy for classroom management
- Teaching efficacy for learner engagement
- Teaching efficacy instructive strategies

Teaching efficacy for classroom management

- Teachers can prohibit the student behavioural problems in the classroom.
- It helps the teachers to maintain the effective teaching to enhance the students' performance in learning and classroom activities.
- It has valuable tasks in pedagogical activities of teachers.

Teaching efficacy for learner engagement

- Teaching efficacy provides the effective teaching to teachers in their classroom through digital pedagogical resources.
- It helps the students to attend the classes interesting and pleasurable.
- It helps the learners to enhance learning attitude, learning strategies, learning style and learning outcomes.

Teaching efficacy for instructive strategies

- Teaching efficacy helps to teachers can teach their subject / lesson through various pedagogical strategies for easily instruct the concepts / lessons via digital resources.
- It helps to teachers to teach the lessons through ICT or online sources for understanding the lessons among learners.
- The digital pedagogical resources are create the innovative teaching based on ICT and similarly the reflective teaching based on the online sources it helps to increase the teachers competencies in teaching activities, as like as the effective or collaborative teaching based on the digital resources it helps the teachers to improve their teaching competencies.

Digital Pedagogical Resources for Teaching Efficacy

In our digital world, each and every activities are depends on the digital tools / resources. The digital resources are helps to improve the all activities of human and effectively and peacefully. In education field, the teaching and learning are incorporate in the digital resources. The teachers are have been using digital pedagogical resources for effective teaching in the classroom activities as like as the learners are following the digital learning resources in the air

good academic outcomes, such as ICT, Computer, Internet, Social media (YouTube, Twitter, Facebook, WhatsApp, Instagram, Telegram, Google Chrome, Gmail, Yahoo, Firebox, Zoom meet, Google Meet, Video-conferencing, Tele-conferencing, e-library, e-book, Wikipedia, MOOC, SWAYAM, OERs, Webinar virtual reality, i pods, etc.,)

Digital pedagogical resources that applied in the teaching process to deliver the lesson / content effectively by teachers. A teacher can use the digital teaching resources in his/ her classroom for understand the concept easily with suitable examples. And the teacher was a digital application for teaching a concept and it is to be noted that, the use of digital device depends on the planning and creativity of the teacher. The following digital resources are very useful to provide the clear teaching and understand the learning, such as

Radio and Television: The past or being stage of the digital world the radio and televisions are being used to facilitate to teachers teaching the concept through electronic sources and to learn learning more meaningful and effectively. Radio is the cheap and best analogue technology for teaching and learning. That is called educational radio, As like as the television. The educational programmes are broadcasting through radio and television.

Computer: Computer is one of the commonly used digital devices in teaching-learning process. It has a numerous applications in the field of education such as preparing digital materials, accessing internet and download the necessary data from online platforms, communication between teachers and learners. It helps the teachers to deliver the content word, multimedia / e-content method, etc., The process consists of the teaching (Input), message (Content), understand the concept by learners (Output) and feedback (Academic outcomes).

Internet: Internet means is connecting a computer, it provides the lot of information in every fields and it has numerous applications in the educational field. And also it is decentralized global network of computers. The interconnected computers have transmitted data.

- Internet helps to provide the recent information about various topics.
- Internet assists to make fast transformation the content and download the data easily among teachers, students and someone.
- It helps to share and access various learning materials.
- It helps to conduct the lesson through online teaching by teachers as like as online learning by learners.
- It helps to teachers to assess the learners performance.
- It provides unlimited message in multi forms such as text, audio, video etc.

Wikis: Wikipedia are open access digital resources for teaching and learning process. It has collaborative constructed knowledge are available for the use of teachers, learners, public, etc.

Social Media: Social media are one of the recent and effective teaching and learning tools. They help individuals maintain social relationships through social networks. Social media serves as a platform to create social networks or social relationship among people. The most popular social media are used in teaching and learning process. such as

Facebook: Facebook is a social networking website where users can post video, photos, images, comments, text, some learning and teaching materials. It helps to share new concepts and live chat, etc.

YouTube: You tube is a popular video sharing website where registered users can upload and share videos with anyone able to access the site. It consists of numerous videos for teaching and learning.

Twitter: Twitter is one of the social network media. It is an online device and micro-blogging social network channel. It helps to share the teaching and learning activities.

Telegram: Telegram is the message transfer to one electronic device to another. It is a message send by telegraph, which is also called a wire.

Mobile: Mobile phone or Smart phone is a wireless hand-held device that allows users to make calls, capture photos, send messages, download necessary data, create the word documents, pdf documents, etc.

- Mobile helps to make the video call (video conference classes for teaching learning process).
- It helps to create the zoom meet class or Google meet classes for emergency time and it helps to provide the proper and sufficient content for particular lesson.
- It assists to create the mobile learning and group discussion.
- It helps to access the teaching and learning resources.
- It helps to teachers and learners to search and download the educational contents in an internet connected mobile.

Information and Communication Technology (ICT)

- ICT is one of the digital pedagogical devices, it helps to teachers to teach their lesson easily, elaborately and effectively.
- It helps to transmit, stored data, create the document and word files and share to the exchange information.
- ICT used in classroom and integrates digital technologies to enhance learning and teaching process.
- ICT is an interactive teaching and learning platforms.
- ICT is helps to develop the personalised learning experiences among learners and effectively teaching experience among teachers.

MOOC: Massive Open Online Courses is the model for delivering lesson / content prepared by teachers and published in their open learning platforms.

- It helps to learn to free access online sources for learning a new courses.
- MOOC has numerous online courses with the computer and internet connection.
- It helps to learners to access easily and without paying.

SWAYAM (Study Webs of Active Learning for Young Aspiring Minds):

- It has three educational policy viz..access, equity and quality.
- It is one of the open access teaching and learning platform.
- It helps to self learners to get new open access in this platform.
- It helps to teachers to increase their teaching for performance and develop their technology related knowledge and to create the open access materials through online device.

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Digital Pedagogical Resources in Teaching Efficacy

Digital pedagogical resources are helps to improve the teaching competencies among teachers. Teachers mostly used in traditional teaching method in their classroom, mean while in an modern society and knowledge society to provide the technology oriented classroom for effective teaching and learning process. The effective teaching consists of the following teaching competencies, such as

- Introduction Skill
- Explanation Skill
- Questioning (Probing) Skill
- Demonstration skill
- Reinforcement Skill
- Stimulus Variation Skill
- Board Usage Skill (Smart / White Board)
- Technology Utilize Skill (Digital devices)

The above mentioned skills are competencies are very effective role in teaching process, because who have applied these all skills in their teaching that teachers are called effective and skilled teachers. Therefore the teachers utilized the digital pedagogical devices in their teaching efficacy.

Conclusion

The digital technologies are pivoted role in teaching and learning process among teachers and learners. The advancement of technologies in education has transformed the way of teaching and learning stated by Bushra F., and Shalla, S.S., (2023). Now-a-days the teaching and learning based on the digital tools or devices, they provide flexible, effective and personalised teaching experience among teachers as similar as the learning knowledge among learners. Additionally these digital pedagogical resources help to improving the quality of teaching and learning. According to O Bannon et al., (2014) evaluated that the usefulness of the digital learning resources in improving educational quality. The suggestion of this article is to promote the use of digital pedagogical resources are helps to improve the teaching efficacy among teachers to their teaching effectively.

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ANALYSIS OF THE INTEGRATED TEACHER EDUCATION PROGRAMMING

Dr. S.Karthikeyan
Principal,
Theni Kammavar Sangam College of Education, Theni

Abstract

The Integrated Teacher Education Programme (ITEP), initiated by the National Council for Teacher Education (NCTE) under the National Education Policy (NEP) 2020, aims to revolutionize teacher preparation in India. This four-year dual-major undergraduate degree offers B.A. B.Ed., B. Sc. B.Ed., and B.Com. B.Ed., equipping future teachers for the new school structure stages: Foundational, Preparatory, Middle, and Secondary (5+3+3+4). Admissions are determined through the National Common Entrance Test (NCET), covering Languages, Domain-specific subjects, a General Test, and Teaching Aptitude. Currently in its pilot phase across 42 universities, the ITEP emphasizes a futuristic, technology-integrated approach to pedagogy, foundational literacy, numeracy, and inclusive education. Its curriculum integrates education coursework with multidisciplinary studies, provides quick teacher certification, and includes practical learning through internships and field placements. Eligibility requires passing the Senior Secondary exam with at least 50% marks. The program promises numerous benefits, such as comprehensive training, practical classroom experience, and enhanced pedagogical skills, thereby increasing graduates' employability in various teaching roles.

Keywords: *ITEP, NEP, Teacher education*

Introduction

The National Council for Teacher Education (NCTE) has launched an Integrated Teacher Education Programme (ITEP), a flagship programme under the National Education Policy (NEP) 2020. This four-year dual-major undergraduate degree offers B.A. B.Ed./ B. Sc. B. Ed. and B.Com. B.Ed. to prepare teachers for the four stages of the new school structure: Foundational, Preparatory, Middle and Secondary (5+3+3+4). Admissions will be made through a National Common Entrance Test (NCET), conducted by the National Testing Agency. The test will comprise four sections: Languages, Domain-specific subjects, a General Test and Teaching Aptitude. The programme is already in pilot mode from the last academic session in 42 central and state universities across the country.

Highlights of the ITEP Program

A few key highlights of ITEP program are given below,

- A futuristic approach to prepare teachers for tomorrow, who can deal with the discerning and dynamic teaching needs of the nation
- Impart unmatched pedagogy that blends modern methods, experiential approach, and extensive use of technology
- Lay a foundation in early childhood and care education, or ECCE
- Focus on achieving foundational literacy and numeracy
- Active role in promoting inclusive education, and knowledge gaining with an Indian perspective
- The course is expected to pump in new vigor, vibes, and action into the teacher education sector

Features of ITEP

The features of **ITEP** differ from the curriculum of educational institutions. However, there are some common features of an ITEP that are followed everywhere. These include the following:

Integration of education coursework: The ITEP programme integrates subject-specific and education coursework in order to offer comprehensive training to all aspiring teachers.

Multidisciplinary curriculum: ITEP programmes include a combination of the multidisciplinary curriculum. This ensures the candidates get a broad-based education covering a wide range of topics such as child development, curriculum design, educational psychology, and evaluation.

Quick teacher certification method: ITEP courses provide quick access to teacher certificates. Since it is a dual bachelor's degree program, candidates are able to pursue their teaching as well as subject degree simultaneously. This way, they don't need to devote separate time to each certification.

Practical learning: These programmes emphasise practical learning to effectively prepare candidates for professional life. Therefore, ITEP courses provide hands-on experience through classroom activities, field placements, and internships.

Teaching methods: ITEP programmes focus on developing necessary teaching skills that equip candidates to create engaging and effective study plans throughout their professional life.

Professional development possibilities: Generally, several ITEP programmes provide opportunities for graduates to keep developing their skills and knowledge after degree completion.

Technology integration: Multiple ITEP programmes include technology in the curriculum, which assists aspiring teachers in using them as a teaching tool. Additionally, it keeps them connected to the newest educational technology developments.

ITEP Eligibility and Admission process

All the **ITEP** programmes offer comprehensive and practical training to candidates. Therefore, they equip candidates with the knowledge and skills required to become a good teacher. Additionally, candidates need to meet a few prerequisites to apply for ITEP courses. These include the following:

- Candidates must pass the Senior Secondary or +2 exam from a recognised board.
- Moreover, they must score at least 50% marks in the Senior Secondary or other equivalent examination.

Furthermore, candidates who meet the eligibility criterion for **ITEP** need to apply for its admission test conducted by NTA. Additionally, the exam paper consists of aptitude and subject-based questions.

Aspirants can also take the national Common Entrance Test or NCET, which is a national-level exam for taking admission to ITEP courses. However, certain institutions may ask for a subject-specific bachelor's degree to offer admission to ITEP programs.

ITEP Curriculum and Program Implementation

The **ITEP** curriculum and programme implementation is based on NCTE suggestions. However, certain universities and institutions are allowed to develop these programs according to their feasibility. Still, they get up to 30% flexibility to make changes to the NCTE curriculum.

Furthermore, educational institutions need to follow NCTE's suggested evaluation pattern.

Benefits of ITEP

ITEP efficiently combines undergraduate or graduate-level studies with the teacher education programme. Therefore, it offers numerous benefits to aspiring teachers. These include the following:

- It incorporates all the curriculum and activities required to achieve the standards for teacher licensing. This saves candidates time and effort that they can devote to completing separate degree and teacher education programmes.
- Teacher education programmes can provide candidates with a deeper understanding of teaching practice by merging education curriculum with classroom experience. Moreover, candidates can apply what they've learned in class to real-world circumstances and get feedback from experts.
- Furthermore, integrated programmes help develop the pedagogical skills required to become a good teacher. Among other things, they can learn about instructional practices, assessment approaches, and classroom management.
- In addition, these programmes strengthen the candidate's knowledge of the topics they will teach. This way, they gain competence in their subject matter, which allows them to support their students' learning better.
- Students who complete an integrated teacher education programme have a teaching licence, a degree in their subject field, and real-world experience dealing with students. Therefore, they have a higher chance of landing a respectable job.

Conclusion

The **ITEP** can provide a comprehensive and focused path to becoming a teacher, with an emphasis on both content knowledge and pedagogical skills. Furthermore, it educates students for a wide range of teaching positions. Therefore, they are able to pursue various teaching careers, such as working as a traditional classroom teacher, conducting alternative education programmes, etc.

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ENHANCING SCIENCE EDUCATION THROUGH AI AN ACTION RESEARCH STUDY ON THE IMPACT OF ARTIFICIAL INTELLIGENCE IN SELF-LEARNING FOR EIGHTH-GRADE STUDENTS

M. Joice Angel
PUMS, Arasanatty, Hosur Block

Abstract

This action research study investigates the efficacy of integrating artificial intelligence (AI) into science education for eighth-grade students, focusing on self-learning methods. The study explores the impact of AI-based self-learning tools on students' comprehension of scientific concepts, using the "Virus" chapter as a case study. A mixed-methods approach was employed, combining quantitative pre- and post-assessments with qualitative data collection techniques, including student surveys and interviews. Results indicate significant improvements in students' conceptual understanding and engagement levels following the intervention. The study highlights the potential of AI to revolutionize science education by providing personalized and interactive learning experiences. Limitations and implications for future research are discussed, emphasizing the responsible and ethical integration of AI in educational settings.

Introduction

Artificial intelligence (AI) has emerged as a transformative force in various domains, including education. Within science education, AI offers promising opportunities to enhance learning experiences by providing personalized and interactive learning environments. This study investigates the impact of AI in self-learning for eighth-grade students, focusing specifically on the "Virus" chapter in the science curriculum.

The integration of AI in education has gained increasing attention due to its potential to address the diverse learning needs of students and improve learning outcomes. By leveraging AI technologies, educators can create adaptive learning environments tailored to individual student preferences, pace, and proficiency levels. This personalized approach fosters deeper conceptual understanding and enhances student engagement and motivation.

Despite the growing interest in AI-driven education, there remains a need for empirical research to assess its effectiveness in improving student learning outcomes, particularly in science education. The "Virus" chapter presents an ideal case study for investigating the impact of AI-based self-learning tools as it encompasses complex scientific concepts that can benefit from interactive and immersive learning experiences.

This action research study aims to fill this gap by examining the efficacy of AI-based self-learning tools in enhancing eighth-grade students' comprehension of the "Virus" chapter. By adopting a mixed-methods approach, combining quantitative assessments with qualitative data collection techniques, the study seeks to provide comprehensive insights into the impact of AI on student learning outcomes and engagement levels.

Through this investigation, the study aims to contribute to the growing body of knowledge on AI integration in science education and inform pedagogical practices aimed at optimizing

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learning experiences for students. By exploring the potential of AI to transform science education, this research has broader implications for educational policy and practice, highlighting the importance of embracing innovative technologies to meet the evolving needs of 21st-century learners.

Review of Related Literature

The integration of artificial intelligence (AI) in education has garnered increasing attention in recent years, with researchers exploring its potential to transform teaching and learning practices. In the context of science education, AI offers unique opportunities to enhance student engagement, personalize learning experiences, and facilitate deeper conceptual understanding of complex scientific concepts.

AI-enabled educational technologies, such as intelligent tutoring systems, adaptive learning platforms, and virtual laboratories, have been shown to improve student outcomes across various subject areas. In science education, these technologies can provide students with opportunities for hands-on exploration, experimentation, and problem-solving, thereby promoting inquiry-based learning and critical thinking skills. Research studies have demonstrated the effectiveness of AI-driven interventions in improving students' mastery of scientific concepts and their ability to apply knowledge in real-world contexts. For example, adaptive learning platforms dynamically adjust content and difficulty levels based on individual student performance, allowing students to progress at their own pace and receive targeted support in areas of difficulty.

Furthermore, AI-powered simulations and virtual laboratories provide students with opportunities to conduct experiments and simulations that may be otherwise impractical or inaccessible in traditional classroom settings. These immersive learning experiences enable students to visualize abstract concepts, explore cause-and-effect relationships, and develop deeper conceptual understanding through hands-on exploration.

Despite the potential benefits of AI in science education, several challenges and considerations must be addressed to ensure its effective implementation. Access to technology and digital resources may vary among students and schools, leading to disparities in educational opportunities. Additionally, concerns related to data privacy, algorithmic bias, and ethical use of AI must be carefully considered to safeguard student rights and ensure equitable access to learning resources.

Overall, the literature highlights the transformative potential of AI in science education, offering innovative solutions to enhance teaching and learning practices. By leveraging AI technologies, educators can create dynamic and personalized learning environments that empower students to engage with scientific concepts in meaningful and authentic ways. However, continued research and collaborative efforts are needed to address challenges and maximize the benefits of AI integration in science education.

Methodology

This action research study employed a mixed-methods approach to investigate the impact of AI-based self-learning tools on Education.

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Intervention

The intervention group received a two-week instructional unit on the "Virus" chapter, incorporating AI-based self-learning tools. These tools included:

Adaptive Learning Platform: Students accessed an adaptive learning platform that provided personalized learning pathways. The platform assessed student understanding through pre-tests and dynamically adjusted the learning content and difficulty level based on individual performance. Students received targeted instruction and practice activities in areas where they showed weaknesses.

Interactive Simulations: Students engaged with interactive simulations that modeled viral replication, transmission pathways, and immune system responses. These simulations allowed students to manipulate variables and observe the consequences, fostering a deeper understanding of complex biological processes.

Educational Games: Students participated in educational games designed to reinforce key scientific concepts related to viruses. These games employed gamification elements like points, badges, and leader boards to enhance engagement and motivation while promoting knowledge retention.

The traditional classroom instruction was supplemented with these AI-based tools, allowing students to learn independently and explore topics at their own pace. The teacher facilitated the learning process by providing guidance, addressing student questions, and monitoring progress through the platform.

Data Collection

A mixed-methods approach was employed to gather comprehensive data on the impact of the intervention. Quantitative and qualitative data collection methods were used:

Pre- and Post-Assessments: Students completed a standardized science assessment focusing on viral concepts before and after the intervention. This allowed for the measurement of learning gains attributable to the use of AI-based self-learning tools.

Student Surveys: Students participated in anonymous surveys at the beginning and end of the intervention. The surveys gauged their perceptions of the AI-based learning tools, their engagement levels, and their understanding of the "Virus" chapter content.

Semi-Structured Interviews: A small group of students participated in voluntary semi-structured interviews after the intervention. The interviews explored their experiences with the AI-based tools in more depth, allowing for richer insights into their learning process and attitudes towards the technology.

Data Analysis

Quantitative data from the pre- and post-assessments were analyzed using statistical software to determine if there were significant improvements in student learning outcomes following the intervention. Qualitative data from the student surveys and interviews were analyzed thematically, identifying recurring patterns and key themes across student responses. This combined analysis provided a comprehensive understanding of the impact of AI-based self-learning tools on student learning and engagement.

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Findings

The findings of this action research study revealed several key insights into the impact of AI-based self-learning tools on eighth-grade students' comprehension of the "Virus" chapter in science education.

Improved Learning Outcomes: Quantitative analysis of pre- and post-assessment scores indicated a statistically significant improvement in students' conceptual understanding of scientific concepts related to viruses. The intervention with AI-based self-learning tools contributed to enhanced learning outcomes among participants, as evidenced by higher post-assessment scores compared to pre-assessment scores.

Increased Engagement: Observational data and qualitative insights from student surveys and interviews highlighted increased levels of engagement and motivation during AI-driven learning activities. Students expressed enthusiasm for interactive simulations, virtual laboratories, and educational games, which provided opportunities for hands-on exploration and experimentation. Survey responses revealed a positive shift in student attitudes towards the "Virus" chapter, with many reporting that they found the learning experience more interesting and enjoyable with the use of AI tools.

Personalized Learning Experiences: AI-enabled adaptive learning platforms tailored content delivery and pacing based on individual student needs, preferences, and proficiency levels. Students appreciated the personalized nature of the learning experience, which allowed them to progress at their own pace and receive targeted support in areas of difficulty. Survey responses indicated that students felt the AI tools helped them identify their learning gaps and focus on areas where they needed more practice.

Positive Student Perceptions: Qualitative analysis of student responses from surveys and interviews indicated positive perceptions towards AI-based self-learning tools. Students expressed satisfaction with the variety of learning activities offered by the AI platform, including simulations, games, and interactive quizzes. They appreciated the ability to interact with virtual environments and explore scientific concepts in a more immersive way. Interviews revealed that students felt the AI tools made learning science more engaging and helped them connect with the material on a deeper level.

Challenges and Limitations: Despite the overall positive outcomes, the study identified several challenges and limitations associated with the implementation of AI-based self-learning interventions. These included:

Technology Access Disparities: Not all students had consistent access to reliable technology and internet connectivity at home, which could potentially limit their ability to fully engage with the AI-based learning tools outside of the classroom setting.

Privacy Concerns: Some students expressed concerns about data privacy, particularly regarding how their performance data was collected and used by the AI platform. These concerns highlight the importance of transparent data collection practices and ensuring student privacy throughout the learning process.

Teacher Training and Support: The effectiveness of AI integration relies heavily on teacher training and support. While the teacher facilitated the intervention, additional training opportunities could further equip educators to leverage the full potential of AI tools and integrate them seamlessly into their teaching practices.

Discussion

The findings of this action research study contribute to the growing body of knowledge on the potential of AI in science education. The use of AI-based self-learning tools demonstrated positive impacts on student learning outcomes, engagement levels, and perceptions towards the learning experience. Students showed significant improvements in their understanding of viral concepts following the intervention, indicating the effectiveness of AI in facilitating knowledge acquisition and comprehension.

The personalized learning approach offered by AI tools catered to individual student needs and learning styles. This resulted in increased student engagement as students were able to interact with the material at their own pace and receive targeted support in areas of difficulty. Additionally, the interactive simulations and educational games fostered a more hands-on learning experience, enhancing student motivation and promoting deeper conceptual understanding.

However, the study also identified challenges that need to be addressed to maximize the benefits of AI integration in educational settings. Disparities in technology access can create barriers to equitable learning opportunities. Addressing these disparities requires collaborative efforts to ensure all students have access to the necessary resources for successful participation in AI-driven learning activities.

Furthermore, student concerns regarding data privacy necessitate transparent communication and ethical data collection practices. Educators and institutions must prioritize student privacy by implementing clear data security measures and ensuring students understand how their data is used.

Finally, ongoing professional development for teachers is crucial for successful AI integration. Providing teachers with adequate training and support equips them to effectively utilize AI tools, troubleshoot technical challenges, and ensure a smooth learning experience for students.

Recommendations

Building upon the insights gained from this action research study, the following recommendations are proposed to optimize the use of AI-based self-learning tools in science education:

Develop Equitable Access Strategies: Collaborate with policymakers, educational institutions, and technology providers to develop strategies that ensure equitable access to technology and internet connectivity for all students. This could involve initiatives such as providing loaner devices, establishing Wi-Fi hotspots in underserved communities, and integrating low-tech or offline alternatives for AI tools when necessary.

Promote Data Privacy and Security: Develop clear and transparent data collection policies that inform students and parents about how their data is collected, used, and stored. Implement robust security measures to protect student data privacy and ensure compliance with relevant data protection regulations.

Invest in Teacher Training and Professional Development: Design comprehensive professional development programs to equip teachers with the necessary skills and knowledge to effectively integrate AI tools into their science curriculum. Training should cover topics such as selecting appropriate AI tools, using data analytics to personalize instruction, and troubleshooting technical challenges.

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Foster Collaboration Between Educators and AI Developers: Encourage collaboration between educators and AI developers to ensure that AI-based learning tools are aligned with curriculum standards and address the specific needs of students. This collaboration can lead to the creation of more effective and engaging AI tools for science education.

Promote Ongoing Research and Evaluation: Conduct longitudinal studies to examine the long-term impact of AI interventions on student learning outcomes. Additionally, comparative studies should be undertaken to assess the effectiveness of AI-based learning compared to traditional methods. Research efforts should also explore the application of AI across various science disciplines to identify best practices and areas for further development.

By implementing these recommendations, we can leverage the transformative potential of AI in science education while addressing potential challenges. This will ensure that all students have access to high-quality learning experiences that prepare them with the scientific knowledge and critical thinking skills necessary to succeed in the 21st century.

Conclusion

In conclusion, this action research study provides valuable insights into the potential of AI-based self-learning tools to enhance science education for eighth-grade students. The study demonstrates significant improvements in student learning outcomes, increased engagement, and positive student perceptions towards the learning experience. By fostering a personalized and interactive learning environment, AI empowers students to become active participants in their own learning journey.

However, maximizing the benefits of AI integration requires a multifaceted approach. Addressing technology access disparities, prioritizing student data privacy, and investing in teacher training are crucial steps towards ensuring equitable and effective AI integration in science education. By implementing the proposed recommendations and fostering ongoing research and collaboration, we can harness the power of AI to create a future where all students have the opportunity to thrive as scientifically literate and engaged learners. This future holds immense potential for fostering innovation, problem-solving skills, and a deeper understanding of the world around us.

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RESILIENCE AMONG B.ED. STUDENTS

H.D. Srinivasamurthy
Research Scholar, Dept. of Studies in Education
Vijayanagara Sri Krishnadevaraya University
Ballari-583015, Karnataka, India

Prof. Saheb Ali H Niragudi
Dean & HOD of Education, Dept. of Studies in Education
Vijayanagara Sri Krishnadevaraya University
Ballari-583015, Karnataka, India

Abstract

Teachers do selfless service that shapes the future of students, the future of citizens and ultimately the future of the country. So, only effective teacher education program can produce good teachers. Teacher education is based on policies and procedures designed to equip future teachers with the knowledge, attitudes, behaviors and skills needed to perform their tasks effectively in the classroom, school and wider community. Resilience is very important for B.Ed. students in becoming teachers. The present study was undertaken to investigate the find out the resilience among B.Ed. students. Survey method was used for the present study. The researcher constructed a five-point scale to measure the level of resilience among B.Ed. students studying in Bangalore. Purposive sampling technique was used to select a sample of 111 B.Ed. students. The data was statistically analyzed and interpreted.

Keywords: *Teachers, Resilience, B.Ed. Students etc.*

Introduction

Teachers are considered as 'the pillars of society' as they are the ones who train students of all professions. Teaching, therefore, is one of the most complex and challenging professions in the world. It by nature has the pressures of being a service-providing field while at the same time involving the intellectual, emotional and social well-being of its benefactors. The influence of a teacher impacts generations. Hence, it is important for the teacher to not just know 'what to teach' and 'how to teach' but is equally important to know ways to cope with the adversities and challenges in the teaching learning process and the learning environment at large.

For years there has been an emphasis on understanding the learner's psychology. There is a need for us to change our focus towards understanding the teacher's psychology which definitely has a direct impact on the learner. Teachers carry their own emotions, feelings and values to the class and so it makes it important to focus on the mental and physical well-being of the teachers and their level of resilience to help translate the same to the students they teach. Right from our teacher training programmes, the focus lies on nurturing the pedagogical skills of the teacher and very little or no importance is given to nurture teachers to be individuals that are mentally strong. We often fail to prepare our teachers for the challenges in the real life situation, which leads to early attrition of teachers.

Resilience

Resilience is the ability to bounce back from a change or disaster that was unanticipated. It is a balance between the stress that the individual has to undergo versus the individual's ability to cope with that stress. Resilience therefore can be defined as a complex construct which takes

into the consideration the individual's environment as well as certain inherent characteristics that one possesses.

Resilience is a concept that involves a wide range of components. The complexity is such that it involves the individual capabilities, the various strategies that can help overcome challenges as well as certain positive outcomes like a sense of commitment and well-being. The challenges that a teacher encounters can be of various degree like an increased pressure of accountability, lack of proper guidance and mentorship or catering to the changing needs of the diverse population of students that the teacher encounters.

Need and Importance of the Study

Over the last decade teacher resilience has emerged as an important field of research, particularly in countries where the teaching profession has experienced high rates of attrition. As such, resilience helps us to maintain our wellbeing in difficult circumstances. Schools and classrooms can be demanding environments, partly because not every student is in the classroom ready to learn and partly because successful teaching and learning require high levels of cognitive, social and emotional investment. Resilience can help teachers respond effectively to this and the challenges they may encounter.

The COVID-19 pandemic has put the teachers under a lot of stress in terms of adapting to new technology, moving to online mode of teaching, taking classes without understanding whether the children were actually present online, inability to assess student outcomes efficiently. These and many more challenges have been faced by the teaching fraternity. We fail to understand that first and foremost, the teacher is a human being, they have their wishes and needs, strengths and weaknesses and are constantly put under pressure to be that ideal teacher. With all these challenges in place, it is important for us to understand teacher wellbeing in terms of their quality of life as a crucial psychological construct.

The Indian system of education is taking a new twist with the introduction of the NEP 2020. Bearing this in mind, it is important for us to understand the various changes that this will bring to the teaching fraternity. The challenges that lie ahead are far more than just managing a classroom of students. With the incorporation of what is proposed in the NEP, teacher competency mapping is key to ensure that teachers continue in this career and have a professional growth. In the years that have passed by, little or no importance was given to this. The continuous professional development of teachers has always been a neglected space. To top it all, teaching in our country has never been an aspirational profession. With all these challenges that lie ahead, only resilient teachers will be able to make it through these new paths.

Hence, the present study was undertaken to find out the level of resilience among B.Ed. students who are set to be the future teachers.

Objectives of the Study

The following objectives were formulated for the present study:

1. To construct and content validate resilience scale for B.Ed. Students
2. To assess the level of resilience among B.Ed. Students based on their demographic variables.

Variables

Demographical Variables

- Gender [Male and Female]
- Subjects Taught [Science, Arts and Language]
- Place of Residence (Urban and Rural)

Dependent Variable

Resilience among B.Ed. Students

Method of the Study

The research methodology employed for the current study is the descriptive method, i.e., survey method.

Sampling

For the present study a sample of 111 B.Ed. students were selected through purposive sampling technique.

Tool

The Resilience Scale for B.Ed. students was constructed by the researcher and content validated by the experts. The scale comprises 20 statements calling for varying degrees of responses ranging from Strongly Agree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA). There are 15 positive statements (1-3, 5-6, 8-13, 15, 18-20). The weightage of marks for the positive statements was given as per the response i.e., 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree and 5 for Strongly Agree. There are 5 negative statements (4, 7, 14, 16 & 17). The weightage of marks for the negative statements was given according to the response i.e., 5 for Strongly Disagree, 4 for Disagree, 3 for Neutral, 2 for Agree and 1 for Strongly Agree. The maximum score that can be obtained by a respondent would be 100.

Collection of Data

The data was collected through the administration of the Resilience Scale among 111 B.Ed. students in Bangalore. They were informed about the purpose of the study and their consent was taken before administering the tool. The researcher assured the teachers of the obscurity of the study. In addition, within the tool, the entry for name was given as optional. The responses of the student teachers were collected, scored and tabulated.

Data Analysis and Interpretations

Ho1: There is no significant difference in the level resilience among male and female pre-service teachers.

Table 1: Resilience among Male And Female B.Ed StudentS

Gender	N	Mean	Standard Deviation	t-value	Level of Significance at 0.05 Level
Female	90	79.333	6.814		
Male	21	75.552	11.209	1.819	**NS

**NS – Not Significant at 0.05 levels

From the above table, it can be seen that, the obtained 't' value 1.819 is less than the table value 1.96 at 0-.05 Level of Significance. So, the null hypothesis is accepted. It means that there is no significant difference in the level of resilience between male and female B.Ed. students. This could correlate to the fact that the stressors and other parameters are almost the same irrespective of the gender. With the change in times, gender stereotypes are slowly dwindling. This being the case, there is no defined work that is generally done by the male or by the female when it comes to daily house-hold chores, the other work that they carry out. Since the gender disparity is on the decline, there seems to be no significant difference in the level of resilience based on gender.

Ho2: There is no significant difference in the level of resilience between arts and science pre-service teachers.

Table 2: Resilience between Arts and Science B.Ed. Students

Pedagogy Subject	N	Mean	Standard Deviation	t-value	Level of Significance at 0.05 Level
Arts	60	72.243	13.436		
Science	51	76.333	9.651	1.551	**NS

**NS–Not Significant at 0.05 level

From the above table, it can be seen that, the obtained 't' value 1.551 is less than the table value 1.96 at 0-.05 Level of Significance. So, the null hypothesis is accepted. It means that there is no significant difference in the level of resilience between arts and science student teachers.

Ho3: There is no significant difference in the level of resilience between the urban and rural B.Ed. students.

Table 3: Resilience between Urban and Rural B.Ed. Students

Locality	N	Mean	Standard Deviation	t-value	Level of Significance at 0.05 Level
Urban	77	72.243	13.436		
Rural	34	78.656	8.123	2.434	*S

*S–Significant at 0.05 level

From the above table and graph, it can be seen that, the obtained 't' value 2.434 is greater than the table value 1.96 at 0.05 Level of Significance. So, the null hypothesis is rejected, and alternative hypothesis is accepted. This means that there is a significant difference in the level of resilience between urban and rural B.Ed. students. The mean is found to be in favour of rural students. It implies that rural B.Ed. students have more resilience than urban students. This can be attributed to the fact that rural life in the current scenario is undergoing severe demographic

changes owing to the rapid urbanization. And also from the childhood stage, rural people are exposed to realities of the world, work etc. which makes them more resilient.

Educational Implications

Following are the educational implications of the current study –

1. Teacher training institutes should take the time to assess and understand the self-perceptions of pre-service teachers on the importance of resilience.
2. Resilience building should be a part of B.Ed. courses for pre-service teachers.
3. An emotional wellness programme can be incorporated by the B.Ed. Colleges as part of their professional development sessions to ensure that the emotional well-being of the B.Ed. students.
4. It is recommended that B.Ed. course create a forum wherein sharing of ideas, success, failures and fears become a part of the college culture.
5. B.Ed. students should engage in self-reflection and mindfulness training which will help them cope with their daily struggles and enhance resilience.

DE-Limitations

The present study has following de-limitations:

1. The study is confined to 111 B.Ed. Students.
2. The study is confined to few B.Ed. colleges located in Bangalore.
3. The study is confined to measure the resilience in students studying in B.Ed. colleges.
4. The study is confined to the measure the resilience with respect to gender, subject and locality of the sample.
5. The tool used for the study is just content validated by experts.

Suggestions for Further Research

Following are the suggestions for further research:

1. The study can be extended to a larger sample of 500-600 B.Ed. students.
2. The study can be extended to analyze resilience B.Ed. students in Karnataka.
3. The study can be extended to find out the influence of other variables such as marital status, SES, cognitive intelligence, emotional intelligence etc. on resilience
4. The study can be extended to B.Ed. students studying in Government, Aided and Private colleges.

Conclusion

In the present study, the researcher has found that gender and subject have no influence on the level of resilience among B.Ed. students. However, rural B.Ed. students found to have better level of resilience than urban students. The present study calls for the more initiatives to build the resilience in B.Ed. students.

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EFFECTIVENESS OF ACTIVE THINKING MATH LAB TO ENSURE CONCEPTUAL UNDERSTANDING FOR MIDDLE SCHOOL STUDENTS

J.V.K. Jeeva Kharunya
MA Edu. Student, IGNOU
2020 Teach For India Fellow

Abstract

Our conventional math teaching methods failed to bring in conceptual clarity and understanding of numbers and shapes among students. For example, students could not visualize the transformed forms of square or a hexagon effectively. Using active thinking math lab-based, a year-long intervention, geometry basics were explored by middle school students. Our study proved the effectiveness of explorative math lab approach. Students gained expertise through peer-to-peer teaching, group interactions and collaborations.

Keywords *Math Lab, active thinking, geometry, middle school, concept, Pedagogy*
Subthemes: Innovative Teaching Methods, Curriculum Innovation, Peer to Peer Learning, Gamification

"The art of teaching is the art of assisting the Discovery." -Mark van Doren

Introduction

"I hate math", "I am not a math person", "Math is a daring and boring subject" and "Everyone can't do Math" are the most prevailing views about Math among kids, parents, teachers and society in general. Many of the High school students choose art courses, just to avoid learning Mathematics. Among very many reasons for Math anxiety, the major one is the abstract way of teaching math concepts. Math is often perceived as memorising a set of facts or formulas which has to be replicated while solving the problem in the same way done by the tutor. Students feel there is no room for creativity when comes to Math learning and it is just a string of numbers and alphabets together which make no sense to them.

These days, increasingly many educational Institutions are setting up Mathematics laboratory. But unfortunately, Math activities conducted were again demonstrations for which student has to share their observations or student constructions with pre-informed steps to follow. Student participation in these activities are passive, less contextual to relate and are mostly teacher centred.

This study was aimed to investigate the conceptual misconceptions in Middle school students through a year-long weekly Active thinking Mathematics lab intervention. In Math lab, Math concepts were introduced in an explorative constructivist approach with modified manipulatives used by the facilitator. Students were engaged with various topics like number sense & operations, integers, fractions, geometry and algebra. Intervention in Geometry alone is discussed in detail here as it's within the scope of this paper. The results of the study will benefit the textbook committee and Math Teachers in providing the necessary changes and effective means of strengthening the basic concepts of geometry.

Background

Geometry Standards and Reality

Our National Curriculum frame work 2023 states that one of the Curricular Goals & Competencies for Middle math curricula as students should be able to

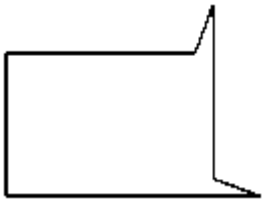
C3.1- Describe, classify, and understand relationships among different types of two and three-dimensional shapes using their defining properties/attributes

A similar competency has been defined in Common core standards created by NCTM, USA wherein they describe one of the essential understandings of geometry as

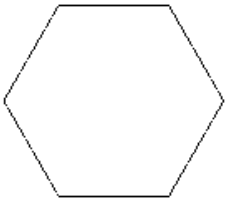
4a. *Naming is not just about nomenclature: it draws attention to properties and objects of geometric interest.*

The following is an extract from Boaler, Jo, 2015 – Mathematical Mindsets: unleashing students' potential through creative math, inspiring messages, and innovative teaching.

Students were asked to name the following shape:



Most were unable to. The shape *is* a hexagon (a six-sided polygon), but hexagons are almost always shown in this way:



This does not illuminate the full concept of a hexagon well.
(Boaler, Jo. 2015) [1]

The example stated above is the reality in most of our classrooms. But why should we learn Geometry? "Geometry organizes and clarifies our visual experiences and provides visual models of mathematical concepts" (Burger, William F. 1988) [2] is the underlying factor for decontextualising the applications of Geometrical theorems and calculus in higher classes. This can be further supported by van Hiele model of Geometric thinking [4] as

Level 0: Visualisation

Students can recognize and name figures in a gestalt manner. Students do not yet understand properties as defining characteristics. They are influenced by nonrelevant attributes such as orientation. For example, some students would not recognize a triangle that "pointed down," or that a square is also a rectangle.

…

Level 2: Informal Deduction

Construction of relationships between classes of figures is possible. For example, rectangles are parallelograms with a right angle. Since squares meet these criteria, all squares must be rectangles and parallelograms. At this stage formal proofs can be followed, but probably not constructed.

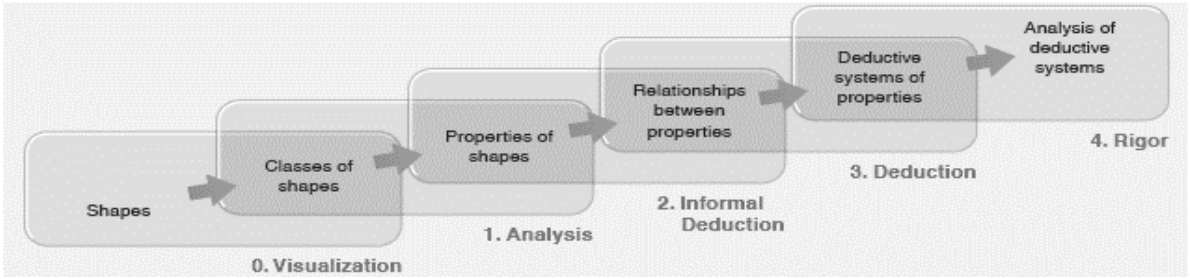


Fig1 Van Hiele's Geometric thinking progression from "Van de wale, Teaching developmentally" [4]

Attainment of Level 2 of Geometrical thinking is often expected in Upper primary classes. Contrastingly it is observed that even students in High school identify and classify shapes mostly, based on their appearance. Their knowledge about shapes were limited to simplified standard examples used by teachers and those stated in the textbook. Hence Geometrical thinking and reasoning are of minimal levels in students, leading to memorising theorems and proofs.

Active thinking math learning

The Active learning was defined by Bonwell and Eison as "anything that involves students in doing things and thinking about the things they are doing" [3]. The Active Thinking Classroom is an approach to teaching that prioritizes the development of students' critical thinking skills. In this type of classroom, the teacher acts as a facilitator rather than a traditional lecturer. Students are encouraged to actively engage with the material and collaborate with their peers.

Methodology

Participants

Around 280 students of grades 6 to 8 of the same school participated in the study. The school was following ICSE curriculum and it was located in a semi urban setup with students from a mixed economic group.

Instruments

Students were asked to complete an ***offline paper-based*** baseline assessment (Before Activity) at the beginning of the academic year. The questions ranged from topics including number sense & operations, integers, fractions, geometry and algebra.

Questions related to geometry

1. All squares are also rectangles (True/False)
2. Draw a hexagon

The same set of questions were included in the end line assessment (After Activity) after a year-long weekly Math lab class interventions. Both the assessments were conducted with supervision and without any time barrier. Students were given choice to skip a question if they don't know answers for it.

Students took around 20 minutes to complete all the Math content-based questions.

Activities through Active thinking math lab

At mathematics lab, low floor high ceiling exploration tasks, Design challenges and Math talks were conducted. Gamification of drill and practice questions were also administered. The norms of the math lab include

- Enhanced Conceptual understanding is more important than Speed of solving problems
- Math can be done in many ways: the process of getting the answer is important than sharing the correct answer
- Questions, Discussions and justifications deepen our understanding
- The how and why of the process is essential
- Treat each other with mutual respect and compassion

Making shapes using closed rope is one of the activities related to geometry was conducted which was inspired from you cubed task [5]

The students have to make a shape without using any geometric construction materials with a rope of 3 meters tied at one end to make it as a loop. Once they have made the shape, they have to convince all the team members and the facilitator who is a sceptic by sharing their justification. Students were asked to make an equilateral triangle, square followed by a rectangle and then a hexagon. Large group discussions were held to unlearn and redefine the understanding of the classification and nomenclature behind the 2-D shapes.

Fig 2.1 & 2.2 Students making a square and justifying their approach to a sceptic
(Image Courtesy: NAS ICSE - Ramnad)

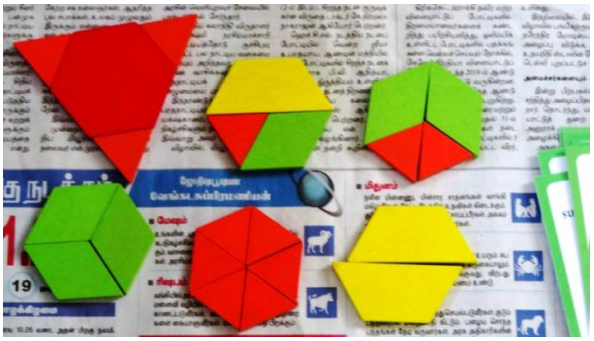


Fig 3.1 Students creating different shapes using pattern blocks through a game
Fig 3.2 Hexagons created by kids by composing varied shapes in different ways

Analysis

Students' assessment was evaluated, responses were grouped and tabulated. Interpreted data was represented using tables, pie chart and bar graphs. Chi- square test was conducted to justify that the geometrical thinking levels were unmodified with usual curricula activities and also to show the performance impact before and after the making shapes activity.

Findings

Students' response for the question "Squares are also rectangles. (True/False)" before and after the Making shapes activity is tabulated in table 1

Table 1 – Student's response for classifying square as rectangle

	Before activity		**After** Activity	
	True (Correct response)	*False*	*True (Correct response)*	*False*
Grade 6	5	87	74	15
Grade 7	2	100	79	33
Grade 8	4	83	78	14
Total	11	270	231	62

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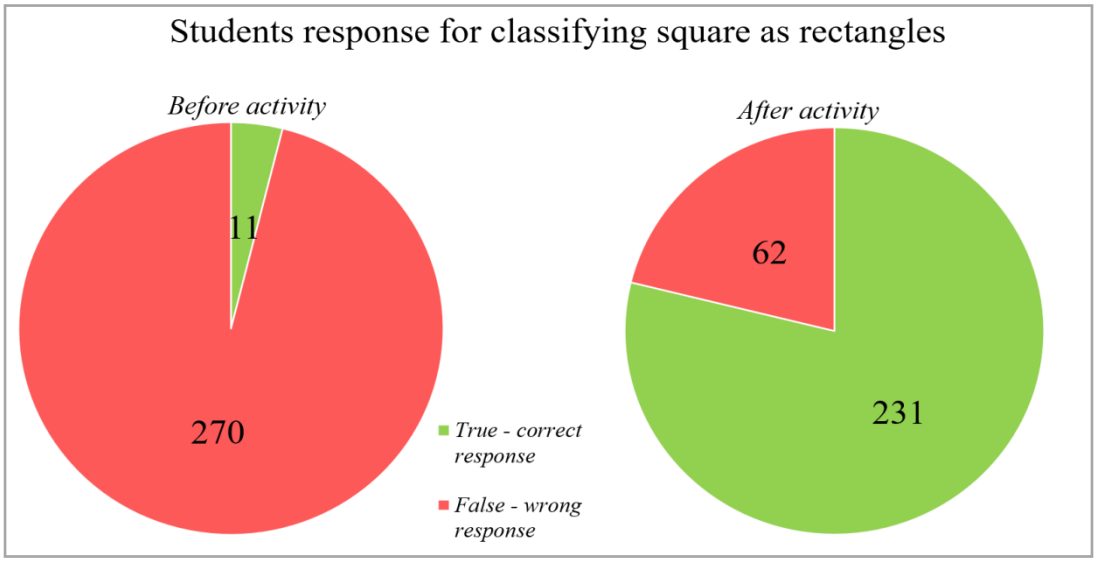

Fig 4.1

Through math lab intervention after conducting geometric exploration task, these are the changes observed in their End line assessment

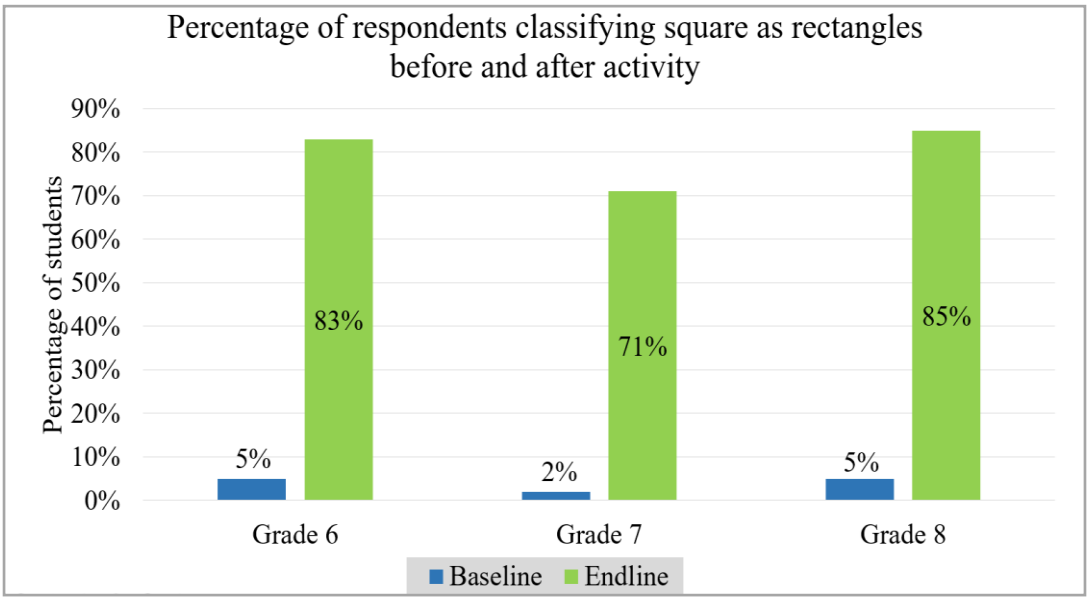

Fig 4.2

Different forms of hexagons drawn by students before and after the making shapes activity is tabulated in table 2

Table 2 – Student's different example drawings for hexagon

Forms of hexagon drawn by students			
			Total
Before activity (Baseline)	Regular (137)	Parallel Base	113
		Different base	24
	Non-Example (In correct)		144
After activity (End-line)	Regular (88)	Parallel Base	53
		Different base	35
	Varied (137)	irregular	94
		Decomposed	43
	Non-Example (In correct)		68

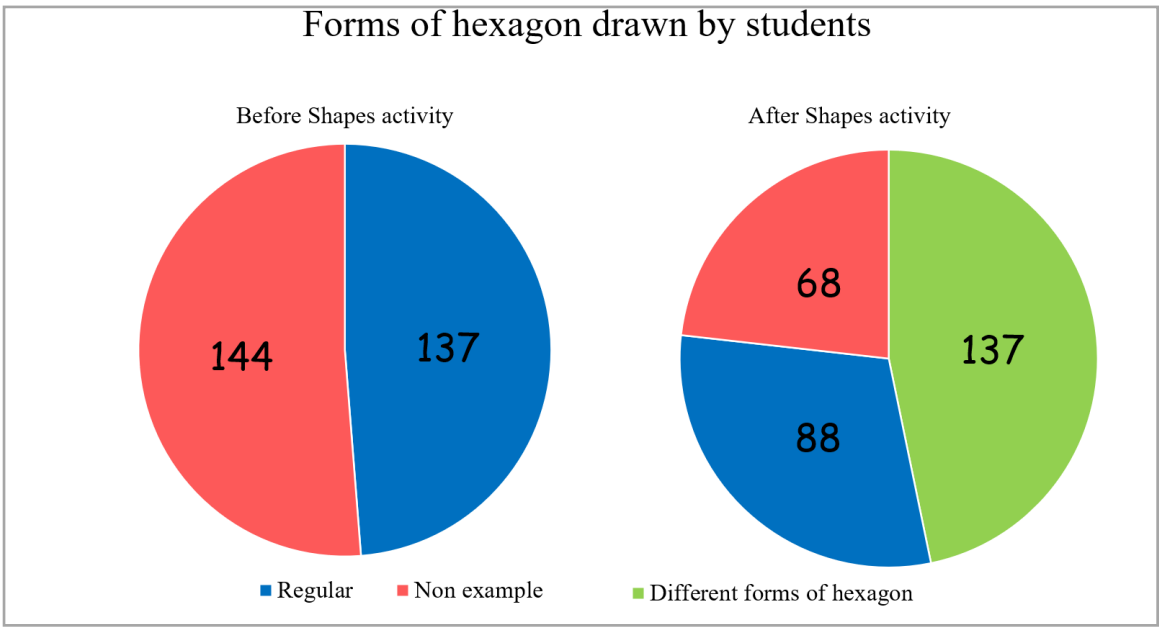

Fig 5

Student's examples for hexagon after math lab intervention

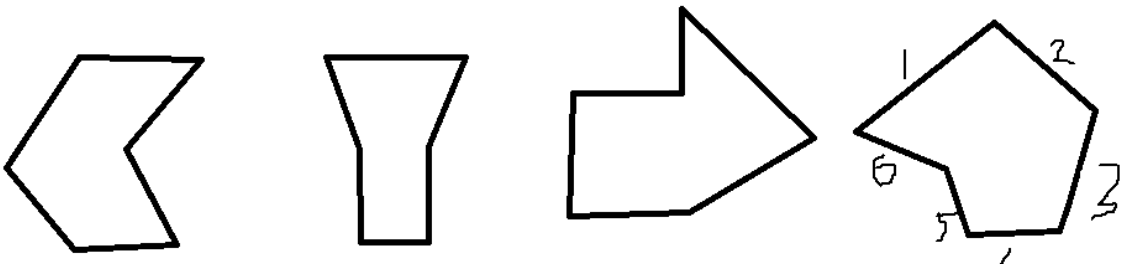

Fig 5.1

Chi square test for Hypothesis 1

H_0: ***There is no significant difference between the student's understanding in geometry across grades (6 – 8) with the existing regular curricular activities***

Table 3 – chi square contingency table

No. of students responding wrong answers across grades	**Q1 (not classifying square as rectangle)**	**Q2 (wrong examples for Hexagon)**	***Total respondents grade wise***
Grade 6	87	51	*138*
Grade 7	100	39	*139*
Grade 8	83	54	*137*
Total respondents' question-wise	*270*	*144*	**414**

$\chi^2\ (chi - sqaure) = 4.3572$ with *df = 2*

p = 9.21 at 0.01 and 5.99 at 0.05, Hence p is significant and H_0 *is accepted*

Chi square test for Hypothesis 2

H_0: ***There is no significant difference between the student's understanding before and after the Math lab activities***

Table 4 – chi square contingency table

No. of students responding wrong answers before & after the activity	**Q1 (not classifying square as rectangle)**	**Q2 (wrong examples for Hexagon)**	***Total respondents w.r.t time of intervention***
Baseline – Before activity	270	144	*414*
End line – After activity	62	68	*130*
Total respondents' question-wise	*332*	*212*	**544**

$\chi^2\ (chi - sqaure) = 12.777$ with *df = 1*

p = 6.64 at 0.01 and 3.84 at 0.05, Hence p is not significant and H_0 *is rejected*

Discussions

Results of the chi-square test performed on hypothesis 1 shows that though many evolving Geometrical concepts were introduced progressively through existing curricular activities from grade 6 to 8, students reasoning level according to Van Hiele's model (Fig 1) remains stagnant at level 0 or 1 with limited proficiency based on appearance. Thus, the geometric thinking across the grades is not improving with usual curriculum interventions.

In the beginning of the academic year, it was seen that students saw squares and rectangles as two irrelevant figures. Though squares have right angle at all the corners and diagonals bisecting each other, students fail to see the necessary and sufficient condition for a rectangle to have opposite sides of equal length from squares having all the four equal sides.

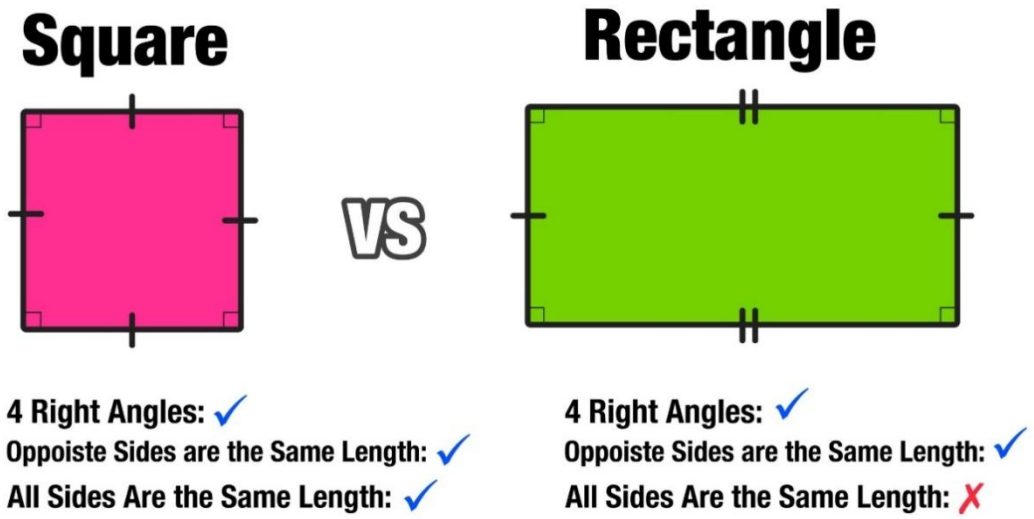

Fig 6, Image courtesy: https://www.mashupmath.com/blog/is-a-square-a-rectangle

An average of 79.6% students across sections have shown shift in their reasoning ability after the math lab intervention activities, to classify squares are also rectangles.

In the beginning of the academic year, it was also observed that students have perceived regular hexagon as only hexagon and not a figure which is a 6- sided polygon. Majority of the regular hexagon examples had base parallel to base of the paper by just replicating the standard simple example shared by the teacher and in the text book. Around 8% of the kids changed the orientation of the hexagon. 51% of the students shared non examples (In correct) for hexagon wherein 16 of them confused it with pentagon, 50 students with octagon and 78 students opted as they don't know.

After the math lab intervention, students sharing non examples (In correct) have reduced from 51% to 23%. We have observed various 6 - sided polygon other than the regular hexagon was shared by 94 students and other 43 students shared how hexagon can be composed, showing the relationship between polygons which together forms 47% of the total students.

Results of the chi- square test performed on hypothesis 2 proved that the math lab activity with modified manipulatives have made significant difference in the geometric understanding of the 6^{th} to 8^{th} grade students

The main take-aways from the study for future practices include

- Explorative constructivist approach to introduce Math concepts, ensures better conceptual understanding
- Usual manipulatives (models of different shapes, observatory demonstrations) cater only to the initial levels geometric reasoning: hence with grades progressing, manipulatives used should be of the evolving skills involving higher order thinking
- It is very important for teachers to state non examples (in correct as well as non-standard) and create an environment for Math discourse for students to share their own what, how and why with justifications
- Creating a positive, joyful and safe space for learning

Ideally in all the Math classrooms irrespective of the grades and topics, students should be learning by doing, approach math visually, creatively and contextually. Students has to be active thinkers who could make sense of what they are learning. For Teachers, to adapt to a new pedagogy with the existing assessment and evaluation patterns would be cumbersome and unrealistic. Hence a steady gradual constructivist explorative approach of teaching math using Math lab as a tool can be adopted for a wider, deeper and sustainable impact.

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- Teach For India (TFI) for empowering individuals with a vision to reimagine an excellent education for all and coaching fellows like me to adapt student centered teacher practices
- Last but not least, my acknowledgement is for my family members and friends who are always supporting in my quest for learning

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PSYCHOLOGICAL, SOCIOLOGICAL AND PHILOSOPHICAL PERSPECTIVES IN INNOVATIVE TEACHING

Dr. N. Azhagu Ganeshwari
Assistant Professor of Physical Science Education
Thiagarajar College of Preceptors (Aided), Madurai

Abstract

In today's world of rapid change, successful learning experiences that cater to the different requirements of students require innovative teaching methods. The amalgamation of philosophical, sociological, and psychological viewpoints offers a comprehensive structure for formulating and executing pedagogical strategies that tackle the ethical, social, and cognitive aspects of education. The integration of these viewpoints is demonstrated by methods like project-based learning, flipped classrooms, and culturally sensitive pedagogy, which blend psychological concepts, sociological issues, and philosophical underpinnings.

Keywords: *Psychological perspectives, Sociological perspectives, Philosophical perspectives and innovative teaching methods*

Importance of psychological, sociological and philosophical perspectives in innovative teaching

Ultimately, embracing psychological, sociological, and philosophical perspectives is crucial for designing innovative teaching methods that holistically address the complex needs of learners in the 21st century.

Psychological Perspective

Creating effective teaching tactics requires an understanding of how students learn, process information, and remember it. Personalized and interesting learning experiences can be created by using psychological theories and studies on individual differences, motivation, cognitive development, and learning styles. Better comprehension and retention of material can be achieved by implementing educational psychology concepts like scaffolding, formative evaluation, and active learning.

Sociological Perspective

Sociological viewpoints provide light on the cultural, social, and environmental elements that affect learning because education is a social process. Social interactions, group dynamics, and power relations are all covered by sociological theories, which can be applied to build inclusive and fair learning environments. Teaching strategies that cater to a range of needs and advance social justice can be informed by an understanding of how socioeconomic position, cultural origins, and community surroundings affect students' educational experiences through schooling.

Philosophical Perspective

The aims and objectives of education are shaped by philosophical viewpoints regarding the nature of knowledge, truth, and ethics. Philosophical traditions that provide frameworks for understanding teaching and learning processes include constructivism, pragmatism, and critical theory. Well-rounded individuals can be produced through innovative teaching approaches that are guided by ethical considerations, such as developing moral reasoning, cultivating democratic principles, and encouraging critical thinking.

Psychological perspectives in innovative teaching methods

Traditional teaching approaches are facing more and more challenges in today's quickly changing educational environment to keep up with the different needs and learning styles of pupils. Because of this, educators are investigating cutting-edge methods of instruction that not only successfully transfer knowledge but also encourage creativity, critical thinking, and problem-solving abilities. These cutting-edge techniques can significantly affect students' motivation, engagement, and general academic achievement from a psychological standpoint.
Problem-based learning (PBL) is one such cutting-edge strategy that encourages students to collaborate to develop solutions to real-world scenarios or problems. Students gain a deeper comprehension of the material by actively applying what they already know to new circumstances. PBL is consistent with constructivism's psychological tenets, which hold that people build their own conceptions of reality via experience and introspection.

Gamification is another cutting-edge approach that combines game features like leader boards, badges, and points with learning. This method makes use of the psychological concepts of reward systems, competitiveness, and motivation to engage students and enhance the fun and dynamic nature of learning. Gamification has the potential to enhance motivation, engagement, and retention of material by capitalizing on students' innate desire for play and competition.

Flipped classrooms, where students learn new content outside of class (e.g., through video lectures) and then engage in hands-on activities and discussions during class time, also hold psychological promise. This approach aligns with theories of active learning, which suggest that students learn best when they are actively involved in the learning process rather than passively receiving information.

Psychologically, innovative teaching methods like PBL, gamification, and flipped classrooms can foster a growth mindset in students. By emphasizing effort, perseverance, and the ability to learn from mistakes, these approaches can help students develop a resilient and adaptable mindset, which is crucial for success in an ever-changing world. Moreover, these innovative methods often incorporate elements of collaborative learning, which aligns with the psychological principles of social constructivism. By working together, students can learn from each other's perspectives, challenge their own assumptions, and develop critical thinking and communication skills.

While innovative teaching methods may require more preparation and resources initially, their potential psychological benefits for student learning and development are significant. By fostering active engagement, critical thinking, and a growth mindset, these approaches can better prepare students for the challenges and opportunities of the 21st century.

Sociological perspectives in innovative teaching

Education plays a pivotal role in shaping society, and the teaching methods employed in classrooms can have far-reaching sociological implications. As we move into an increasingly complex and interconnected world, traditional teaching approaches are being challenged to adapt to the diverse needs and backgrounds of students. Innovative teaching methods, which emphasize active learning, collaboration, and real-world applications, offer a sociological perspective that can better prepare students for the demands of modern society.

One such innovative approach is project-based learning (PBL), which involves students working collaboratively on real-world projects or challenges. From a sociological standpoint, PBL fosters the development of essential skills for navigating a diverse and globalized society, such as teamwork, communication, and cultural awareness. By working together on authentic projects, students learn to appreciate different perspectives, negotiate conflicts, and develop empathy – skills that are crucial for building inclusive and cohesive communities.

Another innovative method, known as culturally responsive teaching, acknowledges and incorporates the diverse cultural backgrounds and experiences of students into the learning process. This approach recognizes that students' identities and lived experiences shape their understanding of the world and their engagement with educational content. By embracing and validating students' cultural backgrounds, culturally responsive teaching can foster a sense of belonging and empowerment, ultimately promoting equitable learning opportunities for all students.

Sociologically, innovative teaching methods like PBL and culturally responsive teaching can challenge traditional power dynamics in the classroom. By positioning students as active participants in the learning process, these approaches decentralize the authority of the teacher and encourage students to take ownership of their learning. This shift in power dynamics can have implications for the broader society, as students learn to question assumptions, think critically, and advocate for their beliefs and values.

Furthermore, innovative teaching methods often incorporate technology and digital tools, which can bridge the digital divide and provide equitable access to educational resources. By leveraging technology, students from diverse socioeconomic backgrounds can access learning materials, collaborate with peers, and develop essential digital literacy skills needed for success in the modern workforce. While implementing innovative teaching methods may require overcoming institutional barriers and challenging deeply rooted educational practices, the sociological benefits are significant. By fostering collaboration, cultural awareness, critical thinking, and equitable access to education, these approaches can better prepare students to navigate the complexities of an increasingly diverse and interconnected society.

Philosophical perspectives in innovative teaching

The pursuit of knowledge and fostering human growth have long been at the heart of philosophical inquiry. As such, the methods and approaches employed in education have profound philosophical implications. Traditional teaching methods, which often prioritize rote memorization and passive knowledge transfer, have faced criticism for failing to cultivate critical thinking, creativity, and a deeper understanding of the world. In contrast, innovative teaching methods offer a philosophical perspective that aligns with the ideals of holistic human development and the pursuit of wisdom.

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One such innovative approach is inquiry-based learning, which encourages students to ask questions, explore ideas, and actively construct their own understanding of the subject matter. From a philosophical standpoint, this approach resonates with the Socratic tradition of questioning and dialogue as a means of arriving at truth. By engaging in inquiry and intellectual discourse, students develop the skills of rational inquiry, critical analysis, and the ability to articulate and defend their ideas – essential pillars of philosophical thought.

Another innovative method is contemplative pedagogy, which incorporates mindfulness practices, such as meditation and reflective writing, into the learning process. Philosophically, this approach aligns with the ancient traditions of Eastern philosophies that emphasize introspection, self-awareness, and the cultivation of inner peace and clarity. By encouraging students to be present, mindful, and reflective, contemplative pedagogy can foster a deeper connection to the learning material and a more holistic understanding of oneself and the world. Experiential learning, which immerses students in real-world experiences and hands-on activities, also offers a philosophical lens. This approach resonates with the philosophical tradition of pragmatism, which emphasizes the practical application of knowledge and the importance of learning through experience. By engaging in authentic experiences, students can develop problem-solving skills, critical thinking, and a deeper appreciation for the complexity and interconnectedness of the world around them.

Philosophically, innovative teaching methods challenge the traditional view of education as a mere transmission of knowledge. Instead, they embrace a more holistic and transformative perspective, where education is seen as a journey of self-discovery, personal growth, and the cultivation of wisdom. By fostering critical thinking, self-awareness, and a deep engagement with the world, these approaches align with the philosophical ideals of human flourishing and the pursuit of a meaningful and examined life.

While implementing innovative teaching methods may require a philosophical shift in educational paradigms and a re-evaluation of long-held beliefs and practices, the potential rewards are profound. By aligning with philosophical principles of inquiry, mindfulness, and experiential learning, these approaches can cultivate not only knowledgeable individuals but also thoughtful, reflective, and wise human beings – a fundamental aspiration of philosophical thought throughout the ages.

Conclusion

By integrating these perspectives, innovative teaching methods can be developed that address the cognitive, social, and ethical dimensions of learning. For example, project-based learning combines psychological principles of active engagement and social learning with sociological considerations of collaborative problem-solving and philosophical emphasis on real-world application and critical thinking. Additionally, these perspectives can inform the use of technology in education, the design of inclusive and culturally responsive curricula, and the development of assessment methods that align with educational goals and values. Ultimately, the synthesis of psychological, sociological, and philosophical perspectives can lead to holistic and transformative teaching methods that nurture intellectual growth, foster social-emotional development, and cultivate ethical and responsible citizens.

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NAVIGATING THE 21ST CENTURY: THE IMPACT OF LIFE SKILLS EDUCATION ON YOUTH DEVELOPMENT

K. Monica Devi
Student Teacher, Thiagarajar College of Preceptors

Abstract

For young people, the twenty-first century offers a quickly changing world full of potential and difficulties. It is difficult for traditional educational institutions, which frequently emphasise memorization, to effectively educate students for this fast-paced society. The importance of life skills education in providing young people with the skills they need to deal with the challenges of the twenty-first century is examined in this article. This study makes the case for the inclusion of life skills education programmes in regular classrooms in order to build resilient and well-rounded youth. It does this by looking at the fundamental elements of life skills education and how they affect important developmental domains like resilience and self-esteem.

Keywords: *Life skills education, Youth development, 21st century skills, Self-esteem, Resilience*

Introduction

Globalisation, a constant flow of knowledge, and fast technical breakthroughs are the hallmarks of the twenty-first century. Even though these advances bring a wealth of opportunity, young people transitioning into adulthood also face particular problems. The conventional educational paradigm, which frequently emphasises the acquisition of topic information, falls short in providing sufficient preparation for the complicated situations that young people will unavoidably face. Education in life skills becomes essential to providing them with the resources they need to succeed. This is where life skills education comes into play, becoming the vital component lacking in the preparation of young people for successful and meaningful lives. Learning life skills is not just about information and rigorous memorization. It's about giving young people a strong toolkit that includes the capacity for critical thought, effective communication, creative problem-solving, teamwork, and emotional stability. It's about helping children develop resilience, self-awareness, and a feeling of agency so they can become effective, self-assured decision-makers, responsible citizens, and adaptive people who can survive in a world that is always changing.

This article delves deep into the transformative power of life skills education for youth development. We'll explore the unique challenges of the 21st century landscape and how these skills equip young people to navigate its complexities. We'll examine the core components of life skills education programs and their impact on fostering self-esteem and resilience, essential building blocks for a successful future. Furthermore, we'll investigate how educators, parents, and policymakers can collaborate to integrate these vital programs into mainstream education, ensuring our youth are well-equipped for the uncharted waters of the 21st century. By investing in life skills education, we empower them not just to survive, but to thrive, becoming the architects of their own destinies and shaping a brighter future for generations to come.

Defining the Landscape: The Challenges of the 21st Century

Young people have a distinct set of problems in the twenty-first century, which shapes their experiences, goals, and routes to success. These multifaceted issues have a significant impact on

young people's development and call for deliberate actions to promote their development and well-being. Let's examine the key issues that youth in the twenty-first century face:

Technological Overload: While the digital age has made it possible to connect and access information like never before, it has also brought up a number of new difficulties, including cyberbullying, information overload, digital distractions, and worries about online safety. Proficiency in digital literacy, critical thinking, and good screen time management are essential for navigating the digital terrain.

Mismatch between Education and Employment: In spite of progress in education, there is still a discrepancy between the skills that students graduate with and what companies require. Young people frequently encounter difficulties making the shift from school to fulfilling work because of skill gaps, a lack of available jobs, and changing labour market conditions.

Mental Health Struggles: Stress, anxiety, depression, and other mental health difficulties are becoming more common among young people due to a combination of factors including social media impact, scholastic pressures, modern life, and societal stigmas. Encouraging self-care behaviours, de-stigmatizing mental health discussions, and providing access to mental health help are essential in tackling these issues.

Social Inequality and Injustice: Youth from underprivileged backgrounds encounter structural obstacles to opportunity, such as discrepancies in educational attainment, differences in economic status, prejudice, and social injustices. Promoting diversity, advancing inclusivity, fighting for social justice, and laying out fair paths for all young people to succeed are all necessary to combat social inequality.

Environmental Concerns: The world and future generations are in grave danger due to pollution, climate change, natural disasters, and environmental deterioration. Advocating for sustainable behaviours for a healthier planet, addressing climate change, and protecting biodiversity are among the issues that young people are pushing for with their environmental activism.

Economic Instability: Youth's financial prospects and well-being are impacted by economic changes, employment insecurity, increased living expenses, and financial constraints. In order to achieve financial independence and navigate economic uncertainty, it is imperative that young people are equipped with financial literacy, entrepreneurship skills, and economic resilience methods.

Health and Wellness: In addition to mental health concerns, young people often confront physical health obstacles, such as access to healthcare, lifestyle diseases, problems with reproduction, substance misuse, and bad coping techniques. For the wellbeing of young people, it is essential to promote holistic wellness, good lifestyle choices, preventative healthcare, and access to healthcare services.

Navigate These Complexities By Life Skills

i. **Critical Thinking**: Encourage young people to exercise critical thinking by having them challenge presumptions, assess evidence, and come to well-informed conclusions. Before acting, instruct them in the analysis of complicated problems, the consideration of various viewpoints, and the anticipation of possible outcomes.

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ii. **Problem-Solving**: Teach young people how to solve problems so they can deal with obstacles successfully. Instruct them in problem identification, brainstorming, feasibility assessment, action plan implementation, and outcome evaluation. Promote resilience, inventiveness, and originality when coming up with solutions.
iii. **Communication:** Help young people develop excellent verbal, nonverbal, and digital communication skills. Instruct them in effective communication, active listening, teamwork, constructive dispute resolution, and self-and other-advocacy.
iv. **Emotional Intelligence**: Help young people develop healthy relationships, understand and control their emotions, and develop empathy for others. Instruct children in the areas of self-awareness, self-control, empathy, and effective expression of needs and feelings.
v. **Resilience:** Help young people develop resilience by teaching them how to overcome obstacles, deal with stress and hardship, and adjust to change. Promote a growth mentality, constructive self-talk, problem-solving techniques, and asking for help when you need it.
vi. **Time management**: Help young people learn time management techniques so they may efficiently prioritise work, set objectives, handle deadlines, and balance obligations. Urge them to maximise productivity by using tools like calendars, planners, and digital apps to arrange their schedules.
vii. **Making decisions**: Teach young people how to obtain information, evaluate options, take consequences into account, and make decisions that are consistent with their beliefs and objectives. When making judgements, promote reflection, critical thinking, and getting advice from reliable sources.
viii. **Adaptability**: Encourage adolescents to be adaptable by supporting them as they accept change, draw lessons from their experiences, and acclimatise to unfamiliar circumstances. Instil in them adaptability, problem-solving techniques, resilience, and the capacity to flourish in unpredictable and changing environments.
ix. **Assertiveness**: Teach young people how to be assertive so they can politely and confidently communicate their wants and opinions. Instruct students in the art of effective communication, boundary-setting, aggressive body language, and self-advocacy in a variety of situations.
x. **Empathy**: Foster empathy in young people by encouraging sensitivity, compassion, and understanding of the thoughts, feelings, and experiences of others. To promote empathy and healthy relationships, promote perspective-taking, active listening, empathy-building exercises, and cooperative problem-solving.
xi. These life skills can be incorporated into curriculum, youth development programmes, and daily interactions to enable young people to face the challenges of the twenty-first century with resilience, self-assurance, flexibility, and a strong sense of agency.

The Power of Life Skills: Building Blocks for Youth Developmemt

Life skill is very must vital in one's youth life and is also the building blocks for the youth development. As mentioned earlier in this article, the most challenges faced by the youth can be navigated by the Life skills. Nowadays, youth are in the state of only achieving whatever they desire and doesn't care the way they achieve thing. I think that what life skills is! One

should be aware of the life skills and practice in their life in their early days so that it will he of his partner wherever he goes especially in his working environment.

Enhancing self-esteem and confidence: The most and main life skill which have more power and also the very important which today's generation should possess is this self-confidence. We can see that day to day the statistics of suicide among the youth is increasing and the main reason is that they do not pursue any self confidence and boldness. Irrespective of one's age, gender and the situation they are never ever should one lose their self-confidence as it will be their ever-supporting power in their life.

Cultivating Resilience: It is a ability to bounce back from the setbacks, adapt to change and overcome adversity. In today's world, where young people face a multitude of challenges, fostering resilience is crucial for their well-being and future success.

Life Skills Education in Action: Measuring Impact

Speaking all about the like skills and their importance in youth life, let's see about the ways that is useful to measure the effectiveness of these vital skills.

1. Pre- and Post-Program Assessments

Self-Reported Skills: Measure students' opinions of their own life skills both before and after the programme by using surveys or questionnaires. These can evaluate cognitive abilities such as making decisions, problem-solving, and communication.

Standardised Examinations: Standardised examinations created expressly to gauge life skills can offer some objective information on students' progress, even though it's not always optimal. To prevent the program's emphasis from becoming too limited, these tests should be utilised with caution.

2. Observational Data

Teacher Observations: Teachers can observe changes in student behaviour related to communication, teamwork, and problem-solving skills during class activities and projects.

Peer Assessments: Students can assess each other's communication, collaboration, and conflict resolution skills in group work settings.

3. Performance-Based Assessments

Scenario-Based Activities: Create realistic scenarios that require students to utilize life skills like making decisions, problem-solving, and conflict resolution. Observe how they approach these scenarios and assess their ability to apply their skills.

Project-Based Learning: Project-based learning allows students to apply life skills in real-world contexts. Their teamwork, communication, and problem-solving skills can be observed during the planning, execution, and presentation of the project.

4. Long-Term Impact Studies

Tracking Student Outcomes: Track the long-term impact of life skills education by following up with graduates and evaluating their career success, social integration, and overall well-being. This can be done through surveys, interviews, or collaboration with employers.

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Data can be used to identify areas where the program needs improvement and adapt it to better serve the needs of students. Providing evidence of the program's success can aid in obtaining funding and promoting the broader adoption of life skills education. Data showcasing positive outcomes can encourage stakeholders to invest in life skills education as a key component of a well-rounded education.

Integrating Life Skills Into Education

Life skill education stream should be integrated with the main stream education for the youth development and for their future development purpose.

A. Integration's Obstacles

Curriculum Integration: It's critical to figure out how to smoothly incorporate life skills instruction into the curricula that are currently in place across many disciplines. Collaboration between curriculum developers and educators of life skills is necessary for this.

Teacher Training: To properly implement life skills programmes, teachers must have the necessary training and tools. This involves instruction on pedagogical strategies that are appropriate for imparting these abilities and incorporating them into the curriculum.

B. Methods of Integration

Standardized Life abilities Curriculum: Teachers can incorporate these abilities into their lectures by using a framework that is developed for each age group in standardized life skills curricula.

Integration by Subject: Life skills can be incorporated into many different subjects. For instance, in science projects, collaboration can be stressed, critical thinking can be encouraged, and presentations in history class can be used to hone communication skills.

Dedicated Courses on Life Skills: A more thorough examination of these abilities can be obtained through specialized life skills courses, in addition to subject-specific integration. Topics including decision-making, communication, emotional intelligence, and financial literacy may be covered in these courses.

Working Together to Bring About Change

The cooperation of multiple stakeholders is necessary for the effective integration of life skill education.

Teachers: Teachers are essential to the successful implementation of life skills programmes. It is vital that they receive training and professional growth during their working period.

Parents: By giving their children opportunity to practise in their homes, parents can help their children retain the life skills they learn in school. A robust support system for youth development is established by parents and educators working together and communicating openly.

Policymakers: To allocate funds and encourage the incorporation of life skills education into national educational frameworks, advocacy for policy reforms at the federal level is essential.

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Conclusion

Young people face a dynamic and challenging environment in the twenty-first century, full of opportunities as well. The rote learning that characterises traditional educational institutions makes it difficult to provide students the skills they need to succeed in this complicated society. The transformative potential of life skills education in supporting youth development has been examined in this study report. We have looked at the essential elements of life skills programmes, such as social-emotional learning, problem-solving, communication, and personal growth. These abilities provide young people the self-assurance, flexibility, and emotional intelligence they need to successfully negotiate the challenges of the twenty-first century. Through the development of resilience, self-awareness, and successful teamwork, life skills education prepares students to be responsible, well-rounded people who can succeed in a world that is always changing.

The path forward lies in integrating life skills education into mainstream education. Developing age-appropriate curricula, providing adequate training for educators, and fostering collaboration between educators, parents, and policymakers are crucial steps towards achieving this goal. By investing in life skills education, we empower a generation of young people not just to survive, but to thrive in the 21st century. They will become the architects of their own destinies, shaping a brighter future for themselves and society as a whole.

This concludes our exploration of the significance of life skills education for youth development in the 21st century. The journey towards a future where young people are equipped with the necessary tools for success has just begun. By prioritizing life skills education, we can ensure that future generations are well-prepared to navigate the uncharted waters of the 21st century and beyond.

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AI TOOLS FOR ASSESSMENT – TRANSFORMING THE LEARNING LANDSCAPE

Dr. S. Raja Kumar
Assistant Professor, Thiagarajar College of Preceptors, Madurai

Dr. S. Prakash
Principal, Thiagarajar College of Preceptors, Madurai

Abstract

Assessment is a cornerstone of education, providing valuable insights into student learning and informing instructional decisions. However, traditional assessment methods can be time-consuming, lack adaptability, and fail to capture the full spectrum of student skills. Artificial intelligence (AI) is emerging as a powerful tool to transform the assessment landscape, offering a range of benefits for both educators and students. This thematic paper explores the key areas where AI is impacting assessment, analyses the advantages and challenges of these tools, and discusses the future implications of AI in education.

***Keywords**: AI Tools, Assessment, Transformation, Learning and landscape*

Introduction

The traditional education assessment model is evolving, no longer reliant solely on conventional tests and assignments. Artificial Intelligence (AI) is driving this change, promising to reshape assessment methods profoundly. This paper examines the limitations of traditional assessments and highlights AI's potential to automate tasks, customize learning, and offer insights into student progress. We'll explore how AI addresses the shortcomings of traditional methods, enhancing learning outcomes and empowering educators. We'll also discuss the benefits and challenges of AI in assessment, emphasising responsible implementation.

Looking ahead, we'll discuss future AI applications that could further revolutionize assessments. Ultimately, AI offers the prospect of a more effective and engaging educational experience. Through this exploration, we'll provide insight into AI's transformative role in assessment, ushering in a new era of education.

The Rise of AI in Assessment

The traditional assessment toolbox, relying heavily on standardized tests and written assignments, often fails to provide a comprehensive picture of student learning. AI offers a fresh perspective, bringing automation, personalization, and advanced analytics to the assessment process. Here, we delve into some key themes surrounding AI-powered assessment tools:

Automated Grading and Scoring: AI can automate the grading of multiple-choice questions, short-answer responses, and even essays (Buckley & Mitra, 2017). This frees up valuable educator time for more personalized feedback and instruction. AI-powered tools can analyze writing style, grammar, and vocabulary, providing insights beyond just correct answers (Baker et al., 2018).

Adaptive Assessments: AI has the potential to create dynamic assessments that adjust difficulty based on student performance in real-time (Kumar et al., 2017). This ensures students are challenged appropriately, preventing frustration for advanced learners and boosting confidence for those who need extra support. Adaptive assessments can identify knowledge

gaps and recommend targeted learning resources for individual students, fostering a more personalized learning experience.

Skill Assessments: AI can go beyond traditional knowledge assessments and analyze student performance in simulations or virtual environments to assess practical skills. This is particularly valuable for subjects like coding, foreign languages, or even soft skills like communication and teamwork (Liu et al., 2020). AI-powered tools can analyze student responses in discussions or debates, gauging critical thinking and communication abilities.

Plagiarism Detection: AI can efficiently scan student work for plagiarism, ensuring academic integrity (Barrón-Cedeno et al., 2020). Advanced tools can not only identify copied content but also suggest sources and proper citation techniques, promoting academic honesty and responsible research practices.

Proctored Online Exams: AI-powered proctoring systems can monitor online exams for suspicious activity, deterring cheating and ensuring exam security (Morrison & Lancaster, 2009). These tools utilize facial recognition, eye tracking, and other techniques to detect potential breaches in exam regulations, promoting a fair and secure testing environment.

Benefits and Challenges: A Balanced Approach

While AI offers a wealth of potential benefits for assessment, it is crucial to acknowledge the challenges and ensure responsible implementation:

Increased Efficiency: Automating repetitive tasks like grading frees up educator time for more meaningful interactions with students, fostering a more student-centered learning environment (Buckley & Mitra, 2017).

Personalized Learning: Adaptive assessments and skill analysis provide targeted learning paths for individual students, catering to diverse learning styles and needs (Kumar et al., 2017).

Improved Data Analysis: AI can generate detailed reports on student performance, including visualizations and trend analysis. This provides deeper insights for educators and administrators, allowing them to identify areas of strength and weakness and make data-driven decisions to improve instruction (Baker et al., 2018).

Accessibility: AI tools can support students with disabilities by offering alternative testing formats like text-to-speech or voice recognition, promoting inclusive assessment practices (Liu et al., 2020).

Challenges and Considerations

Bias and Fairness: AI algorithms must be carefully designed and monitored to avoid bias based on factors like race, gender, or socioeconomic background (Eichhorn et al., 2019). Regularly evaluating and refining AI tools is crucial to ensure fair and equitable assessment for all students.

Over-reliance on Technology: AI tools should complement, not replace, the role of educators in providing in-depth understanding and personalized feedback. Educators should leverage AI to enhance their assessment practices, not eliminate their expertise in human interaction and formative assessment strategies.

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Privacy Concerns: Data security and student privacy must be prioritized when using AI assessment tools. Clear policies and transparent data-handling practices are essential to building trust with students and educators.

The Future of AI in Assessment

As AI technology continues to evolve, we can expect even more innovative applications in the realm of assessment. Here are some potential future directions:

AI-powered feedback: AI could analyze student responses and generate personalized feedback, providing targeted guidance and suggestions for improvement.

Holistic assessment: AI could go beyond standardized metrics and incorporate data from various sources, such as student engagement, and participation, ...

AI-powered simulations: AI could create personalized learning simulations that adapt to student choices and responses, allowing for deeper exploration of concepts and real-world application of knowledge.

Gamified Assessment: AI could integrate game mechanics and elements of fun into the assessment process, increasing student engagement and motivation.

Conclusion

AI is composed to revolutionize the assessment landscape, offering a plethora of tools and functionalities that can enhance learning outcomes and empower educators. By harnessing the power of AI while acknowledging its limitations, we can create a more efficient, personalized, and effective learning environment for all students. However, it is crucial to ensure responsible implementation, prioritizing fairness, data security, and the irreplaceable role of educators in the learning process. As AI continues to evolve, the possibilities for transforming assessment are vast, paving the way for a future where learning is not just measured, but truly optimized for each student.

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EMPOWERING SPECIAL EDUCATION THROUGH VIRTUAL REALITY

P. Muthuyugendar & P. Saravanan
Student Teachers, Thiagarajar College of Preceptors, Madurai

Abstract

Inclusive education represents one of the most challenging aspects of modern education. In recent years, a major challenge in achieving inclusivity in education has been to find modern tools that might adapt the teaching process to the needs of children with disabilities. This article investigates the possibility to use virtual reality Virtual Reality (VR) technology to improve the learning process of children with disabilities. In this regard, a qualitative study based on the Focus Group method was conducted among 31 specialists who work with children with disabilities, with the aim of identifying potential opportunities and limits of using Virtual Reality (VR) technology in the education of this category of children. The research results reveal that for most of the interviewees the Virtual Reality (VR) application was a new experience; they appreciated that this technology could improve the educational process for children with disabilities and it could become a useful tool to support the education of such children. These results could have a positive impact on the activities carried out by policymakers, academia, and the economic environment in their efforts to implement policies aimed at improving the inclusive education system. To this end, some Virtual Reality (VR) applications could be developed in a collaborative system involving IT companies and universities in the designing and implementation of these applications.

Keywords: *sustainable inclusive education, virtual reality Virtual Reality (VR), modern teaching technologies, children with disabilities, interactive learning environments, teaching and learning strategies, education digitization*

Introduction

Inclusive education provides education for all categories of children (including children with disabilities), and it is considered one of the most effective ways to combat discrimination and ensure equal opportunities for all children. In Romania, the new legislative framework of education is based on two main principles, as follows: 1. the principle of non-discrimination according to which access to quality education is achieved without any discrimination; 2. the principle of ensuring equal opportunities according to which the differences regarding access and treatment for all the beneficiaries of education without any discrimination are removed . At the beginning, the concept of inclusive education referred to children with disabilities in the regular school system, but the concept has evolved and now it is defined by UNESCO as "the process of strengthening the capacity of the education system reach out to all learners". Thus, providing equal opportunities represents one of the greatest challenges of inclusive education . To work in a common environment, to reach all students and to include all the children, inclusive education uses specific tools and technology to help both teachers and children in reaching the expected results. Tools such as "secularity, unity, and equality" can significantly contribute to achieving a sustainable inclusive education; the key to accomplishing this goal is represented by the teachers and their positive attitudes regarding this aspect .Among the modern innovations, the immersive technologies such as Virtual Reality Virtual Reality (VR) or Increased Reality are increasingly utilized, both within the field of computer innovation conjointly in other areas. Vaughan, Gabrys and Dube recognized five key areas in which Virtual Reality (VR) preparing and evaluation had a critical increment the therapeutic field,

mechanical and commercial preparing, restoration, and inaccessible preparing.A arrangement of ponders examined the impact of advances on learning and instruction. Agreeing to Hsin, Li and Tsai, about one-third of the thinks about distributed on the Net of Science between 2008 and 2013 that considered youthful children's learning drawn nearer the taking after themes:children from worker families, children with moo financial status or children with extraordinary needs. Most of them highlighted the positive impacts of advances, since advances lead to the advancement of multiculturalism, to the increment of intuitive between children and to their collaboration . Other ponders uncovered that children with inabilities, particularly from Northern nations, are thought to be the most recipients of this "digital revolution. Specialists claim that these children can advantage from fitting learning materials and overcome communication boundaries with the assistance of "cyber learning procedures and environments". Agreeing to UNICEF, at slightest 93 million children with incapacities "are one of the foremost marginalized and prohibited bunches in society and they endure from segregation with respect to get to to education" . It isn't simple to supply the proper instruction for children with inabilities, as they confront particular boundaries, and have get to to restricted social and financial opportunities. Moreover, these children are not fair customers of innovation, but moreover makers, a part that's still not adequately investigated .Virtual Reality Virtual Reality (VR) innovation has illustrated gigantic potential in upsetting different businesses, and one segment that stands to advantage significantly from its transformative control is uncommon instruction. Understanding the centrality and affect of Virtual Reality (VR) in instruction is pivotal in increasing in value the special openings it presents for understudies with extraordinary needs. This article points to investigate the crossing point of Virtual Reality (VR) and uncommon instruction, dig into the benefits it offers, examine its execution in classrooms, and shed light on the prospects of this energizing innovation.

Understanding Virtual Reality Virtual Reality (VR) in Education

Some time recently diving into how Virtual Reality (VR) applies to extraordinary instruction, it is fundamental to get a handle on the quintessence of this innovation. Virtual Reality may be a reenacted involvement that permits clients to submerge themselves in a virtual environment, made utilizing computer-generated 3D illustrations. This immersive encounter offers a wealthy tactile engagement, giving learners with a increased sense of nearness and an opportunity to involvement learning materials in a novel and compelling way.Virtual Reality

innovation is based on making a computerized environment that clients can connected with through particular equipment, such as head-mounted shows (HMDs) and handheld controllers. These gadgets give clients with a practical and immersive encounter, empowering them to investigate and connected with virtual objects and situations as on the off chance that they were physically show.

Defining Virtual Reality Virtual Reality (VR) Technology

Virtual Reality Virtual Reality (VR) innovation has come a long way since its beginning. The early days of Virtual Reality (VR) were stamped by bulky headsets and constrained design capabilities. In any case, with headways in innovation, Virtual Reality (VR) has advanced into a more open and immersive involvement.Cutting edge Virtual Reality (VR) headsets are smooth and lightweight, making them comfortable to wear for expanded periods. The design have too progressed altogether, with high-resolution shows and reasonable rendering of virtual situations. Moreover, the improvement of handheld controllers has permitted for more natural interaction with virtual objects, advance upgrading the immersive involvement.One of the key components of Virtual Reality (VR) innovation is the following framework. This framework employments sensors to distinguish and decipher the user's developments into the virtual environment. This empowers clients to walk, reach, and associated with objects within the virtual world, making a really immersive and intelligently encounter.

The Evaluation of Virtual Reality Virtual Reality (VR) in the Educational Sectors

In later a long time, Virtual Reality (VR) has picked up footing in different areas, counting healthcare, gaming, and excitement. In any case, its potential in instruction has remained to a great extent undiscovered until as of late. Instructive teach are perceiving the control of Virtual Reality (VR) to improve learning encounters by giving understudies with locks in and intuitively substance past conventional classroom settings.With particular Virtual Reality (VR) instructive applications, understudies can investigate chronicled destinations, conduct virtual tests, or take an interest in recreations that reproduce real-world scenarios. For case, understudies considering antiquated history can for all intents and purposes visit antiquated civilisations and witness verifiable occasions unfurl some time recently their eyes. This experiential learning approach not as it were extends students' understanding but too cultivates basic considering, problem-solving, and collaboration aptitudes.Besides, Virtual Reality (VR) can be especially useful for understudies with extraordinary needs. For occasion, understudies with physical inabilities can utilize Virtual Reality (VR) to take an interest in physical exercises which will be challenging or blocked off within the genuine world. This inclusionary perspective of Virtual Reality (VR) permits all understudies to lock in in learning exercises on an rise to balance, advancing a sense of having a place and strengthening.As Virtual Reality (VR) innovation propels, its potential in education is as it were anticipated to develop. With the capacity to make immersive and intelligently learning encounters, Virtual Reality (VR) has the potential to revolutionize the way we instruct and learn, making instruction more locks in, available, and comprehensive for all understudies.

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The Intersection of Virtual Reality (Virtual Reality (VR))and Special Education

Extraordinary instruction requires a custom-made approach to oblige the one of a kind needs of understudies with incapacities. Virtual Reality (VR) presents a promising arrangement by giving customized and comprehensive learning encounters. By leveraging its immersive capabilities and versatility, Virtual Reality (VR) can address the challenges confronted by extraordinary instruction classrooms.

The Unique Needs of Special Education

Understudies with inabilities regularly battle with conventional educating strategies due to different variables such as consideration shortages, tangible disabilities, or troubles in theoretical considering. Comprehensive instruction points to supply rise to openings and back to all understudies, independent of their capacities. Be that as it may, accomplishing this objective can be challenging in conventional classroom settings.

For occurrence, understudies with consideration shortfalls may discover it challenging to remain locked in and centered in a conventional classroom environment. The steady diversions and overpowering jolts can ruin their learning advance. Essentially, understudies with tangible impedance's may battle to completely comprehend and take an interest in exercises that intensely depend on visual or sound-related prompts.

Besides, understudies with challenges in theoretical considering may confront deterrents in grasping complex concepts and concepts displayed in a conventional classroom setting. The

theoretical nature of certain subjects, such as arithmetic or science, can be especially challenging for these understudies, driving to disappointment and a need of inspiration.

How Virtual Reality Virtual Reality (VR) Addresses in Special Education Challenges

Virtual Reality (VR) can adjust to distinctive learning styles and cater to person needs, advertising a adaptable and customized learning involvement. It gives a secure and controlled environment where understudies can hone and strengthen their aptitudes without fear of judgment or disappointment. The immersive nature of Virtual Reality (VR) captivates students' consideration, increments engagement, and invigorates their cognitive capacities.

By making a virtual world that can be custom fitted to each student's particular needs, Virtual Reality (VR) permits teachers to supply focused on meditations and back. For illustration, understudies with consideration shortfalls can advantage from Virtual Reality (VR) recreations that limit diversions and give centered learning encounters. These recreations can offer assistance progress their capacity to concentrate and hold data.

Moreover, Virtual Reality (VR) can mimic real-life circumstances and empower understudies to create and refine basic life abilities in a controlled environment. For case, understudies with neurodiversity can hone social intelligent through virtual scenarios, making a difference them construct social competence and certainty. They can learn how to start discussions, decipher non-verbal signals, and explore social circumstances, all inside a secure and strong virtual environment.

Moreover, Virtual Reality (VR) can offer intelligently and multi-sensory encounters that cater to understudies with tactile impedance's. Utilizing haptic input gadgets, understudies can feel and touch virtual objects, upgrading their understanding and engagement. So also, understudies with visual disabilities can advantage from sound depictions and sound signals that give extra setting and data.

Generally, Virtual Reality (VR) has the potential to upset extraordinary instruction by giving inventive and successful learning encounters. Its flexibility, immersive nature, and capacity to cater to person needs make it a important instrument for comprehensive instruction. By saddling the control of Virtual Reality (VR), teachers can create a more comprehensive and locks in learning environment for understudies with incapacities.

Inclusive Education In Virtual Reality Virtual Reality (VR) Technology

Concurring to a few creators, the point of comprehensive instruction is to make strides differing qualities and to guarantee rise to get to to instruction and to all instructive programs and situations for all understudies . They expressed that all understudies, with or without inabilities, ought to be within the same classroom . Ainscow, Slee and Best bolster the thought that “every learner things equally” and he/she has the correct to get viable learning openings. They contend for the ought to center customary school on comprehensive instruction, advocating a “whole framework approach” organizational show. This framework as it were works on the off chance that the method of incorporation takes put in several environments, to be specific within the community, school, and classroom, with the bolster of instructors and understudies . Ainscow too contends that to gotten to be compelling, comprehensive instruction must bolster all the understudies . With this point, he proposes a concept called “inclusive inquiry”, which alludes to the association of both instructors and understudies in a

nonstop discourse around the most ways to progress the instructive forms for way better consideration .

Comprehensive instruction is based basically on the guideline agreeing to which the instructive framework must incorporate all the children and the schools must be arranged to react to the person needs of these children .

Concurring to Cretu and Morandau, it is exceptionally critical to get ready instructors for tending to a differing qualities of understudies and for creating comprehensive instructive situations for all in arrange to guarantee a feasible future and break even with openings for all the understudies. Universally, noteworthy steps have been taken to empower teachers and future instructors to work in comprehensive instruction. A few authors note that comprehensive instruction is a never-ending prepare that continuously requires changes and unused apparatuses. These instruments ought to not only improve the circumstance at a few point, but they would also bring major changes in instruction.Since the part of inclusive instruction is to form a proper learning environment, a few creators have proposed the utilize of organized role-playing diversions, where the learning fashion seem advance from detached learning to intelligently learning by including the "learners" as active participants. Hence, they can accomplish cognitive abilities. A arrangement of ponders uncovered that association with an avatar, in an environment reenacted through virtual reality, is more practical and valuable, hence contributing to the creation of a more open learning environment. Beginning from Gibson's Affordance Hypothesis of openness, a few masters concluded that Virtual Reality (VR) may make the learning environment more open. Learning by investigating, getting data in genuine time, utilizing e-platforms, self-discovery, testing, and testing are fair a couple of of the new components that can be utilized in instruction. Besides, the utilize of innovation may improve these instructive apparatuses. For illustration, computers can be used in exercises such as educating, works out, investigating, multimedia projects, or career direction. Several studies uncover that utilizing virtual situations to convert social interrelations might progress learning and they too might contribute, to some degree, to the concept of "equal opportunities" in instruction .

Virtual Reality (VR) may ended up supportive within the education of children with inabilities, by empowering students and understudies to make and make strides social and passionate capacities . In this sense, it is valuable to present some activities, such as a virtual

reality program made to move forward the enthusiastic and social adjustment aptitudes of children with Extreme introvertedness Range Clutters, who were uncovered to six learning scenarios that were displayed through a four-side immersive virtual reality environment moreover known as "Half-Cave" and their development was followed; another proposed application was a computerized visualization framework, which consequently decides the child's enthusiastic state.In later a long time, Virtual Reality (VR) innovation has ended up increasingly show in our society, in areas like e-commerce, instruction, administrations, and medicine and is getting to be more available to everybody . The concept of "virtual reality" can be portrayed by utilizing the taking after related terms:

"reality"—the genuine world, which includes the physical presence of people and objects; "virtual reality"—a advanced representation of the world; "virtually"—a virtual introduction of a possible world, based on the rules of the genuine world. There are a few definitions of Virtual Reality (VR)—for occurrence, Virtual Reality (VR) may be characterized as "a system in which clients feel that they are in a virtual world with different gear and the clients connected with this world" or "Virtual Reality (VR) leverages immersive innovations recreates intuitively virtual situations or virtual universes with which clients ended up subjectively included and in which they feel physically present". Virtual Reality (VR) could be a communication environment that includes the presence of four components:

a virtual world, submersion, tactile criticism, and interactivity . The objective of Virtual Reality (VR) is to offer an true encounter to clients by setting them in a secure and controllable environment. The expanding reasonableness of IT applications is making favorable conditions and advertising expanding openings to utilize Virtual Reality (VR) in instructive forms, thus being able to reply to the diverse learning needs of people with incapacities . Two properties of Virtual Reality (VR) can contribute to increasing the openness of the instruction process—"the sense of nearness, and the encapsulated affordances of gesture and control within the 3rd dimension".Utilizing innovative tools to form learning more energetic, more proficient, and more participatory might progress comprehensive instruction. In comprehensive instruction frameworks, Virtual Reality (VR) might change children's learning style by giving more challenges, it can attract and center children's consideration, it can offer appropriate control of the learning environment, and, too, it can include the participants emotionally . To this conclusion, virtual reality, and machine learning were utilized to make a learning stage capable of solving the socialization problems by uncovering the children to social lessons, such as "a course to school", "behavior in computer class", "interaction with peers", or "safety skills".This may too be substantial for children with inabilities, particularly for those with mental inabilities who deny genuine tests and intuitive, since Virtual Reality (VR) might give submersion and client interaction with a virtual environment . In this way, a depiction of the genuine world without any imaginary components may be offered, abstract concepts can be displayed through visual helps, and children may be positioned in certain settings in which they cannot be positioned in genuine conditions (since of distinctive social imperatives, assets or limitations specifically related to disability). For case, for children with autism, Virtual Reality (VR) provides authenticity and authenticity in a controlled environment, so it can upgrade learning and perception processes, empowering the securing of real-world abilities . Video displaying ("video-based instruction") through Virtual Reality (VR) might ended up accommodating for autistic children, children with diverse intellectual disabilities, or children

with formative inabilities, by increasing their degree of involvement . At the same time, utilizing Virtual Reality (VR) technology offers the possibility to rehash introductions and to do diverse works out without including a human interaction . Distinctive thinks about uncover that Virtual Reality (VR) innovation might offer assistance individuals with neurodevelopmental disarranges to develop communication capacities, as these persons can "navigate" in an simpler way in a virtual environment that gives challenges comparative to the genuine world.Utilizing virtual situations made with Virtual Reality (VR) innovation can encourage learning approximately logical-mathematical concepts or indeed relaxation exercises, such as dodging inadvertent wounds . Virtual Reality (VR)) can be utilized to "increase self-esteem and sense of empowerment" and anticipate depression by making a difference to overcome inability boundaries . At long last, the interaction and communication between children and instructors may well be progressed Nevertheless, researchers distinguished a arrangement of disadvantages that will prevent the use of Virtual Reality (VR) in instruction non-realistic representation, as well small adaptability, costs, user discomfort, etc.In some cases, issues, such as speed perusing must be taken into consideration when Virtual Reality (VR) is utilized Thus, the part of specialists in teaching children with incapacities gets to be very important. They must continually find new ways to make strides children's learning performance, help them gotten to be more independent and make strides their social abilities, and unused innovations such as Virtual Reality (VR)) can offer assistance them accomplish this objective .

The Benefits of Virtual Reality (VR) in Uncommon Instruction

The benefits of coordination Virtual Reality (VR) into extraordinary instruction classrooms amplify past tending to particular challenges. The innovation offers various points of interest that improve learning encounters and advance consideration and openness for understudies with incapacities.

Improving Learning Encounters

Virtual Reality (VR) submerges understudies in their learning materials, making a multisensory involvement that improves information maintenance. By locks in numerous faculties at the same time, Virtual Reality (VR) invigorates cognitive forms and strengthens learning. This immersive approach advances dynamic cooperation, interest, and investigation, making learning more agreeable and successful.

Advancing Consideration and Availability

Virtual Reality (VR) innovation breaks down physical and cognitive obstructions that ruin students' learning encounters. It gives break even with get to to instructive substance, independent of a student's physical capacities or geological area. Virtual Reality (VR) can transport understudies to virtual classrooms, exhibition halls, or authentic locales, empowering them to share in improving learning exercises that were already blocked off.

Understudies in Virtual Reality (VR) in classroom

Executing Virtual Reality (VR) in Extraordinary Instruction Classrooms.Coordination Virtual Reality (VR) into uncommon instruction classrooms requires cautious arranging and

thought of different components. Teachers and policymakers must guarantee the accessibility of essential gear and apparatuses, as well as give satisfactory preparing and back to teachers.

Fundamental Hardware and Devices

To execute Virtual Reality (VR) in uncommon instruction classrooms, schools have to be contribute in suitable equipment, such as Virtual Reality (VR) headsets and controllers. Guaranteeing compatibility with instructive computer program and applications is fundamental for a consistent client encounter. Furthermore, schools ought to consider the require for particular computer program particularly outlined for understudies with incapacities.

Training for Teachers

Instructors play an essential part within the effective integration of Virtual Reality (VR) into extraordinary instruction classrooms. Giving careful preparing and proficient advancement openings is crucial to guarantee teachers are capable in utilizing Virtual Reality (VR) innovation and can leverage its full potential to back different learners successfully. Collaboration with specialists within the field and persistent back for educators' expertise improvement is fundamental.

Future Prospects of Virtual Reality (VR) in Uncommon Instruction

The potential of Virtual Reality (VR) in uncommon instruction is still being investigated, and progressing inquire about and advancements proceed to shape its future. As innovation advances, it is anticipated to ended up more open, cost-effective, and user-friendly, opening up modern roads in uncommon instruction.

Progressing Inquire about and Improvement

Analysts are effectively examining the affect of Virtual Reality (VR) on learning results for understudies with incapacities. Their discoveries shed light on best hones and viable approaches to coordination Virtual Reality (VR) into extraordinary instruction educational module. Ongoing research ensures that the innovation proceeds to advance in a way that boosts its potential for learners with different needs.

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Potential Challenges and Arrangements

Whereas Virtual Reality (VR) holds gigantic guarantee, certain challenges got to be tended to for its viable usage in special education classrooms. Issues such as taken a toll, openness, and the require for particular substance creation stay ranges of concern. Proceeded collaboration between teachers, designers, and analysts is vital to overcoming these challenges and guaranteeing the far reaching selection of Virtual Reality (VR) in uncommon instruction.

Conclusion

In conclusion, Virtual Reality (VR) innovation offers transformative potential for uncommon instruction classrooms. By tending to the one of a kind needs of understudies with inabilities, upgrading learning encounters, and advancing incorporation, Virtual Reality (VR) opens up unused skylines for customized and locks in instruction. As innovation propels and its benefits ended up more apparent, Virtual Reality (VR) has the control to upset the way we teach and enable understudies with uncommon needs.

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OPEN EDUCATION: KNOWLEDGE WITHOUT BOUNDARIES

Murugeswari M
Student Teacher,
Thiagarajar College of Preceptors, Madurai

Abstract

This paper explores the transformative potential of Open Education in dismantling barriers to knowledge and fostering a more equitable and accessible learning environment for all. Open Education, characterized by the free and open sharing of educational resources, transcends geographical limitations, socioeconomic disparities and traditional institutional constraints, democratizing the learning process. The purpose of this paper is to offer an overview of the Open Education, emphasise its merits and impact.

Keywords: *Open Education, Open Education Resources, Accessible Learning, Open Schooling & Universities, flexible learning.*

Introduction

Open Education is a movement aimed at making educational resources and opportunities freely available to all, regardless geographical location, socioeconomic status or background. It encompasses various initiatives such as open educational resources (OER), massive open online courses (MOOCs) and open access journals, promoting accessibility, inclusivity and lifelong learning. No formal educational qualifications are required to join the open education system.

History of Open Education

The concept of Open Education has roots in the early 20th century, but it gained momentum in the digital age with the emergence of the internet and open licensing frameworks. Here is a brief overview of the history of Open Education:

Open Education Movement (late 1960s to 1970s): The Open Education Movement emerged in the late 1960s and early 1970s as a response to the traditional educational model that was seen as rigid, exclusive, and lacking in innovation. Proponents of Open Education advocated for more flexible, student-centered approaches to teaching and learning. This movement emphasized open access to educational resources, collaboration among educators, and the use of technology to enhance learning experiences.

Open Universities (1970s to present): The Open University in the United Kingdom, founded in 1969, is one of the pioneering institutions in the field of Open Education. The Open University offered distance learning programs that allowed students to study at their own pace and access course materials online.

Open Educational Resources (OER) Movement (early 2000s to present): The OER movement gained traction in the early 2000s with the rise of digital technologies and open licensing frameworks such as Creative Commons. Organizations and initiatives like MIT Open Course Ware, Connex ions (now known as OpenStax), and OER Commons began sharing educational materials openly online, allowing educators and students to access, adapt, and

share resources freely. The OER movement aimed to reduce barriers to education, promote collaboration among educators, and foster innovation in teaching and learning.

Massive Open Online Courses (MOOCs) (2012 to present): The emergence of MOOC platforms such as Coursera, edX, and Udacity in the early 2010s brought Open Education to a global audience. MOOCs offered free or low-cost online courses from top universities and institutions, reaching millions of learners worldwide. MOOCs provided opportunities for lifelong learning, professional development, and skills enhancement in diverse fields. While the MOOC phenomenon has evolved over time, it continues to play a significant role in expanding access to quality education.

Open Pedagogy and Open Educational Practices (OEP) (2010s to present): Open Pedagogy focuses on learner-centered approaches, collaboration, and creativity in teaching and learning. Educators are encouraged to engage students in co-creating course materials, using open educational resources, and fostering critical thinking skills through interactive activities. Open Educational Practices (OEP) encompass a broader set of strategies that promote openness, transparency, and inclusivity in education. By embracing Open Pedagogy and OEP, educators can empower students, enhance engagement, and promote a culture of sharing and collaboration in education.

Overall, the history of Open Education reflects a growing movement toward openness, accessibility, and innovation in teaching and learning. As technology continues to evolve and societal needs change, Open Education will likely continue to expand and transform education practices worldwide.

Importants of Open Education

One of the most significant trends in the field of education in the 21st century is the emergence and expansion of open education. Open education can be defined as a philosophy and a practice that aims to assess to high quality learning opportunities for anyone, anywhere, anytime, without barriers of cost, location, or prior qualifications. Open education encompasses various forms and modalities, such as open educational resources (OER), open textbooks, open courses, open pedagogy, open licenses, and open recognition. Open education has the potential to transform the way people learn, teach, and share knowledge, and to foster entrepreneurial mindsets among learners and educators.

Benefits of Open Education:

Some of the benefits and challenges of open education are:

- Open education can increase access and equity in education, especially for underserved and marginalized groups, such as low-income, rural, or remote learners, women and girls, refugees and migrants, and people with disabilities. By removing or reducing the financial, geographical, and institutional barriers to education, open education can enable more people to pursue their learning goals and aspirations, and to acquire the skills and competencies they need for personal and professional education.
- Open education can foster innovation and creativity in education, as it encourages the use of diverse and dynamic pedagogical approaches, such as collaborative, project based, problem-based and inquiry-based learning. Open education can also promote the

development of entrepreneurial mindsets among learners and educators, as it empowers them to be proactive, resourceful, adaptable and resilient in the face of uncertainty and complexity.

- Open education can also stimulate the creation and the dissemination of new knowledge and solutions, as it enables the sharing and the remixing of open educational resources and courses across different contexts and domains.

Open Schools and Universities in India:

- **Open Schools in India**

Open schools in India follows a learner-centered approach to education. Students can choose from a variety of disciplines to fulfill their own needs and goals.

1. National Institute of Open Schooling (NIOS)
2. Board of Open Schooling and Skill Education (BOSSE) – Sikkim
3. Bihar Board of Open Schooling and Examination (BBOSE) - Bihar
4. West Bengal Council of Rabindra Open Schooling (WBCROS) – West Bengal
5. A.P. Open School Society (APOSS) – Andhra Pradesh
6. Chhattisgarh State Open School (CGSOS) – Chhattisgarh
7. M.P. State School Education Board (MPSOS) – Madhya Pradesh
8. Rajasthan State Open School (RSOS) – Rajasthan
9. Telangana Open School Society (TOSS) – Telangana
10. Haryana Open School – Bhiwani
11. Maharashtra State Open Board of Secondary & Higher Secondary Education – Maharashtra

- **Open University in India**

Open University serves as a lifeline for individuals with gaps in their education due to medical or financial constraints. It provides a welcoming environment that champions equal opportunities for all learners, regardless of their circumstances.

1. Indira Gandhi National Open University - Delhi.
2. Dr B R Ambedkar Open University - Hyderabad.
3. Tamil Nadu Open University - Chennai.
4. Sikkim Manipal University Directorate of Distance Education - Sikkim.
5. Symbiosis Centre for Distance Learning – Pune
6. Delhi University School of Open Learning – Delhi
7. National Institute of Open Learning – Noida
8. Jawaharlal Nehru Technological University Hyderabad – Hyderabad
9. University of Mumbai Institute of Distance & Open Learning – Mumbai
10. Netaji Subhas Open University – Kolkata
11. Karnataka State Open University – Mysore
12. Uttarakhand Open University -Nainital
13. Vardhman Mahaveer Open University – Kota
14. Madhya Pradesh BHOJ (open) University – Bhopal
15. Pt. Sundarlal Sharma Open University – Chhattisgarh

Open Educational Resources

Open Educational Resources (OER) are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others.

Open Educational Resources (OERs) are the resources available in public domain with an open license. OERs fulfills the true aim of education, by democratizing learning and reaching out of those who cannot afford or access them.

At the difficult time of lock down due to COVID-19, many stakeholders or education across the globe including universities, publishers, etc have opened the door to OERs.

National Repository of Open Educational Resources (NROER): NROER is an initiative by the Ministry of Human Resource Development, Government of India, to provide a platform for educators to access and share open educational resources. The website offers a wide range of resources for various subjects and levels of education.

Website: https://nroer.gov.in/home/

SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds): SWAYAM is an online platform that offers free courses from universities and institutions in India. Learners can access video lectures, reading materials, quizzes, and assignments on a variety of subjects.

Website: https://swayam.gov.in/

National Digital Library of India (NDLI): NDLI is a digital repository that provides access to a vast collection of academic resources, including textbooks, articles, videos, and audio materials. Users can search for resources by subject, language, and format.

Website: https://ndl.iitkgp.ac.in/

National Programme on Technology Enhanced Learning (NPTEL): NPTEL is a joint initiative by the Indian Institutes of Technology (IITs) and the Indian Institute of Science (IISc) to provide online courses in engineering, science, and humanities. The website offers video lectures, course materials, and certification options.

Website: https://nptel.ac.in/

e-PG Pathshala: e-PG Pathshala comprises good quality interactive content at Post Graduate level in various disciplines of social sciences, fine arts, humanities, mathematical sciences, linguistics and languages, etc.

e-PG Pathshala is an initiative by the University Grants Commission (UGC) that offers post-graduate courses in various disciplines. The website provides e-content for different subjects, including lectures, e-books, and quizzes.

Website: http://epgp.inflibnet.ac.in/

eBasta: eBasta is Government Digital India Initiative, this project has created a framework to make school books accessible in digital from as e-books to be read and used on tablets and laptops.

Website: http://www.ebasta.in/

Impact of Open Education in Different Stakeholders

Identify the following benefits for each of those involved in using Open Education approaches – the learners, the organization and the educators.

Learners can benefit from:

- Applying knowledge in a wider context than their course would otherwise allow
- Freedom of access and enhanced opportunities for learning
- Support for learner-centered, self-directed and social/informal learning approaches
- The opportunity to test out course materials before enrolling

Educators can benefit from:

- Student/user feedback and open peer review
- Reputational benefits, recognition
- Benefits (efficiency and cultural) of collaborative approaches to teaching/learning
- Reaching a wider range of learner

Educational institutions can benefit from:

- Recognition and enhanced reputation
- Wider availability of their academic content (linking to widening participation agenda)
- Efficiencies in content production
- Increased sharing of ideas and practice within the institution
- Increased understanding of IPR

Other sectors (Eg; employers, public bodies, private bodies, 3rd sector) benefit from:

- Access to repurpose able content
- Input to scoping, development and endorsement of open content in their focus area
- New potential partnerships with content providers and other sectors
- Increased understanding of IPR, curriculum development and learning technologies

Limitations of Open Education

Quality issues. Since many OER repositories allow any user to create an account and post material, some resources may not be relevant and/or accurate.

Extra effort required to adopt OERs. Adopting OERs in the classroom involves additional work on the part of faculty, instructional designers, editors, digital rights specialists, and others in order to find the OERs, adapt/modify them, check them for accessibility, verify any copyright issues, publish the resources in the institution's LMS, and so forth. These are issues that many colleges and universities have little experience with.

Lack of human interaction between teachers and students. OER material is created to stand alone, and since self-learning users may access the material outside of a classroom environment, they will miss out on the discussion and instructor feedback that characterize for-credit classes and that make such classes useful and valuable.

Language and/or cultural barriers. Although efforts are being made to make OERs available in multiple languages, many are only available in English, limiting their usefulness to non-English speakers. Additionally, not all resources are culturally appropriate for all audiences.

Technological issues. Some students may have trouble using some OERs if they have a slow or erratic internet connection. Other OERs may require software that students don't have and that they may not be able to afford.

Static formats. Some OERs are published in digital formats that make it hard to download, access, and modify the content.

Conclusion

Open education offers numerous benefits, including accessibility, flexibility, and affordability. It democratizes learning by removing barriers such as cost and location, allowing individuals from diverse backgrounds to access quality education. However, challenges like ensuring accreditation and maintaining academic integrity need to be addressed for open education to reach its full potential. Overall, it's a promising avenue for lifelong learning and global knowledge sharing.

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THE ACADEMIC OUTCOMES OF STUDENTS WITH DISABILITIES PARTICIPATING IN PEER TUTORING

U. Yoogesh & G. SaravanaKumar
B Ed Student Teacher
Thiagarajar college of preceptors, Madurai

Abstract

This study aims to assess the academic outcomes of students with disabilities participating in peer tutoring within inclusive education settings. The study also identifies key factors contributing to the success of peer tutoring, such as effective tutor training, consistent support from educators, and the development of positive peer relationships. These findings suggest that implementing peer tutoring programs in inclusive classrooms can promote academic achievement and provide a more inclusive and supportive educational experience.Inclusive education, which integrates students with disabilities into general education classrooms, seeks to provide equitable learning opportunities for all students. Peer tutoring, a collaborative learning strategy where students support each other's academic progress, has been widely recognized for its potential benefits

Introduction

Peer tutoring is an educational practice where students help each other learn and understand academic content. It involves one student (the tutor) providing instructional support to another student (the tutee), often within the same age group or grade level. This method can be particularly effective in reinforcing learning, as it encourages active participation and collaboration among students. The most well-known peer tutoring research examines the advantages that students with mild disabilities or no disabilities get from peer tutoring in general education classes and class-wide peer tutoring, despite the fact that peer tutoring is widely used, with typical peers tutoring students in self-contained classrooms. The goal of inclusive education is to give all students equal access to learning opportunities by integrating students with disabilities into regular education classes. The potential advantages of peer tutoring, a cooperative learning approach in which students assist one another's academic development, are well known.

Peer Tutoring

Peer tutoring is a teaching approach in which students assist one another in learning and developing their comprehension of different concepts or disciplines. In this type of cooperative learning, students switch between being the tutee and the tutor, encouraging active participation and engagement. Peer tutoring involves more experienced students assisting less experienced students in understanding a certain topic or idea.

Inclusive Classroom

A classroom that welcomes pupils of all backgrounds and skill levels is known as an inclusive classroom. All students, including those with disabilities, those from diverse cultural and linguistic origins, and those with a range of academic talents, will find their diverse needs met by it. Ensuring that every student feels supported, appreciated, and capable of participating completely in the learning process is the aim of an inclusive classroom.

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Advantages of Peer Tutoring

Academic Improvement:

Research has shown that tutors and tutees who participate in peer tutoring perform better academically. Tutors reinforce their own expertise through teaching, while tutees gain from the individualized attention and explanation.

Improved Social Skills:

Peer tutoring's dynamic and encouraging environment helps tutees and tutors alike gain greater empathy, cooperation, and communication skills.

Enhanced Self-Belief and Drive:

Students frequently experience heightened self-assurance and motivation when they confide in their peers and ask questions. Tutors feel more responsible and accomplished, which raises their self-esteem.

Inclusive Learning Environment:

By encouraging peer relationships and lowering social barriers, peer tutoring supports an inclusive classroom atmosphere. It facilitates the integration of learners with various backgrounds and learning requirements into the educational

Growth Towards Independence:

Peer tutoring can aid impaired kids in developing methods for independent learning through guided assistance. Tutors can help students become more independent by teaching them time management, problem-solving strategies, and study skills.

Equitable Gain:

Peer tutoring has advantages for both parties. Tutors themselves develop tolerance, sensitivity, and a greater comprehension of the range of learning demands. This mutually beneficial partnership develops a collaborative and supportive culture as well as an inclusive learning environment.

Empathic Role Models:

Peer tutors are frequently used as mentors. Observing peers achieve academic success can motivate kids with disabilities and offer real-world examples of how to overcome obstacles.

Strengthening of Inclusive Learning :

Peer tutoring upholds the inclusive education tenets by guaranteeing that students with disabilities receive the assistance they need to fully engage in

Types of Peer Tutoring

Cross-Age Tutoring:

In order to teach material that is developmentally suitable for the tutee, older pupils are paired with younger ones. In order to stimulate the younger student's thinking, the tutor clarifies the idea or skill, demonstrates appropriate behavior, and poses questions.

Same-Age Tutoring:

A higher-performing and lower-performing classmate are matched to learn content the lower-performing student has not yet mastered. A popular version of same-age tutoring is paired reading using a book chosen to stretch the tutee’s skills.

Classwide Peer Tutoring:

This type of peer tutoring involves the whole class at once. Students put previously taught concepts or skills into practice in pairs. Every team member alternates between the roles of

tutee and tutor. The teacher prepares the questions ahead of time, and the tutor asks them and evaluates how accurately their partner responds.

Reciprocal Peer Tutoring:

Students alternate roles as tutor and tutee, which can enhance learning for both participants as they explain and listen. To promote their group's success, students are matched in varied ways, with each member acting as both a tutor and a tutee at the same time. Students are tasked with synthesising material and posing questions to obtain explanations and replies in this cooperative learning activity.

Peer Tutoring in Inclusive Classrrom

For students with disabilities, peer tutoring is especially advantageous in a number of ways:

Personalized Attention:

Peer tutoring offers the more tailored education that disabled kids frequently require. Peer tutors can provide one-on-one help by customizing their explanations and aid to the tutee's unique need.

Enhanced Engagement:

Peer tutoring promotes involvement in the learning process. Working beside a peer can make disabled children feel more at ease and involved than in a large classroom.

Enhanced Academic Achievement:

Peer tutors can assist children with disabilities in comprehending and remembering knowledge more efficiently. To improve learning, the tutor can repeat ideas, deliver the material in several ways, and offer quick feedback.

Improved Social Skills:

Social growth is facilitated by peer interaction. Students with disabilities can develop confidence, strengthen their communication skills, and form connections via consistent,

To ensure that kids with disabilities receive the most out of peer tutoring, educators and schools can:

Teach Tutors:

Give peer tutors instruction on how to assist students with disabilities in an efficient manner, covering topics such as identifying particular disabilities and useful teaching methods.

Combine Suitably:

Based on similar learning styles, personalities, and academic requirements, tutors and tutees are paired.

Track Progress:

Ensure that the tutoring sessions are fulfilling the needs of the impaired students by routinely observing and evaluating them. Make any required adjustments to the approach.

Provide Resources:

Give tutors the tools and resources they need to assist their tutoring efforts, such as professional support from instructors or special educators and access to educational materials.

Encourage Feedback:

To help the process get better all the time, provide an atmosphere where tutees and tutors can offer input.

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ADDRESSING EQUITY AND ACCESSIBILITY ISSUES IN INCLUSIVE EDUCATION - A SURVEY

Dr. R.Kohila Devi
Assistant Professor of Education
Thiagarajar College of Preceptors, Madurai

Abstract

The Present Education System offers a high level of opportunity for the students in accessing inclusive education. Equity, equality, and individual opportunity are provided to all the students without any discrimination. Inclusive education aims to provide equitable access to quality education for all students, regardless of their diverse backgrounds and abilities. However, significant issues and challenges remain in addressing equity and accessibility issues. This research article presents findings from a comprehensive survey investigating these challenges in inclusive education settings. This survey research explores various dimensions such as infrastructure, teacher preparedness, policy implementation, and socio-cultural barriers. Recommendations for improving equity and accessibility are discussed, emphasizing the need for systemic changes, stakeholder engagement, and policy reforms.

Keywords: Inclusive education, equity, accessibility, policy implementation, socio-cultural barriers

Introduction

Inclusive education has emerged as a critical paradigm aimed at ensuring that all students, including those with disabilities and from marginalized communities, receive a quality education within mainstream settings. Despite international commitments and national policies promoting inclusivity, substantial gaps remain in achieving equity and accessibility. This research investigates these issues through a survey of educators, administrators, students, and parents, aiming to identify the most pressing barriers and potential solutions. Inclusive education is based on the principle that all children, regardless of their abilities or disabilities, should learn together in mainstream classrooms. This approach promotes diversity and equality, supporting the development of an inclusive society. It requires schools to accommodate all learners, adapting teaching methods and environments to meet individual needs.

Operational Definition of Key Terms

Inclusive Education: A teaching approach where students of all abilities and backgrounds learn together in the same classrooms. It involves providing appropriate support and accommodations to ensure every student's educational needs are met, and fostering an environment of acceptance and respect.

Equity: Ensuring fair treatment, opportunities, and resources for all students, recognizing and addressing the specific needs of individuals to overcome barriers to learning. Equity involves creating conditions that allow all students to succeed, especially those who have historically been marginalized or disadvantaged.

Accessibility: The design and implementation of educational environments, resources, and practices that enable all students, including those with disabilities, to fully participate and engage in learning. This includes physical access to facilities, as well as access to information, communication, and technology.

Objectives of the study

- To evaluate the existing infrastructure, tools, and resources available in inclusive education
- To identify the physical, social, and educational barriers that hinder full participation of students with disabilities
- To investigate the level of preparedness and ongoing professional development that educators
- To analyze the academic and social outcomes of students with disabilities in inclusive settings

Hypothesis of the Study

- Current accessibility measures in inclusive education settings are insufficient to meet the needs of all students with disabilities.
- Significant barriers, including lack of resources and negative social attitudes, prevent the effective inclusion of students with disabilities in mainstream classrooms
- Teachers in inclusive education settings do not receive adequate training and support to address the diverse needs of their students effectively.
- Students with disabilities in inclusive education settings do not achieve better social outcomes

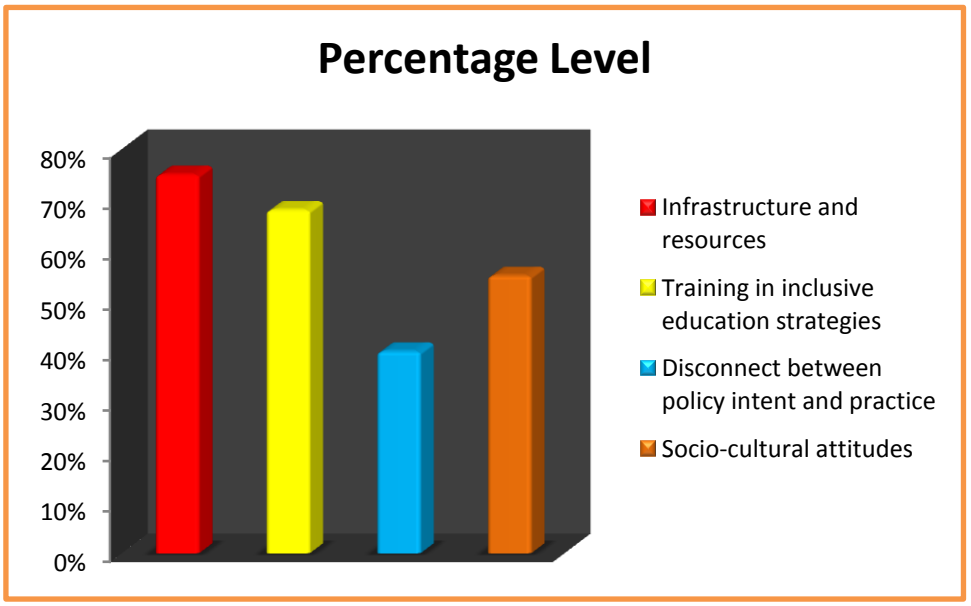
Methodology

The researcher employed a mixed-methods approach, utilizing both quantitative and qualitative data. A structured survey was distributed to a sample of 200 school students studying in inclusive schools. The survey consisted of Likert-scale questions, multiple-choice questions, and open-ended responses to capture a comprehensive view of the challenges and potential solutions in inclusive education.

Percentage Analysis and Interpretation

Major dimensions of equity and accessibility issues and its percentage level with diagrammatic representation

S. No.	Dimensions	Percentage Level
1	**Infrastructure and resources**	**78%**
2	**Training in inclusive education strategies**	**69%**
3	**Disconnect between policy intent and practice**	**46%**
4	**Socio-cultural attitudes**	**57%**



A significant majority of respondents (78%) indicated that inadequate infrastructure and resources are major barriers to inclusive education. Schools often lack necessary facilities such as ramps, accessible toilets, and specialized learning materials. The disparity is more pronounced in rural and economically disadvantaged areas. Approximately 69% of teachers reported feeling unprepared to effectively teach in inclusive classrooms. The survey highlighted a critical need for ongoing professional development and training in inclusive education strategies. Teachers also expressed a need for more support from special education experts and access to inclusive education resources. Only 46% of respondents believed these policies were effectively implemented. Issues cited include inadequate funding, lack of enforcement mechanisms, and insufficient monitoring and evaluation frameworks. There is a clear disconnect between policy intent and practice. Socio-cultural attitudes towards disability and diversity significantly impact the success of inclusive education. About 57% of respondents noted that stigma and discrimination against students with disabilities persist within school communities. There is a need for broader societal change to foster acceptance and inclusion.

Findings

78% indicated that inadequate infrastructure and resources are major barriers to inclusive education. Schools often lack necessary facilities such as ramps, accessible toilets, and specialized learning materials. Teachers also expressed a need for more support from special education experts and access to inclusive education resources up to 69%. 46% of students revealed that there is a clear disconnect between policy intent and practice and 57% of respondents noted that stigma and discrimination against students with disabilities persist within school communities

Conclusion

Achieving true equity and accessibility in inclusive education requires a multifaceted approach that addresses educational, cultural, and structural barriers. By implementing targeted

strategies and fostering a collaborative, well-resourced, and supportive educational environment, we can move closer to a world where all students have the opportunity to thrive. The survey highlights the importance of ongoing efforts to train educators, allocate resources effectively, and engage communities in the pursuit of truly inclusive education.

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A STUDY ON SNAPCHAT ADDICTION ON AMONG B. ED TEACHER TRAINEES

Mr. S. Kavimugilan
B.Ed. Student Teacher
Thiagarajar College of Preceptors, Madurai, Tamil Nadu

Dr. S. Anbalagan
Assistant Professor of Mathematics
Thiagarajar College of Preceptors, Madurai, Tamil Nadu

Abstract

This study examines the Snapchat addiction among B.Ed Teacher Trainees. Snapchat, a widely-used social media platform among young adults, has become an integral part of daily life, influencing various aspects of behavior and lifestyle. The research aims to explore the correlation between excessive Snapchat usage and its effects on students' academic achievements and their social interactions. A Normative survey Method was employed. The sample consisted of 130 B.Ed. Teacher trainees from Madurai District. Data analysis revealed a significant usage.
Keywords: *Snapchat addiction, Social Media and B.Ed. Teacher Trainees*

Introduction

In recent years, the widespread adoption of social media platforms has revolutionized the way individuals interact, communicate, and consume information. Among these platforms, Snapchat has emerged as one of the most popular choices, especially among younger demographics, including B.Ed students. While Snapchat offers various features for communication and entertainment, its addictive nature has raised concerns regarding its impact on academic performance and social well-being among students pursuing a Bachelor of Education degree.

Moreover, the curated nature of Snapchat content can contribute to feelings of inadequacy and comparison among B.Ed. Teacher trainees. The prevalence of filters and editing tools may create unrealistic standards of beauty and success, fostering a culture of comparison and self-doubt. This can exacerbate existing mental health issues and undermine self-esteem, further compromising social well-being. In light of these concerns, it is essential for B.Ed. Teacher Trainees to recognize the potential consequences of Snapchat addiction and adopt strategies to maintain a healthy balance between their online and offline lives.

Snapchat

Snapchat is a multimedia messaging app known for its unique features such as disappearing messages, photos, and videos. It allows users to send "Snaps" – pictures or short videos – to friends or post them to their "Story," a temporary collection of Snaps visible to selected contacts for 24 hours. Snapchat also offers filters, lenses, and stickers for creative editing, as well as features like Snap Map for location sharing and Discover for curated content from publishers and creators. Its ephemeral nature and interactive elements have made it popular, particularly among younger demographics, for casual communication, sharing moments, and staying entertained

Need and Significance of the Study

B.Ed. Teacher Trainees are future educators who will be responsible for shaping young minds. Understanding their social media habits and their impact can help in devising strategies to address similar issues in their future students. Snapchat addiction might lead to distractions, reduced study time, and decreased academic performance. Identifying these correlations can help in implementing interventions or educational programs to mitigate the negative effects. Social media addiction, including Snapchat, can impact interpersonal relationships, self-esteem, and mental health. Assessing its effects on social well-being can aid in offering support services or counseling to affected students. Insights from such studies can inform educational policies related to technology use in academic settings. It can help in establishing guidelines or educational initiatives to promote responsible social media usage among students.

Statement of the Problem

The problem under taken by the investigator is stated as **"A STUDY ON SNAPCHAT ADDICTION AMONG B.ED. TEACHER TRAINEES".**

Operation of Terms

Addiction to Snapchat

Addiction to Snapchat refers to a compulsive and excessive use of the social media platform Instagram, leading to negative impacts on a person's daily life, relationships, or mental well-being.

B.Ed. Teacher Trainees

B.Ed. Teacher Trainees refers to someone who is simultaneously a student in an educational program, typically pursuing a degree in education, and gaining practical teaching experience in a classroom setting under the guidance of a supervising teacher.

Objectives of the Study

The investigator of the present study framed the following objectives:

1. To find out the level of Addiction in Snapchat among B.Ed. teacher trainees
2. To find out whether there is significant difference in Addiction of Snapchat with respect to gender, types of college, medium of instruction, Locality of Student teacher living place, Marital status and Family Type

Hypothesis of the Study

The investigator of the present study framed the following hypotheses:

1. There is no significant difference between male and female B.Ed. Student Teacher in their Addiction to Snapchat with respect to gender.
2. There is no significant difference between Government Aided and Self-finance B.Ed. teacher trainees in their Addiction to Snapchat with respect to types of college.
3. There is no significant difference between Tamil and English B.Ed. Student Teacher in their Addiction to Snapchat with respect to Medium of Instruction.

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4. There is no significant difference between Rural and Urban B.Ed. teacher trainees in their Addiction to Snapchat with respect to Locality of Student teacher living place.
5. There is no significant difference between Married and Unmarried B.Ed. teacher trainees in their Addiction to Snapchat with respect to Marital status.
6. There is no significant difference between Nuclear Family and Joint Family B.Ed. teacher trainees in their Addiction to Snapchat with respect to Family Type.

The Method

In the present study, the investigator applied normative survey as a method. The normative survey method studies, describes and interprets what exists at present**.**

Population

The Population of the study was B.Ed. Student teachers in Madurai district

Sample

The present study consists of B.Ed. (Bachelor of Education) B.Ed. teacher trainees Addiction of Snapchat in Madurai District of Tamil Nadu, India. The sample was selected by using simple random sampling technique. The sample forms a representative sample of the whole population. The sample consisted of 130 students of whom 56 were Male and 74 were Female.

Delimitations of the Study

1. The present study is undertaken only in Madurai district
2. The investigator has chosen 130 B.Ed. teacher trainees' samples for this study

Tool Used for Present Study

The tool used for the present study was

(iii) Personal Data form

(iv) The Addiction of Snapchat Scale is constructed by the investigator and guide (2024).

Tools for Data Collection:

The Addiction of Snapchat scale was developed and constructed by investigator. This scale consists of as many as 25 items and each item has five alternative responses i.e. Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree.

Scoring:

Table: 01

Scoring Key

So the scoring to the response given by the students should be like the following

S.No	Response	Weightage
1	Strongly Agree	5
2	Agree	4
3	Neutral	3
4	Disagree	2
5	Strongly Disagree	1

Data Analysis

The level of B.Ed. Teacher Trainees Addiction of Snapchat

Table: 02

The level of B.Ed. Teacher Trainees Addiction of Snapchat

Addiction of Snapchat	Low Level		Moderate Level		High Level	
	N	%	N	%	N	%
	45	34.4	62	47.3	23	17.6

According to the table below, 34.4% of B.Ed. B.Ed. teacher trainees have low level, 47.3 % of B.Ed. teacher trainees have moderate and 17.6% have high level of B.Ed. 21st century Student Teacher Addiction of Snapchat. The level of B.Ed. teacher trainees Addiction of Snapchat is moderate

Null Hypothesis: 1

There is no significant difference between male and female B.Ed. teacher trainees in their Addiction to Snapchat with respect to gender.

Table: 03

Difference between Male and Female B.Ed. Teacher Trainees in their Addiction to Snapchat with Respect to Gender

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Gender	Male	56	81.21	7.933	3.18	**Significant**
	Female	74	85.26	6.536		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (3.18) is greater than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is rejected. It shows that there is significant difference between male and female B.Ed. student teacher in their addiction to Snapchat with respect to gender

Null Hypothesis: 2

There is no significant difference between Government Aided and Self-finance B.Ed. teacher trainees in their Addiction to snapchat with respect to types of college.

Table: 04

Difference between Government Aided and Self-Finance B.Ed. Teacher Trainees in their Addiction to Snapchat with Respect to Types of College

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Types of College	Government Aided	49	84.06	6.540	0.651	Not Significant
	Self-finance	81	83.19	7.925		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.651) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is No significant difference between Government Aided and Self-finance B.Ed. Student Teacher in their Addiction to Snapchat with respect to types of College

Null Hypothesis:3

There is no significant difference between Tamil and English B.Ed. teacher trainees in their Addiction to Snapchat with respect to Medium of Instruction.

Table: 05

Difference between Tamil and English B.Ed. Teacher Trainees in Their Addiction to Snapchat with Respect to Medium of Instruction

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Medium of Instruction	Tamil	43	83.02	6.752	0.530	Not Significant
	English	87	83.76	7.753		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.530) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that There is no significant difference between Tamil and English B.Ed. teacher trainees in their Addiction to Snapchat with respect to Medium of Instruction.

Null Hypothesis: 4

There is no significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Snapchat with respect to Locality of living place

Table: 06

Significant Difference between Rural and Urban B.Ed. Student Teacher in Their Addiction to Snapchat with Respect to Locality of Student Teacher Living Place

Variable	Sub- Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Locality of Student teacher living place	Rural	62	83.19	8.606	0.471	Not Significant
	Urban	68	83.81	6.194		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.471) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is significant difference between Rural and Urban B.Ed. Student Teacher in their Addiction to Snapchat with respect to Locality of Student teacher living place

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Null Hypothesis: 5

There is no significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Snapchat with respect to Married Status.

Table: 07

Significant Difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Instagram with Respect to Marital Status

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Marital status	Married	87	83.44	7.808	0.171	Not Significant
	Unmarried	43	83.67	6.647		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.171) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Snapchat with respect to Married Status**.**

Null Hypothesis: 6

There is no significant difference between Nuclear Family and Joint Family B.Ed. teacher trainees in their Addiction to Snapchat with respect to Family Type.

Table: 08

Significant Difference between Male and Female of B.Ed. Pre Service Trainees Perception of Classroom Technology in the Digital Age with Respect to Gender

Variable	Sub-Variables	N	M	S.D	't' - Value	Significance at 0.05 level
Family Type	Nuclear Family	77	84.23	6.909	0.77	**Not Significant**
	Joint Family	53	82.47	8.057		

(At 5% level of significance, the table value of 't' is 1.976)

It is inferred from the above table that calculated 't' value (0.77) is less than the table value (1.976) for df (2,148) and at 5% level of significance. Hence the null hypothesis is accepted. It shows that there is significant difference between Nuclear Family and Joint Family B.Ed. teacher trainees in their Addiction to Snapchat with respect to Family Type.

Major Finding of the Study

1. 34.4 % of B.Ed. B.Ed. teacher trainees have low level, 47.3% of B.Ed. teacher trainees have moderate and 17.6% have high level of B.Ed. Teacher trainees Addiction of Snapchat
2. There is significant difference between male and female B.Ed. teacher trainees in their Addiction to Snapchat with respect to gender.

3. There is no significant difference between Government Aided and Self-finance B.Ed. teacher trainees in their Addiction to Snapchat with respect to types of college.
4. There is no significant difference between Tamil and English B.Ed. teacher trainees in their Addiction to Snapchat with respect to Medium of Instruction.
5. There is no significant difference between Rural and Urban B.Ed. teacher trainees in their Addiction to Snapchat with respect to Locality of Student teacher living place.
6. There is no significant difference between Married and Unmarried B.Ed. Student Teacher in their Addiction to Snapchat with respect to Marital status.
7. There is no significant difference between Nuclear Family and Joint Family B.Ed. Student Teacher in their Addiction to Snapchat with respect to Family Type.

Interpretation and Discussion

The finding of result shows that male and female B.Ed. teacher trainees exhibit varying levels of engagement with Snapchat. This observation aligns with broader research indicating that gender influences social media usage patterns, with studies often noting that females tend to spend more time on social platforms compared to males. Possible factors contributing to this difference could include variations in socialization, interests, or motivations for using Snapchat.

Finding of present study point out that the significant difference between rural and urban B.Ed. teacher trainees in their addiction to Snapchat underscores the need for targeted interventions and collaborative efforts to address the digital divide and promote equitable access to technology and digital resources. By recognizing the unique challenges and opportunities associated with each locality, educators and policymakers can support the holistic development of student-teachers and foster a culture of digital inclusion within educational settings.

Recommendations for this Study

Develop Awareness Programs: Implement awareness programs and workshops within educational institutions to educate students about the potential negative impacts of excessive Snapchat usage on academic performance and social well-being.

Promote Digital Literacy: Integrate digital literacy courses into the curriculum to teach students about responsible social media usage, including strategies for managing time spent on platforms like Snapchat.

Encourage Balanced Technology Use: Advocate for a balanced approach to technology use, emphasizing the importance of offline activities such as face-to-face interactions, hobbies, and physical exercise to promote overall well-being.

Provide Counseling Services: Offer counseling services within educational institutions to support students who may be struggling with Snapchat addiction or experiencing negative effects on their academic performance and social well-being.

Parental Involvement: Educate parents about the potential risks associated with excessive Snapchat usage and involve them in discussions about setting appropriate boundaries and monitoring their children's online activities.

Monitor Academic Progress: Establish systems for monitoring students' academic progress and identifying potential correlations between excessive Snapchat usage and declines in academic performance.

Encourage Healthy Coping Mechanisms: Promote healthy coping mechanisms for stress and anxiety that do not involve excessive use of social media, such as mindfulness practices, exercise, and seeking support from friends and family.

Collaborate with Researchers: Collaborate with researchers in the field of psychology and social media addiction to further investigate the underlying mechanisms and potential interventions for Snapchat addiction among B.Ed. students.

Longitudinal Studies: Conduct longitudinal studies to track the long-term effects of Snapchat addiction on academic performance and social well-being, providing valuable insights for developing targeted interventions and support programs**.**

Conclusion

In conclusion, while Snapchat offers numerous benefits as in a communication and networking tool, its addictive nature poses significant challenges for B.Ed. teacher trainees. By acknowledging these challenges and implementing targeted interventions, educational institutions can empower student teachers to harness the potential of social media in a responsible and constructive manner, thereby promoting their overall well-being and success.

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BEST PRACTICES IN CAREER COUNSELLING FOR HIGH SCHOOL AND COLLEGE STUDENTS

K. Balasubramanian
Research Scholar, TNTEU, Chennai

M. Saratha
Research Scholar, TNTEU, Chennai

Abstract

Career counselling plays a vital role in guiding students to make informed career choices. This paper aims to outline the best practices in career counselling for high school and college students. The objectives are to understand the need for and importance of career counselling for students, define career counselling, discuss specific strategies for high school and college students, and provide recommendations to improve student career advising. The paper concludes that starting counselling early, using assessments, imparting work-readiness skills, enabling experiential learning, and leveraging technology are some best practices to guide students. Robust career education partnerships between counsellors, schools, and industry are critical.

Keywords: *Career, Counselling, Best Practices, School students, College students and Counsellors.*

Introduction

Choosing a career path is one of the most important decisions in a student's life. However, many students face dilemmas in identifying their interests and aptitudes, exploring options, and making informed career decisions. Here, effective career counseling provides crucial guidance to students for mapping their careers. This paper aims to delineate some best practices in career counseling, focusing on high school and college students.

Objectives of the Study

The objectives of this paper are:

- To understand the need for and importance of career counselling for high school and college students
- To define career counseling and its scope.
- To discuss specific career counseling strategies suitable for high school and college students
- To provide recommendations for improving student career advising and counseling.

Need for the Study

Career decisions made in high school and college have ramifications on students' future job prospects and career trajectories. However, many students lack self-awareness regarding their aptitudes. They also struggle to connect academic programs with career paths, often choosing college majors arbitrarily. Effective counseling is thus needed to guide students toward fulfilling careers. This paper seeks to formulate best practices that counsellors and schools can implement to improve student career advising.

Career Counselling - Operational Definition

Career counselling refers to specialized services aimed at helping students make informed educational and occupational choices. It typically involves assessments to understand students' personalities, interests, values, and skills. Counsellors use this information to guide students toward academic programs and career paths aligned with their goals. Career counselling may include classroom sessions, individual advisor meetings, career interest inventories, aptitude tests, mentorships, internships, and work-readiness training.

Career Counseling for High School Students

Here are some best practices in career counselling tailored for high school students:

- Start early: Introduce career advising for students starting 9th grade to expose them to various options.
- Offer career interest assessments: Administer questionnaires, surveys, and aptitude tests to help identify students' interests.
- Enable job shadowing: Arrange for students to shadow professionals in fields of interest to get hands-on exposure.
- Provide individualized guidance: Counsellors should meet one-on-one with each student to guide their subject selection and extracurricular activities.
- Impart work-readiness skills: Help students build job-search skills like resume writing, interviewing, and professional networking.
- Encourage experiential learning: Promote internships, volunteering, and community service to give students practical experience.
- Involve parents: Get parents on board regarding the child's career plans through counsellor interactions and career workshops.

Career Counseling for College Students

Some best practices in career counselling tailored for college students include:

Career assessment tests: Use psychometric and aptitude tests to help students identify majors aligned with interests and strengths.

Resume and LinkedIn profile reviews: Provide feedback to strengthen students' profiles and enhance employability.

Job search strategies: Advise students on networking, job boards, internships, and other techniques to tap into employment opportunities.

Interview preparation: Conduct mock interviews and share strategies to succeed in recruitment interviews.

On-campus job fairs: Enable students to connect with prospective employers by organizing university job fairs.

Strategies for developing Career counselling for high school and college students.

It involves a comprehensive approach to help individuals make informed decisions about their future paths.

Self-Exploration and Assessment

- Personality assessments: Utilize tools like Myers-Briggs Type Indicator (MBTI) or Holland Code to help students understand their personality traits and preferences.
- Interest inventories: Use assessments like the Strong Interest Inventory to identify students' interests and align them with potential career paths.
- Skill assessments: Help students identify their strengths and weaknesses through skills assessments to guide them toward suitable professions.

Educational Planning

- Academic advising: Guide course selection, extracurricular activities, and academic performance to align with career goals.
- Degree and major exploration: Assist students in researching and understanding different majors and degrees, considering their relevance to their career aspirations.

Career Exploration

- Industry research: Introduce students to various industries and career options, showcasing the current trends, job market demands, and growth prospects.
- Job shadowing and internships: Facilitate opportunities for students to gain real-world experience and insights into potential career paths.

Goal Setting

- Short-term and long-term goal setting: Help students set achievable goals that align with their career aspirations, considering both immediate and future objectives.
- Breaking down goals: Teach students how to break larger goals into smaller, manageable tasks, creating a roadmap for success.

Resume Building and Job Search Skills

- Resume writing workshops: Guide students in creating effective resumes that highlight their skills, experiences, and achievements.
- Job search strategies: Provide tips on effective job searching, including online platforms, networking, and utilizing career resources.

Interview Preparation

- Mock interviews: Conduct practice interviews to help students develop confidence, refine communication skills, and learn how to respond to common interview questions.
- Professional etiquette: Educate students on professional behavior, dress code, and communication norms in the workplace.

Networking and Building Professional Relationships

- Networking events: Encourage participation in industry-specific events, job fairs, and seminars to expand professional networks.
- LinkedIn and online presence: Guide students in creating and maintaining a professional online presence, including LinkedIn profiles.

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Adapting to Change

- Flexibility in career paths: Emphasize the importance of adaptability and openness to change as students navigate their careers.
- Lifelong learning: Encourage a mindset of continuous learning and skill development to stay relevant in a dynamic job market.

Post-Graduation Support

- Alumni connections: Facilitate connections between current students and alumni who can provide valuable insights and mentorship.
- Follow-up sessions: Conduct post-graduation check-ins to provide ongoing support and guidance as students transition into the workforce.

Cultural Sensitivity and Inclusivity

- Consider diverse perspectives: Recognize and respect cultural differences in career aspirations, ensuring that counseling services are inclusive and sensitive to various backgrounds.
- Addressing bias: Train counselors to be aware of and mitigate biases in career counseling, promoting fair and equitable guidance for all students.

Implementing these best practices can contribute to a holistic and effective career counseling program for high school and college students.

Recommendations

Some recommendations to further improve career counseling for students are:

- Start counseling earlier in middle school to provide more time for exploration.
- Make career education a larger part of the school curriculum and not just limited counselor interactions.
- Leverage technology like online portals, apps, and courses for scale and easier access.
- Form partnerships between counsellors, academic institutions, and industry/community partners.
- Include workplace visits, job shadowing and internship opportunities from high school itself.
- Train counsellors to provide inclusive and equitable guidance catering to diverse student needs.
- Obtain student feedback to assess counselling effectiveness and gaps.

Conclusion

Career decisions made early in life impact one's professional trajectory significantly. Investing in career education and counselling will enable students to make informed choices, aligning their academics and co-curricular toward fulfilling careers. Implementing best practices like assessments, experiential learning, and leveraging alumni networks while partnering with industry and parents will lead to more successful transitions from school to employment. Further research should assess counselling outcomes to promote evidence-based policies in this field.

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INNOVATIVE TEACHING METHODS FOR THE 21ST CENTURY LEARNERS

Dr. V. Vijayalakshmi
Assistant Professor of Tamil,
Thiagarajar College of Preceptors, Madurai District, Tamil Nadu

Abstract

This paper explores the evolving landscape of education, highlighting the growing need for innovative teaching methods. It delves into a range of these methods, encompassing technology-driven approaches like flipped classrooms and virtual reality, as well as established strategies like project-based learning and peer instruction. The paper analyzes the benefits of these methods, emphasizing their potential to increase student engagement, promote deeper understanding, and cultivate critical thinking skills. It acknowledges the importance of tailoring these methods to diverse learning styles and grade levels. Furthermore, the paper explores the challenges associated with implementing innovative teaching methods, including access to technology and the need for professional development for educators. It concludes by emphasizing the transformative power of innovative teaching methods in fostering a more dynamic and engaging learning environment for students of all backgrounds.

Keywords*: Flipped classroom, Blended learning, Virtual reality, Project-based learning.*

Introduction

The landscape of education is undergoing a dramatic transformation. The traditional, teacher-centered model is no longer sufficient to equip students with the skills and knowledge they need to thrive in the dynamic and information-rich environment of the 21st century. Today's learners are digital natives, accustomed to instant access to information and a world of interactive experiences. This necessitates a shift towards innovative teaching methods that cater to their unique learning styles and foster deeper engagement.

This paper explores a range of these innovative approaches, specifically focusing on flipped classrooms, blended learning, virtual reality (VR), and project-based learning. These methods share a common thread: they move away from passive learning and empower students to take an active role in their own education (Lang, 2016). **Flipped classrooms** invert the traditional classroom structure by delivering foundational content online, often through video lectures or interactive modules, and reserving face-to-face classroom time for deeper exploration, application, and collaborative activities (Bergmann & Sams, 2014).

Blended learning seamlessly integrates online and offline learning experiences, allowing for personalized learning paths and catering to diverse learning styles (Graham, 2013). **Virtual reality (VR)** immerses students in simulated environments, offering them the opportunity to explore complex concepts and historical periods in a way that traditional textbooks cannot (Akcayir & Akcayir, 2017). **Project-based learning** engages students in solving real-world problems through collaborative projects, fostering critical thinking, problem-solving, and communication skills (Buckley, 2017). By delving into these innovative methods, this paper aims to demonstrate their potential to transform the educational experience for the 21st century learner.

Need and Significance

Engaging 21st Century Learners

Today's students are digital natives who learn differently than previous generations. They crave interactivity, collaboration, and a connection between learning and the real world. Innovative methods like flipped classrooms and project-based learning address these needs, fostering deeper engagement and motivation.

Developing Critical Skills

The job market demands critical thinking, problem-solving, communication, and collaboration skills. Traditional lectures often fall short in developing these. Innovative methods like VR simulations and project-based learning provide students with opportunities to apply their knowledge, work together, and think critically to solve problems.

Catering to Diverse Learners

Every student learns differently. Innovative methods offer a wider variety of approaches, catering to auditory, visual, and kinesthetic learners. Blended learning, for example, allows students to learn at their own pace with online resources, while still benefiting from face-to-face interaction in the classroom.

Promoting Deeper Understanding

Innovative methods like VR can transport students to different historical periods or immerse them in complex scientific concepts. This firsthand experience fosters a deeper understanding of the material compared to traditional textbooks and lectures.

Preparing for the Future

The world of tomorrow is full of unknowns. Innovative teaching methods equip students with the adaptability, creativity, and critical thinking skills needed to thrive in any situation. They learn to be lifelong learners comfortable with change and capable of solving unforeseen problems.

Challenges in Implementation

1. Teacher Training and Comfort Level

New Skills and Approaches

Many innovative methods require educators to adopt new teaching styles and utilize unfamiliar technologies. Teachers may need professional development opportunities to become comfortable with these methods and confident in their execution. (Lang, 2016)

Shifting Mindsets

Traditional teacher training often emphasizes a teacher-centered approach. Transitioning to a student-centered approach, common in innovative methods, can be challenging for some educators.

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2. Time Constraints and Planning

Upfront Planning

Innovative methods often necessitate more upfront planning compared to traditional lectures. Developing engaging activities, crafting rubrics, and anticipating student needs can be time-consuming for busy teachers. (Krajcik & Blumenfeld, 2006)

Integrating with Curriculum

Effectively integrating innovative methods with existing curriculum standards can be a challenge. Teachers need to ensure the methods align with learning objectives and mandated assessments.

3. Resource Limitations

Technology Access

Many innovative methods, like flipped classrooms and VR, rely on technology access for both students and teachers. Unequal access to devices and internet connectivity can create barriers to implementation. (Bergmann & Sams, 2014)

Classroom Space

Some innovative methods, like project-based learning, might require flexible classroom layouts to facilitate collaboration and project work. Traditional classroom configurations might not be suitable for these activities.

4. Student Resistance and Adaptation

Unfamiliarity with New Methods

Students accustomed to traditional lectures might initially resist the shift to more active learning styles demanded by innovative methods. (Abeysekera & Dawson, 2015)

Differentiated Learning Needs

Catering to diverse learning styles within a single innovative method can be challenging. Teachers need to adapt their approach to ensure all students can participate meaningfully.

5. Assessment and Evaluation

Developing Effective Assessments

Traditional assessments might not be suitable for measuring the skills fostered by innovative methods. Educators need to develop new assessment strategies that accurately capture student learning.

Addressing Collaboration Challenges

Collaboration is a key component of many innovative methods. However, assessing individual contributions within a group project can be complex.

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Conclusion

The educational landscape is undergoing a transformation, demanding a shift from traditional, teacher-centered methods towards innovative approaches that cater to the unique needs of 21st century learners. This paper explored a range of these innovative methods, including flipped classrooms, blended learning, virtual reality, and project-based learning. These methods have the potential to revolutionize education by fostering deeper student engagement, promoting critical thinking skills, and preparing students for success in a rapidly changing world.

While there are undeniable challenges associated with implementing innovative teaching methods, such as teacher training needs, resource limitations, and student adaptation, these challenges can be overcome through a collaborative effort. Investing in professional development, fostering a culture of innovation among educators, and advocating for resources are essential steps in paving the way for successful implementation. Ultimately, the benefits of innovative teaching methods far outweigh the challenges. By embracing these methods, educators can create a more dynamic and engaging learning environment that empowers students to become lifelong learners and thrive in the unpredictable future that awaits them.

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ASSESSMENT OF LIFE SKILLS AMONG GRADE 10 STUDENTS IN BENGALURU

Dr. A. Srinivasacharlu
Faculty of Education, Green Educator
IGNOU Academic Counsellor & Research Supervisor
Sri Sarvajna College of Education (Govt. Aided & IGNOU PSC-13140P)
Vijayanagar, Bengaluru-560040, Karnataka, India

Abstract

The New Education Policy 2020 notes that the aim of education has to go beyond cognitive development by building character and creating holistic and well-rounded individuals equipped with key 21st-century skills. Life skills Education help to promote mental well-being and competence in adolescents as they experience numerous challenges and several problems. The present study involving survey method was carried out to find out the life skills among grade 10 students studying in government and private schools in Bengaluru. The study utilized self-made content validated life skills tool comprising three domains like thinking skills, personal skills and inter-personal skills. A sample of 103 grade 10 students were selected through simple random sampling. The study found out that girls and private school students have better thinking skills. Both urban and rural students have similar thinking skills. None of the demographic variables have any influence personal skills and interpersonal skills among students. Regarding overall life skills, girl students are found to have better life skills than boys. The study advocates for concerted initiatives from school administrators, teachers and parents for developing life skills among grade 10 students.

Keywords: *Life Skills, Grade 10 Students, Bengaluru and Life Skills Education*

Introduction

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19 (WHO). It is a unique stage of human development. Adolescents face the common challenges and problems like physical changes, physiological changes, **coping up with stress; peer pressure; drug abuse;** school problems; body image problem; **problems with family/parents; teenage pregnancy;** behaviour problem; health issue; emotional problems; anger issue; gender-related problems etc. Due to these challenges and problems, they have a tough time in coping-up with stress. Stanley Hall rightfully called this period "Stress and Storm" Thus, to grow and develop in good health, adolescents among others, need opportunities to develop life skills etc.

Life Skills and Life Skills Education

According to WHO 1997, life skills are "the abilities for adaptive and positive behaviour that enable humans to deal effectively with the demands and challenges of everyday life." The ten Core Life Skills include: Self-Awareness; Empathy; Critical Thinking; Creative Thinking; Decision Making; Problem Solving; Interpersonal Relationship; Effective Communication; Coping with Stress; Coping with Emotions. Life skills education cultivates life skills among students and enables them to reach their full potentials and prepare for the challenges of everyday life. It is recognized as a methodology to address a variety of issues of child and youth development as expressed in UNGASS on HIV/ AIDS (2001), UNGASS on Children (2002), World Youth Report (2003), World Program for Human Rights Education (2004), UN Decade

on ESD (2005), UN Secretary General's Study on Violence Against Children (2006), 51st Commission on the Status of Women (2007), and the World Development Report (2007).

Need and Importance of the Study

Adolescence is a critical period during which remarkable physical and psychological changes take place. Adolescents stretch their relations beyond their family and are highly influenced by outside world, social media etc. In addition, they are vulnerable to experimentation and risk taking, giving in to negative peer pressure, of taking uninformed decisions on crucial issues. It is generally seen that because of these changes, emotional discomfort, inability, anxiety, conflicts are aroused time and again in their lives. The NEP 2020 notes that the aim of education has to go beyond cognitive development by building character and creating holistic and well-rounded individuals equipped with key 21st-century skills. Life skills education would facilitate adolescents to develop life skills which enable them to face the challenges of adolescence and prepare for adult life. The present study was conducted to assess the life skills among grade 10 students studying in Bengaluru, Karnataka, India.

Objectives

1. To construct and content validate the dimension wise life skills tool for grade 10 students.
2. To study the influence of demographic variables on life skills and its three dimensions.

Variables

Demographic Variables: Place of Residence (Urban and Rural)**;** Gender (Male and Female); Type of School (Government and Private)

Dependent Variable: Life Skills (thinking skills, personal skills and interpersonal skills)

Operational Definitions

Life Skills: They are the abilities for adaptive and positive behaviour that enable humans to deal effectively with the demands and challenges of everyday life. The 10 life skills are grouped under Thinking Skills (Creative Thinking, Critical Thinking, Decision Making and Problem Solving), Personal Skills (Self Awareness, Coping with Emotions and Coping with Stress) and Interpersonal Skills (Communication Skills, Inter-Personal Relationship and Empathy). **Grade 10 Students:** It implies adolescents studying in grade 10. They include boys and girls, urban and rural students and students studying in government and private schools in Bengaluru.

Method of Research

The study involved quantitative survey method for collecting the data.

Sampling

Simple random sampling technique was followed in drawing the sample of 103 grade 10 students studying in government and private schools in Bengaluru in Karnataka.

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Research Tool

The researcher constructed life skills tool and obtained its content validation from experts. The tool had it try out on ten grade 10 students. The final tool has 30 items spreading equally among three dimensions. 40 minutes of time is stipulated responding to the tool: **Dimension A: Thinking Skills:** It has 8 multiple choice questions and 2 puzzles covering life skills such as Creative Thinking, Critical Thinking, Decision Making and Problem Solving. One mark was given for choosing correct option and incorrect or omitted question was given zero mark. For the two puzzles, students have to write answer. Correct answer was given one mark and incorrect or non-responding was given zero mark. **Dimension B: Personal Skills:** It has 10 positive statements with varying degrees of responses such as Strongly Agree (5), Agree (4), Undecided (3), Disagree (2) and Strongly Disagree (1). It covers life skills such as Self Awareness, Coping with Emotions and Coping with Stress. **Dimension C: Interpersonal Skills:** It has 10 positive statements with varying degrees of responses as followed for dimension B. It covers Communication Skills, Inter-Personal Relationship and Empathy.

Data Analysis and Interpretation

Dimension A: Thinking Skills

$H_0$1: There is no significant difference in the thinking skills of boys and girls of grade 10.

$H_0$2: There is no significant difference in the thinking skills of urban and rural students of grade 10.

$H_0$3: There is no significant difference in the thinking skills of government and private school students of grade 10.

Table 1: Thinking Skills in Grade 10 Students w.r.to Gender, Locality and School

Demographic Variable	N	Mean	SD	t-value	Levels of Significance
Boys	50	8.280	0.729	4.004	Significant at 0.01 Level
Girls	53	8.868	0.761		
Urban	77	8.662	0.788	1.753	Not Significant at 0.05 Level
Rural	26	8.347	0.797		
Government	52	8.404	0.823	2.345	Significant at 0.01 Level
Private	51	8.765	0.737		

Based on the 't' value, it can be inferred that gender and type of school have influence on the thinking skills among students of grade 10. Girls are found to have better thinking skills than boys. In studies examining connections within the brain, it has been found that women tend to have stronger connections side to side, which could lead to better intuitive thinking, analysing, and drawing of conclusions. Students studying in private schools are found to have better thinking skills than those studying in government schools. It can be attributed to regular specific initiatives taken up at private schools in developing thinking skills in their students. There is no significant difference in the thinking skills of urban and rural students. Thus, it can be inferred that locality has no influence on the thinking skills in students. It can be attributed to opinion that students irrespective of their locality are exposed to realities of the world.

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Dimension B: Personal Skills

$H_0$4: There is no significant difference in the personal skills of boys and girls of grade 10.

$H_0$5: There is no significant difference in the personal skills of urban and rural students of grade 10.

$H_0$6: There is no significant difference in the personal skills of government and private school students of grade 10.

Table 2: Personal Skills in Grade 10 Students w.r.to Gender, Locality and School

Demographic Variable	N	Mean	SD	t-value	Levels of Significance
Boys	50	30.34	5.101	1.237	Not Significant at 0.05 Level
Girls	53	28.623	8.639		
Urban	77	39.623	2.026	0.369	Not Significant at 0.05 Level
Rural	26	39.769	1.632		
Government	52	39.404	1.818	1.367	Not Significant at 0.05 Level
Private	51	39.229	2.018		

Based on the 't' value, it can be seen that gender, locality and type of school have no influence on the level of personal skills among students of grade 10. It means both boys and girls of grade 10 are found to have similar level of personal skills. Both urban and rural students of grade 10 are found to have similar level of personal skills. Additionally, grade 10 students studying in government and private are found to have similar level of the personal skills.

Dimension C: Interpersonal Skills

$H_0$7: There is no significant difference in the interpersonal skills of boys and girls of grade 10.

$H_0$8: There is no significant difference in the interpersonal skills of urban and rural students of grade 10.

$H_0$9: There is no significant difference in the interpersonal skills of government and private school students of grade 10.

Table 3: Interpersonal Skills in Grade 10 Students w.r.to Gender, Locality & School

Demographic Variable	N	Mean	SD	t-value	Levels of Significance
Boys	50	38.380	1.576	0.226	Not Significant at 0.05 Level
Girls	53	38.453	1.693		
Urban	77	38.455	1.721	0.466	Not Significant at 0.05 Level
Rural	26	38.308	1.349		
Government	52	38.231	1.664	1.176	Not Significant at 0.05 Level
Private	51	38.608	1.588		

Based on the 't' value, it can be inferred that gender, locality and type of school have no influence on the level of interpersonal skills among students of grade 10. It means both boys and girls; urban and rural students; and students of government and private schools of grade 10 are found to have similar level of the interpersonal skills.

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Summative Life Skills

$H_0$10: There is no significant difference in the life skills of boys and girls of grade 10.
$H_0$11: There is no significant difference in the life skills of urban and rural students of grade 10.
$H_0$12: There is no significant difference in the life skills of government and private school students of grade 10.

Table 4: Life Skills in Grade 10 Students w.r.to Gender, Locality & School

Demographic Variable	N	Mean	SD	t-value	Levels of Significance
Boys	50	85.6	2.748	3.192	Significant at 0.01 Level
Girls	53	87.66	3.752		
Urban	77	86.74	3.70	0.479	Not Significant at 0.05 Level
Rural	26	86.423	2.595		
Government	52	86.038	3.266	1.87	Not Significant at 0.05 Level
Private	51	87.294	3.540		

Based on the 't' value, it can be inferred that there is a significant difference in the level of life skills between boys and girls of grade 10. Girls are found to have better life skills than boys. However, locality and type of school have no influence on the level of life skills among students of grade 10. This means that urban and rural students; and students of government and private schools of grade 10 are found to have similar level of the life skills.

Overall, it can be inferred that girls of grade 10 are having better thinking skills and overall life skills than boys.

Educational Implications

1. Life Skills are very important for adolescents given the stage they are in. They play a vital role in building personality and develop skills to face the problems in life.
2. Schools should adopt life skill education in their regular schedule.
3. The teachers should have positive attitude and commitment to give life skills education.
4. Schools should enable their teachers to get periodically trained in life skills education.
5. Schools should provide for adequate resources to teachers to take up wide variety of strategies in imparting life skills education.
6. Schools and Teachers should identify the specific adolescents who are lacking in life skills and conduct intervention in those areas.
7. The following strategies can be taken up by the teachers to develop life skills in students:

Screening of Documentaries/Films: The teacher can screen documentaries or films on great personalities like Swamy Vivekananda, B.R. Ambedkar, Abdul Kalam etc. In addition, documentaries and videos on brave children can be screened. All these can help to develop skills like confidence, positive attitude etc.

Invite Role Models: The teacher can invite scientists, legends and celebrities to give talk. This can help the students to realize that in spite of hardships they had come out with flying colours due to their determination, hard work, positive attitude, adaptation etc.

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Organize Games: The teacher can organize games like Chinese Whispers (communication skills), Do unto others (Empathy), Escaping from Mystery Island (creative thinking, critical thinking, problem solving, decision making and coping skills), Giving Gifts (understanding about others and their perception about oneself) etc.

Camp and Educational Excursion: These programmes can help to develop team spirit, tolerance to others, understanding others, interpersonal relationships, helping others etc.

Brainstorming: The teacher can organize brainstorming which helps the students to develop creative thinking, communication skills, tolerance to other perceptions etc.

Visit to Orphanage Centre and Old age Home: Visit to orphanage centre and old age home can help the students to develop empathy towards the problems of others.

Laboratory Work: The teacher should encourage the students to carryout independent and group experiments in the laboratory. This will help them to develop and practice critical thinking, team spirit, decision making, problem solving attitude etc.

Co-curricular Activities: The teacher can motivate the students to participate in co-curricular activities like sports, singing, dance, quiz, essay, drawing, elocution etc. This can help them to nurture their talents, develop confidence, new thinking etc.

DE-Limitations

1. The study is confined to find out the life skills grade 10 students studying in government and private schools.
2. The study is confined to a sample of 103 students drawn from few schools in Bengaluru.
3. The study is confined to measure the influence of locality, gender and type of school.
4. The life skill tool is only content validated.
5. The researcher has not seen the demonstration of life skills by sample in actual situations.

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MATHEMATICAL COMMUNICATION SKILLS IN PEDAGOGY OF MATHEMATICS

Mr. M. Gowrishankar
Doctoral Scholar, Meston College of Education (Autonomous), Royapettah, Chennai

Dr. J. Johnsi Priya
Assistant Professor and Research Supervisor, Meston College of Education (Autonomous), Royapettah, Chennai

Abstract

Effective communication lies at the heart of mathematics, facilitating the exchange of ideas, discoveries, and insights among mathematicians and with broader audiences. This paper presents a comprehensive overview of mathematical communication skills essential for success in various mathematical endeavors. It explores key aspects such as clarity and precision in mathematical expression, mastery of notation and symbols, proficient proof writing, adept visualization techniques, and the art of verbal communication. Audience awareness and ethical considerations are also highlighted as integral components of mathematical communication. Drawing upon existing literature and pedagogical practices, this paper offers insights and recommendations for educators, researchers, and students seeking to enhance their mathematical communication skills. By fostering proficiency in mathematical communication, individuals can contribute more effectively to mathematical research, education, and broader societal discourse.
Keywords: *Mathematics Communication Skills, Mathematics Language, Collaborative problem-solving.*

Introduction

Mathematical communication skills refer to the ability to effectively convey mathematical ideas, concepts, reasoning, and solutions to others. This involves using appropriate mathematical language, symbols, diagrams, and representations to articulate mathematical thoughts clearly and logically. Strong mathematical communication skills enable individuals to express their understanding of mathematical concepts, collaborate with others, and effectively communicate their findings or solutions in various contexts, such as written explanations, oral presentations, or mathematical discussions.

Communication plays a crucial role in both mathematics and mathematics education. Highlighted the significance of prioritizing communication in mathematics learning due to two crucial reasons: mathematics serves as a cognitive tool for problem-solving and as a social activity. Similarly, asserted that mathematical communication plays a crucial role in students' development of mathematical concepts and strategies. It is essential for students to succeed in approaching and solving mathematical problems, as well as for them to exchange information, share thoughts and discoveries, and refine their mathematical ideas. The proficiency of students' mathematical communication skills is of utmost significance as it directly impacts the learning process in the classroom.

Mathematical communication refers to the students' capacity to articulate their mathematical concepts using language, notation, or symbols, enabling them to comprehend, interpret, describe relationships, and solve real-world problems by means of mathematical

models, both verbally and in written form. Students' proficiency in mathematical communication serves as an indicator of their depth of understanding in mathematics. Moreover, the mathematical communication process is anticipated to facilitate students in developing proficiency in mathematical thinking, critical analysis, and systematic reasoning. Insufficient communication skills will impede students' comprehension and consequently lead to suboptimal academic achievements.

Strategies to Enhance Mathematics Communication in Classrooms

Strategies to Enhance Mathematics Communication in Classrooms

Important of Mathematical Communication Skills

Mathematical communication skills are crucial for several reasons

Understanding and Learning: When students communicate their mathematical ideas, they deepen their understanding of concepts. Explaining a solution or reasoning to others helps consolidate knowledge.

Collaboration: Effective communication allows students to work together on problem-solving tasks. Discussing strategies, sharing insights, and critiquing each other's work enhance collaboration.

Real-World Applications : In the real world, mathematicians, scientists, and engineers need to communicate their findings, hypotheses, and models. Strong mathematical communication skills enable professionals to convey complex ideas clearly.

Assessment: Teachers assess students' understanding through their communication. Written explanations, oral presentations, and visual representations provide insight into their grasp of mathematical concepts.

Problem Solving: Clear communication is essential for solving mathematical problems. Whether it's writing proofs, explaining algorithms, or justifying solutions, effective communication is integral to problem-solving.

In summary, mathematical communication skills foster deeper understanding, collaboration, and real-world applicability. They empower students to express their mathematical thinking clearly and confidently.

Strategies to Enhance Mathematical Communication Classrooms

1. **Clarity and Precision**: Mathematical language requires precision. Practice expressing mathematical ideas clearly and concisely. Avoid ambiguous language and define terms precisely.
2. **Use of Notation**: Familiarize yourself with standard mathematical notation and use it consistently. This makes your communication more efficient and clearer to those who understand the notation.
3. **Visualization**: Use visual aids like graphs, diagrams, and charts to illustrate concepts. Visual representations can often convey complex ideas more effectively than words alone.
4. **Analogies and Metaphors**: Use analogies and metaphors to relate mathematical concepts to familiar situations. This can help make abstract ideas more concrete and easier to understand.

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5. **Examples and Counterexamples**: Provide examples to illustrate concepts and demonstrate their application. Similarly, use counterexamples to clarify misconceptions and highlight exceptions.
6. **Structured Explanations**: Organize your explanations logically, starting with an introduction to the concept, followed by the main ideas, and concluding with a summary or recap. This helps your audience follow your reasoning.
7. **Active Listening and Feedback**: When communicating mathematically, actively listen to questions and feedback from your audience. Adjust your explanations based on their level of understanding and address any confusion promptly.
8. **Practice Communication**: Practice explaining mathematical concepts to others, whether it's through tutoring, teaching, or discussing with peers. Teaching others is one of the most effective ways to reinforce your own understanding and improve communication skills.
9. **Writing**: Develop your mathematical writing skills by composing clear and well-structured explanations, proofs, and mathematical arguments. Pay attention to grammar, punctuation, and formatting to enhance readability.
10. **Seeking Feedback**: Solicit feedback from peers, instructors, or mentors on your mathematical communication skills. Constructive criticism can help you identify areas for improvement and refine your communication strategies.
11. **Engage in Discussions**: Participate in mathematical discussions, both online and offline. Engaging in debates and discussions about mathematical concepts can help you refine your arguments and communication skills.
12. **Reflection**: Reflect on your own communication experiences. After giving a presentation or explaining a concept, think about what went well and what could be improved. Use this feedback to continually refine your communication skills.
13. By incorporating these strategies into your practice, you can enhance your mathematical communication skills and effectively convey complex mathematical ideas to others.

Essentials of Mathematical Communication Skills for Teachers and Students

Mathematical communication skills are essential for both teachers and students for several reasons:

For Teachers:

1. **Effective Instruction**: Teachers need to communicate mathematical concepts clearly and accurately to their students. Strong communication skills enable teachers to explain complex ideas in ways that are understandable to learners with varying levels of mathematical proficiency.
2. **Facilitating Learning**: Teachers with good communication skills can facilitate classroom discussions, encouraging students to ask questions, share ideas, and engage with mathematical concepts actively. This interaction fosters deeper learning and understanding.
3. **Providing Feedback**: Clear communication allows teachers to provide constructive feedback to students, helping them identify areas for improvement and reinforcing their strengths. Feedback is crucial for student growth and development in mathematics.

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4. **Adapting Teaching Strategies**: Effective communication enables teachers to assess students' understanding and adjust their teaching strategies accordingly. They can use different methods, such as visual aids, analogies, or real-world examples, to make mathematical concepts more accessible and engaging.
5. **Building Relationships**: Strong communication skills help teachers build positive relationships with their students, fostering trust and mutual respect. A supportive learning environment encourages students to take risks, ask questions, and actively participate in their mathematical learning journey.

For Students:

1. **Understanding Concepts**: Mathematical communication skills enable students to articulate their thoughts, ask questions, and seek clarification when they encounter difficulties. By effectively communicating with their teachers and peers, students can deepen their understanding of mathematical concepts.
2. **Problem Solving**: Communication is essential for problem-solving in mathematics. Students need to be able to communicate their strategies, reasoning, and solutions clearly and logically. Through discussions and collaboration, students can learn from each other's approaches and develop more robust problem-solving skills.
3. **Confidence Building**: The ability to communicate mathematical ideas effectively can boost students' confidence in their abilities. When students can articulate their reasoning and solutions with clarity, they feel more confident tackling challenging problems and exploring new mathematical concepts.
4. **Collaboration**: Mathematical communication skills are vital for collaborative learning. By sharing ideas, discussing strategies, and explaining concepts to each other, students can work together to solve problems and deepen their understanding collectively.
5. **Real-World Applications**: Effective communication in mathematics extends beyond the classroom to real-world contexts. Students who can communicate mathematical ideas clearly are better equipped to apply their knowledge in various practical situations, such as in science, engineering, finance, and everyday problem-solving.

Improve mathematical communication skills

Improving mathematical communication skills involves clarity, precision, and coherence. Here are some tips:

1. **Clarity and Conciseness**: Clearly articulate your thoughts and ideas. Use precise language and avoid unnecessary jargon or ambiguity. Be concise in your explanations, focusing on the key points.
2. **Logical Structure**: Organize your mathematical arguments in a logical manner. Start with a clear statement of the problem or theorem, followed by your approach or proof, and conclude with a summary or conclusion.
3. **Visual Aids**: Utilize visual aids such as diagrams, graphs, or tables to enhance understanding. Visual representations can often convey complex ideas more effectively than text alone.

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4. **Examples and Counterexamples**: Support your explanations with relevant examples to illustrate concepts. Additionally, consider providing counterexamples to clarify conditions or limitations.
5. **References**: Cite relevant sources and references to support your arguments or to provide further reading for interested readers. This enhances the credibility of your work and allows readers to explore the topic in more depth.
6. **Peer Review**: Seek feedback from peers or mentors on your mathematical communication. Constructive criticism can help you identify areas for improvement and refine your skills over time.
7. **Practice, Practice, Practice**: Like any skill, improving mathematical communication requires practice. Engage in regular mathematical writing, whether it's through problem-solving, theorem proofs, or exposition of mathematical concepts.

Conclusion

The development of strong mathematical communication skills is crucial for students to effectively engage with and comprehend mathematical concepts. Through verbal reasoning, written explanations, and collaborative problem-solving, students not only deepen their understanding of mathematics but also enhance their ability to articulate and justify their reasoning. Furthermore, fostering a classroom environment that encourages mathematical discourse and provides opportunities for students to communicate their ideas promotes active learning and meta-cognitive reflection. Educators play a pivotal role in nurturing these skills through intentional instruction and meaningful feedback. By prioritizing mathematical communication in the pedagogy of mathematics, educators can empower students to become confident and proficient mathematical communicators.

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INNOVATIVE TEACHING METHOD IN EDUCATION

P.G. Hemasri
Ph.D, *Research Scholar, TNTEU*

Abstract

The digital revolution has dramatically changed the nature of work and the skills required to succeed in the 21st century but the educational curriculum struggling to keep pace. In present day, numerous educators are actively steering their classroom away from such scenarios aiming to engage students more deeply in the learning process by exploring modern teaching methods. The educational landscape is evolving rapidly, demanding that you stay abreast of and to more contemporary strategies.

Introduction

Innovative teaching methods extend beyond the mere incorporation of cutting edge teaching methods or a constant pursuit of the latest educational trends. These modern methods of teaching prioritize students, emphasizing classroom engagement and interaction. Innovative teaching strategies encourage proactive students and collaboration among the students and the teacher. While this demands increased effort from students, approach is tailored to better meet their individual needs, fostering accelerated growth.

Key Characteristics of Innovative Teaching

- Blended and Flipped learning
- Creative methodology in communication
- Activity based Teaching
- Brainstorming Exercise
- Quiz and Review Assessment

Teaching methods are the broader techniques used to help students achieve learning outcomes, while activities are the different ways of implementing these methods.

Teaching methods vary in their approach, some are more student-centered while others are more instructor centered, and you will see this reflected in the chart. Teaching methods help students

- Master the content of the course learn how to apply the content in particular contexts
- Learn how to apply the content in particular contexts
- Instructors should identify which teaching methods will properly support a particular learning. Its effectiveness depends on this alignment. To make the most appropriate choice, an instructor should consider learning outcomes, student needs and the learning environment.

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Teaching Approach	Teaching Method	Definition/ What students do	Activities
Teacher-Centered	Lecture	Instructor presenting material and answering student questions that arise. Students receive, take in and respond	Demonstration, modeling, questions (convergent), presentation, slideshow, note-taking
	Directed Discussion	Class discussion that follows a pre-determined set of questions to lead students to certain realizations or conclusions, or to help them meet a specific learning outcome	Direct, specific, or open-ended questions that are connected to learning outcomes and include varied cognitive processes
	Direct Instruction	Lecturing, but includes time for guided and independent practice	Create mind/concept maps, free writes, one-sentence summary, one minute papers
	Guided Instruction	Direct and structure instruction that includes extensive instructor modeling and student practice time	Showing and explaining examples, model strategies, demonstrate tasks, classify concepts, define vocabulary, scaffold steps
	Just-in-Time Teaching	Instructor adjusts class activities and lectures to respond to the misconceptions revealed by assessing students' prior knowledge	Warmups, Goodfors, Conceptual questions (usually a quiz) to motivate students to do the readings
Student-Centered	Interactive Lecture	A lecture that includes 2-15 minute breaks for student activities every 12-20 minutes.	Multiple-choice items, solving a problem, comparing and filling in lecture notes, debriefing a mini case study, pair-compare, pair-compare-ask, reflection/reaction paragraph, solve a problem, concept mapping activities, correct the error, compare and contrast, paraphrase the idea, answer knowledge and comprehension questions
	Experiential Learning	Students focus on their learning process through application, observation and reflection	Debates, panel discussion, press conference, symposium, reflection journals, lab experiments

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	Case-based Learning	Students apply course knowledge to devise one or more solutions or resolutions to problems or dilemmas presented in a realistic story or situation	Case study analysis, collaborative scenario-based discussions
	Inquiry-based or Inquiry Guided Learning	Students learning or applying material in order to meet a challenge, answer a question, conduct an experiment, or interpret data	Worked examples, process worksheets, analyze data sets, evaluate evidence, apply findings to a situation or problem and synthesize resolution(s), answer probing questions about a given research study, ask and answer "What will happen if…?" questions
	Problem-based Learning	Student groups conducting outside research on student-identified learning issues (unknowns) to devise one or more solutions or resolutions to problems or dilemmas presented in a realistic story or situation	Review and critique research studies, work in groups/teams to solve a specific open-ended problem, labs
	Project-based Learning	Students applying course knowledge to produce something; often paired with cooperative learning	Group work/team project – design or create something – e.g., piece of equipment, a product or architectural design, a computer code, a multimedia presentation, an artistic or literary work, a website, research study, service learning
	Role Plays and Simulations	Students acting out roles or improvising scripts, in a realistic and problematic social or interpersonal situation. Students playing out, either in person, or virtually, a hypothetical social situation that abstracts key elements from reality	Real-life situations and scenarios, debates, interviews, frame simulation
	Fieldwork and Clinicals	Students learning how to conduct research and make sound professional judgments in real-world situations	Internships, assistantships, community service, shadowing

Choose Your Methods

- **Step 1:** Review your learning outcomes.
- **Step 2:** Identify the teaching methods that best align to these learning outcomes and fill in the appropriate column.
- **Step 3:** Consider possible activities which will next be examined in further detail.
- **Learning outcome:** Solve a complex math equation.
- **Learning environment:** An in person, upper-level math course with 20 students.

References:

- *Table adapted from: Nilson (2016)*
- *Britannica*
- *Piogroup*
- *Kalturblog*

EXPLORING THE IMPACT OF MINDFULNESS BASED SOCIAL-EMOTIONAL LEARNING ON ENGLISH LANGUAGE ANXIETY: A CLASSROOM INTERVENTION STUDY

P.K. Manju
Research Scholar, NSS Training College, Ottapalam, University of Calicut

Dr. D. Minikumari
Assoc. Prof in Mathematics Education, NSS Training College, Ottapalam, University of Calicut

Abstract

Education is not just about academic achievement; it also encompasses the holistic development of students. In this dynamic world, students need to develop skills that go beyond traditional academic knowledge. Emotional intelligence is increasingly recognized as a key factor in academic and personal success. Students are often bombarded with distractions in this digital age making it difficult for them to concentrate on their studies. They face a multitude of stressors including academic pressure, social media and personal challenges. Mindfulness in education is significant in the 21st century because it equips students with the tools they need to thrive academically, emotionally and socially in an increasingly complex and demanding world. Mindfulness practices have been shown to improve mental health, reduce stress and enhance overall wellbeing. By integrating mindfulness practices with social and emotional learning strategies, educators can support the holistic development of students and create a more nurturing and conducive learning environment. This paper explores the potential of Mindfulness based Social-Emotional Learning program (MBSEL) for alleviating stress and anxiety in the realm of second language acquisition. Through a review of existing literature, the paper investigates how mindfulness practices can be integrated with social and emotional learning strategies to alleviate English language anxiety and to improve overall performance of students in second language classroom. The study explores how Mindfulness based Social-Emotional Learning influences English language anxiety among a sample of higher secondary students of Kerala. The feedback from students suggests that there's a noticeable decrease in anxiety and stress levels during the second language classes coupled with an enhanced level of engagement. The paper suggests Mindfulness based Social-Emotional learning as a potential strategy promoting holistic development empowering second language learners.

Keywords: *Mindfulness, Social and Emotional Learning, English Language Anxiety, English as second language(ESL), English as foreign language(EFL)*

Language is a crucial component of life that reflects individuality by sharing one's feelings, thoughts, and emotions. Learning a language is a complex process that necessitates the development of different skills in order to fully utilise it effectively. Learning a second language not only improves memory and listening skills but also makes a person more successful in many other areas such as marketing, technology, and international business. It is impossible to deny or disregard the significance of English as a thought, knowledge, and communication medium in the context of the developing global community. English has grown in importance in India as a library language, an associate language, and a powerful tool for building

relationships abroad. Learning a second language is more difficult than learning a first language; it requires more effort and practise, and there are more challenges to overcome. Due to socio-cultural and demographic factors, English language teaching and learning in classrooms in India is still in crisis. Researchers discovered that a wide range of circumstances can negatively affect the learning of a second language. Learning a foreign language is likely to cause negative emotions brought on by linguistic difficulties in combination with psychological variables to induce feelings of apprehension and uneasiness (Wray, 2002). English being a foreign language, one of the biggest challenges students have when learning the language is anxiety.

Anxiety is one of the major problems faced in an English classroom, and it is a result of the students' affective characteristics. Even if they understand the message, pupils who have attitudes that are not favourable to learning a second language will likely seek out less information and have a high or strong affective filter, which inhibits the input from reaching the area of the brain that is responsible for language acquisition or the language acquisition device (Krahnke & Krashen, 1983). Horwitz et al. (1986) defined foreign language anxiety as "a different complex of self-perceptions, attitudes, feelings, and behaviours connected with classroom language learning resulting from the distinctiveness of the language learning process." Numerous studies have examined the connection between learning a language and anxiety (Horwitz et al., 1986; Young, 1992), all of which contend that anxiety has a major impact on language acquisition and performance.

Students who are anxious of using English language may experience tension, trepidation, or even shyness. According to Pappamihiel (2002) English language anxiety is "social anxiety," based on interpersonal interactions. English Language Anxiety, also known as Xenoglossophobia, is the sensation of uneasiness, worry, nervousness, or apprehension that is experienced while learning or using English language (Boettger & Koeltzsch, 2020). An individual's level of intelligence plays a considerable effect in how well they learn English, but emotional intelligence plays the most crucial role in deciding whether they succeed or fail. Goelman (1998) asserts that emotional intelligence accounts for 80% of the factors that contribute to success. Emotional intelligence helps people to navigate the web of human relationships and understand both their own and others' feelings. In the process of learning a language, emotional intelligence benefits both internal systems and the surrounding environment (Rouhani, 2008). The researchers recommended that in order to enhance and boost students' academic achievements, a supportive learning environment should be created to foster the development of emotional intelligence.

Social and Emotional Learning (SEL) has become widely accepted in educational settings as a means to help individuals manage emotions, develop self-awareness, and cultivate pro social behavior. SEL can significantly impact English language anxiety among students (Kocalï & Aşık, 2022) Schools, districts, and even entire countries are adopting various SEL initiatives to assist individuals in navigating intricate feelings and fostering tranquility and inner peace. It enables individuals to recognize and harness their emotions, thoughts, strengths, weaknesses, and values in beneficial manner, advancing personal growth and well-being.

Mindfulness practices also have been shown to improve mental health, reduce stress and enhance overall wellbeing. The practice of Mindfulness meditation often referred to as MM, has garnered recognition for its effectiveness in academic context nowadays. Morgan & Katz

(2021) look into the possibility of raising mindfulness scores, the possibility of reducing foreign language anxiety (FLA) through mindfulness interventions, and the views of language learners about mindfulness meditation as a way to treat FLA.

A new approach known as Mindfulness-Based Social Emotional Learning (MBSEL) relies upon the principles of Social and Emotional Learning (SEL) by emphasizing daily mindfulness practice. The idea was developed in the 20th century and was popularised by Jon Kabat-Zinn. Mindfulness practice can have a significant impact on the social emotional learning (SEL) of second language students. Research suggests that mindfulness interventions can help improve emotional regulation, reduce stress, enhance self-awareness, and promote overall well-being. The goal of this program is to use mindfulness practices to enhance self-awareness emotional intelligence and interpersonal skills. It incorporates ideas from both modern psychological theories and traditional mindfulness practices. MBSEL programs are intended to assist individuals especially students in acquiring the abilities to successfully navigate social interactions by regulating their emotions.

This study examines the studies related to Mindfulness, Social and emotional learning and English language anxiety. It also investigates the impact of MBSEL on English language anxiety among higher secondary school students.

Objectives of the study

- To conduct an extensive literature review aimed at comprehensively understanding the concepts of mindfulness, social and emotional learning, and their interplay in mitigating English language anxiety.
- To integrate Mindfulness based social-emotional learning (MBSEL) program in second language class room.
- To examine the effect of Mindfulness based social-emotional learning(MBSEL) on English language anxiety among higher secondary school students
- To compare the mean pre-test scores and post-test scores in English language anxiety of the experimental group.

Hypotheses of the study

- Mindfulness based social-emotional learning(MBSEL) significantly decreases English language anxiety of higher secondary school students.
- There exists significant difference in mean pre-test scores and mean post-test scores in English language anxiety of the experimental group.

Literature Review

English language anxiety refers to the feelings of tension, apprehension, and fear experienced by individuals when using English as a second language (Hashemi, 2011. It can hinder language learning and communication, leading to decreased motivation, limited participation, and reduced proficiency in English.

Theoretical frameworks such as Horwitz's Model of Foreign Language Anxiety and Young's Social Anxiety Model provide insights into the psychological and social factors that contribute to English language anxiety. These models emphasized the role of individual

differences, cognitive processes, and classroom dynamics in understanding and addressing language anxiety. The Affective Filter Hypothesis, proposed by Stephen Krashen, suggests that negative emotions and anxiety can create a mental "filter" that hinders language acquisition and processing. When learners experience high levels of anxiety, their affective filter is raised, impeding the intake and internalization of new language input. Social Cognitive Theory, developed by Albert Bandura, emphasizes the reciprocal interaction between personal factors, behavior, and the environment. In the context of the study, this theory suggests that emotional intelligence, as a personal factor, can influence learners' thoughts, emotions, and behaviors related to English language anxiety.

In the early 1970s, researchers like Charles A. Horwitz and Elaine K. Horwitz conducted pioneering studies on language anxiety, focusing on the affective factors that can hinder second language learning. They highlighted the detrimental effects of anxiety on language proficiency and communication skills. In the following decades, studies expanded to examine English language anxiety specifically. Researchers explored the sources and manifestations of language anxiety among students, with a particular focus on the fear of negative evaluation, self-consciousness, and performance anxiety in English language classrooms.

Horwitz, (1991) after conducting research to assess the validity and reliability of the foreign language classroom anxiety scale (FLCAS), supports a significantly negative correlation between anxiety and proficiency in a foreign language.

Anupama, (2012) conducted research on second language learning anxiety and its effect on proficiency. The study demonstrates that giving proper educational resources can lessen the impact of anxiety, and it also demonstrates the need for continuous evaluation processes.
According to research, English Language Learners are perceived as having limited English language proficiency compared to their peers when they have higher levels of internalisation of problems, externalisation of problems, lower interpersonal skills, and fewer adaptive skills (Long, 2017). The emotional moods of learners may obstruct their ability to acquire Second language (Melani, B. Z., Roberts, S., & Taylor, 2020).

Peerayuth, (2019) investigated the role of mindfulness to mitigate English language anxiety in Thai university students. The objective of the study was to find whether the students' level of anxiety when using English as a second language was influenced by their level of mindfulness. The findings of the study revealed that mindfulness and English language anxiety were significantly correlated in such a way that that reduced anxiety levels were linked to higher mindfulness levels. This shows that the integration of mindfulness techniques into language learning programs could improve language learning outcomes and lower anxiety levels for Thai students.

Morgan & Katz (2021) investigates the connection between mindfulness meditation (MM) and foreign language classroom anxiety (FLCA) within a university setting. It identifies a preliminary negative correlation between FLCA and mindfulness scores. Additionally, the study shows that various groups exhibited diverse outcomes after a 13-week MM program, suggesting that MM may be possible to alleviate FLCA.

The research conducted by Kocalï and Asık (2022) found that mindfulness interventions employed in the research generally produced favorable outcomes for ESL/EFL learners. Moreover, studies that did not involve any specific interventions highlighted a positive correlation between mindfulness abilities and foreign language education.

Puteri Zarina et al., 2023 investigated how ESL instructors felt about employing Mindfulness Based Intruction (MBI) in Malaysian classrooms, concentrating on their knowledge, difficulties, and preparedness for these kinds of interventions. In spite of challenges, most educators have a favorable outlook on MBIs because they understand how beneficial they are for lowering stress levels and improving the learning environment for both teachers and students.

Pham, 2023 used neurolinguistic perspectives to examine the beneficial effects of mindfulness on second language acquisition (SLA). He found that mindfulness exercises improve brain connections, which in turn improves focus, working memory, and academic performance. He reccomends integrating mindfulness techniques into language instruction for optimizing student's language performance.

Smith & Patel 2021 investigated the acceptability and feasibility of the Heartfulness Way program, a social-emotional learning intervention rooted in mindfulness techniques, within secondary schools in India. The study used qualitative approaches, including focus group discussions with teachers and adolescents and semi-structured interviews with program staff, program-delivering teachers, and school principals. Thematic Analysis using NVivo indicated substantial support for the mindfulness-based curriculum, showing increased prosocial conduct, self-acceptance, and participant interactions.

Social and emotional learning plays a crucial role in reducing second language anxiety. Research emphasizes the significance of addressing socioemotional factors in language learning to enhance student performance. By implementing strategies that focus on students' emotional states, such as humour and empathy, language anxiety can be reduced while improving socioemotional learning (Hernandez & Mejia, 2022, Ismail & Hastings, 2023).

Methodology of the study

Method

The design of this study is quasi-experimental one-group pretest-posttest design. The study was conducted as an intervention in a rural school located in Central Kerala, targeting higher secondary school students.

Sample

The study sample consists of 37 students enrolled in the Humanities group at a rural secondary school in Central Kerala.

Tools Used

The major tool employed in the study was an adapted version of English Language Anxiety Scale (ELAS) developed by Arjunan & Archana (2014). The scale consists of 20 items, each of which is graded on a 5-point Likert-type scale where the responses range from 'Strongly Agree' to 'Strongly Disagree'. The scale is found to have an external validity of 0.72, and a reliability of 0.81. Highest scores imply higher levels of English language anxiety.

Procedure

A 15-minute mindfulness session was integrated into second language classroom routine, accompanied by selected social and emotional learning strategies over a period of 6 weeks. To

evaluate the impact of MBSEL on elevating English language anxiety, an adapted version of English Language Anxiety Scale was administered to the experimental group before and after the intervention. Highest scores imply higher levels of English language anxiety. The data collected from pre-test scores and post-test scores of English language anxiety were tabulated in order to investigate the effectiveness of MBSEL. Semi structured interviews were also conducted with voluntary participants from the experimental group by utilising an unstructured questionnaire after the implementation of MBSEL.

Statistical Analysis

In order to run a data analysis, the quantitative data was entered to the software program IBM SPSS version 28. Paired sample t-test was conducted to evaluate the impact of MBSEL on students' English language anxiety The qualitative data analysis was done by thematic analysis where relevant statements found were compared and contrast with each other to reach an interpretation.

Data Analysis and Interpretation

Analysis of significant difference in mean pre-test scores and mean post-test scores in English language anxiety of the experimental group.

Table 1

Data and Result of the comparison of mean scores for English language anxiety before and after intervention

			Paired Differences					**t**	**Df**	**Sig.(2-tailed)**
			Mean	**Std. Dev**	**Std. Error Mean**	**95% Confidence Interval of the Difference**				
	Mean	**Std. Dev**				**Lower**	**Upper**			
Before	55.41	9.103	15.892	6.798	1.118	13.625	18.158	14.220	36	<.001
After	39.51	8.986								

The results show a significant decrease in the anxiety of students Before (M= 55.41, SD=9.103) to After (M=39.51, SD=8.986), t (36) = 14.220, p <.001(two tailed). The mean increase in the test scores was 15.892 with a 95% confidence interval ranging from 13.625 to 18.158. The eta square statistic (.84) indicated a large effect size.

The result from the semi structured interviews shows that the participants noticed a better learning atmosphere and had positive changes in their daily life. The respondents stated seeing positive changes towards their language learning process. Most of the participants stated feeling more engaged and interested in second language classrooms. They shared some personal experiences and reported feeling more relaxed after going through the intervention.

Conclusion and Recommendations

Mindfulness-Based Social Emotional Learning (MBSEL) has demonstrated effectiveness in reducing English language anxiety among higher secondary school students. By incorporating mindfulness techniques, learners are able to develop self-confidence and create a stress-free classroom environment conducive to free expression. Additionally, MBSEL help students better manage their emotions, foster empathy and understanding towards others, and enhance their skills for effective social interactions.

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CUSTOMERS' SATISFACTION WITH RESPECT TO DIGITAL PAYMENT SYSTEMS IN CHENNAI

Shivani Gupta
Ph.D Research Scholar,
Sathyabama Institute of Science and Technology, Chennai

Dr. M. John Britto
Assistant Professor
Sathyabama Institute of Science and Technology, Chennai

Abstract

Electronic payments, or e-payments, have revolutionized the way individuals and businesses conduct financial transactions. With the advent of technology, traditional methods of payment, such as cash and checks, are being rapidly replaced by digital alternatives. E-payments encompass a wide range of electronic transactions, including credit card payments, online banking transfers, mobile wallet payments, and peer-to-peer transfers. One of the key advantages of e-payments is convenience. Users can make transactions anytime, anywhere, without the need for physical currency or visiting a bank branch. Both primary and secondary data has been used for the study. Primary data has been collected from the customers of public sector banks in Chennai. A convenient sampling method was adopted for the purpose of the study. A total of 385 bank customers were selected randomly from Chennai City. The findings of the study shows that customers are highly influencing the factors such as E-Payment saves time and money and Convenient in use.

Keywords: *Digital payments, E-Payments, Transactions, Technology development.*

1.1 Introduction:

In today's rapidly evolving technological landscape, digital payment systems have emerged as a cornerstone of modern financial transactions. These systems facilitate electronic transfer of funds, revolutionizing the way individuals and businesses conduct commerce. Digital payment platforms offer convenience, speed, and security, making them increasingly popular worldwide. With the rise of smart phones and internet connectivity, users can easily initiate transactions from anywhere, at any time. From online shopping to bill payments, digital payment systems streamline financial interactions, reducing reliance on traditional cash-based methods. Moreover, these systems often incorporate advanced encryption techniques and authentication protocols to safeguard sensitive information, ensuring secure transactions. As the world embraces digitalization, the adoption of digital payment systems continues to soar, reshaping the global economy and paving the way for a cashless future.

The advent of digital payment systems has democratized access to financial services, empowering individuals who were previously underserved by traditional banking infrastructure. These systems bridge geographical barriers, enabling seamless cross-border transactions and fostering global economic integration. Moreover, digital payment platforms offer transparency and traceability, providing users with detailed records of their financial activities for better financial management. The proliferation of digital wallets and mobile payment apps has diversified the options available to consumers, catering to diverse preferences and needs. Businesses benefit from digital payment systems by reducing reliance on cash

handling, minimizing risks associated with theft and fraud. Furthermore, digital payments contribute to environmental sustainability by reducing the need for paper-based transactions and physical currency production. As technology continues to advance, digital payment systems are poised to further innovate, potentially integrating features such as crypto currency and block chain technology for enhanced efficiency and security.

1.2 Review of Literature:

Table 1.1 Review literatures related to customers satisfaction towards Digital Payments

Author Name, Year and Title	Objective of the study	Research Methodology	Findings of the study
Saurabh V Singh et.al (2014) Customer satisfaction and perception towards digital payment	To examine the impact of digital payment on the operations of financial institutions in the country.	The current study gathered primary data from 120 respondents across diverse regions of Gujarat using a meticulously designed questionnaire. The aim was to explore respondents' perspectives on consumer adoption of digital payment methods.	The study's results reveal that customers have a positive attitude towards electronic payment, as evidenced by 50% to 60% strongly agreeing and 20% to 40% agreeing with various expectations such as ease of use, large amount transfers, 24/7 access, low charges, and time-saving features.
Rihana R & Meena (2023) A Study On the Awareness and Customer's Satisfaction Towards Online Payment App	To know the level of awareness towards online-payment apps.	The primary data in this study consists of information collected for the first time through a questionnaire-based survey involving individuals of all age groups. The study's sample size is restricted to 100 respondents.	Based on the study's findings, the majority of respondents expressed high satisfaction levels with online payment applications. Presently, both genders utilize and exhibit satisfaction with these digital payment platforms.
Sushmitha & Sabhya (2020) People's Satisfaction Towards E-Payment System: A Study With	To study the people's satisfaction towards E-payment system	In this study, the researcher employed a combination of primary and secondary data, employing a random sampling method. Primary data were gathered from a sample of 100 respondents in Udupi	The study's conclusions indicate a significant portion of respondents in Udupi Taluk express satisfaction with the e-payment system. However, it's noteworthy that some respondents exhibit lower satisfaction

Reference To Udupi Thaluk		Taluk, utilizing a 5-point Likert scale for scaling certain questions. Secondary data, sourced from various outlets such as websites, research articles, journals, books, and the internet, complemented the study's dataset.	levels, suggesting a need for further enhancements in the e-payment system. Presently, both males and females utilize and express satisfaction with e-payment services.

Source: Collected review from various sources

1.3 Objective of the Study:

The main objective of the study is to identify the Customers' satisfaction with respect to digital payment systems in Chennai.

1.4 Research Methodology:

The present study was carried out with the objective to find out the customer's satisfaction towards digital payments in Chennai region. Both primary and secondary data have been used in the study. The primary data were collected from the customers of public sector banks in Chennai. The primary data were collected through a questionnaire which was prepared and the respondents were required to provide necessary details when they visited the bank branches. Required secondary data for the study were collected from journals, Magazines, and RBI reports.

1.5.1 Sampling Technique and Sampling Size:

To analyze the data, a convenient sampling method was adopted for the purpose of the study. To enable the researcher to input the data by and large this method was adopted. A total of 385 bank customers were selected randomly from Chennai City.

1.6 Digital payments play a pivotal role in the realm of e-commerce, transforming the way transactions are conducted online. Here's how:

Convenience: Digital payment methods such as credit/debit cards, mobile wallets, and online banking provide unparalleled convenience to customers, allowing them to make purchases with just a few clicks from the comfort of their homes.

Global Reach: E-commerce platforms leverage digital payment systems to cater to a global audience, facilitating transactions across borders without the need for currency conversions or geographical constraints.

Enhanced Security: Advanced encryption and authentication technologies employed by digital payment systems ensure secure transactions, instilling confidence among customers to make online purchases without fear of data breaches or fraud.

Faster Transactions: Digital payments enable instantaneous transactions, eliminating the delays associated with traditional payment methods such as bank transfers or cash on delivery, thereby improving the overall shopping experience.

Seamless Integration: E-commerce platforms seamlessly integrate digital payment gateways, allowing merchants to accept various payment methods and providing customers with multiple options to choose from, enhancing flexibility and user experience.

Reduced Operational Costs: Digital payments streamline the payment process for e-commerce businesses, reducing the overhead costs associated with handling cash, processing checks, or managing physical payment terminals.

Real-time Tracking: Digital payment systems offer real-time transaction tracking and reporting capabilities, empowering merchants to monitor sales, manage inventory, and analyze customer behaviour more effectively.

Customer Trust and Loyalty: Providing secure and convenient digital payment options builds trust and encourages repeat purchases, fostering customer loyalty and contributing to the long-term success of e-commerce businesses.

Innovation Opportunities: The evolving landscape of digital payments opens up opportunities for innovation, such as integrating emerging technologies like biometrics, block chain, and crypto currencies into e-commerce platforms to further enhance security and efficiency.

Compliance and Regulation: E-commerce businesses must adhere to regulatory standards and compliance requirements governing digital payments, ensuring the protection of consumer data and adherence to financial regulations to maintain trust and credibility in the market.

1.7 Data Analysis and Interpretation:

1.7.1 Demographic Profile of the Customers:

In order to understand the demographic profile of the customers, percentage analysis was used to identify the personal information like Gender, Age, Marital status, Residential status, Educational Qualification, Occupation. The Table 1.1 shows the demographic profile of the respondents.

Table 1.1 Demographic Profile of the respondents

Demographic Profile	Options	Frequency	Percent
Gender	Male	152	41
	Female	228	59
	Total	385	100
Age	Less than 30 years	36	9
	31 to 40 years	144	37
	41 to 50 years	46	12
	51 to 60 years	130	34
	Above 60 years	29	8
	Total	385	100
Marital status	Married	249	65
	Unmarried	68	18

	Widowed	28	7
	Divorced	40	10
	Total	385	100
Educational Qualification	Not Formally Educated	78	20
	High school	51	13
	Degree	112	29
	Master Degree	101	26
	Illiterate	43	12
	Total	385	100
Residence	Semi – Urban	133	34
	Rural	252	66
	Total	385	100
Occupation	Student	38	10
	Professional	86	22
	Business	58	15
	House Wife	185	48
	Others	18	5
	Total	385	100

Source: Primary Data

Gender: Among 385 respondents considered for the study, 228 respondents (59%) are female and 152 respondents (41%) are males. It is observed that majority of the female respondents are using digital payments.

Age: Age of the customers plays a major role in the using the bank accounts. Customers can operate their individual accounts only after the completion of 18 years. Age is one of the most important factors for a human being and age also serves as a yard stick to participate or discontinue in any occupation or profession. Among 385 respondents considered for the study; 36 respondents (9%) were age between less than 30 years, 144 respondents (37%) were in the age group of 31 to 40 years, 46 respondents (12%) were in the age group of 41 to 50 years, 130 respondents (34%) belongs to the age group between 51 to 60 years and 29 respondents (8%) were above 60 years. Thus, majority of the customers contacted are in the age group of 31 to 40 years.

Marital status: Marital status gives a person social recognition. It increases the responsibility of a person in the society and in his family. Among 385 respondents considered for the study, 249 respondents (65%) are married, 68 respondents (18%) are not married and 28 respondents (7%) are widowed and 40 respondents (10%) of them were divorced. Hence, majority of the respondents contacted for the study are married.

Educational Qualification: Education is the process of gaining knowledge in the respective fields. Educational qualification is a basic indispensable demographic variable in the social science research. Education is one of the most important factors that influence a person in the

society to a large extent. So an attempt is made to analyze the level of education of customers. Among 385 respondents considered for the study, 78 respondents (20%) are Not formally educated, 51 respondents (13%) have completed their high school, 112 respondents (29%) are qualified with degree, 101 respondents (26%) are qualified Master Degree and 43 respondents (12%) are categorized as belonging to Illiterate. Therefore, majority of the customers are qualified degree.

Occupation: Among 385 respondents considered for the study, 38 respondents (10%) are student, 86 respondents (22%) are professionals, 58 respondents (15%) are business, 185 respondents (48%) are housewife and 18 respondents (5%) are categorized as belonging to others category.

Residence: Among 385 respondents considered for the study, 133 respondents (34%) belongs to semi urban, and 252 respondents (66%) belong to rural area. Therefore, majority of the respondents are belongs to rural area.

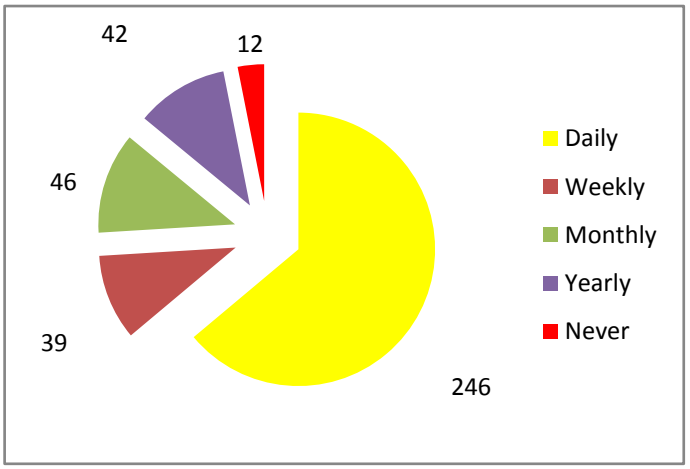
17.2 Customers Usage of E-payment – Descriptive statistics:-

Table 1.2 describes that customer's usage of e-payments.

Table 1.2 Customers Usage of E-payment

S.No	Particulars	No of Respondents	Percentage
1	Daily	246	63.8
2	Weekly	39	10.1
3	Monthly	46	11.9
4	Yearly	42	10.9
5	Never	12	3.1
Total		385	100

Source: Primary Data



Among 385 respondents considered for the study, 63.8 Percent of them were using the e-payments services daily, 10.1 percent of the respondents were using the e-payments services weekly, 11.9 percent of the respondents were using the e-payments services monthly, 10.9 percent of the respondents were using the e-payments services yearly and remaining 3.1 percent

of the respondents were not using e-payments services. Therefore, majority of the respondents were using the e-payments services.

1.7.3 Customers' satisfaction towards E-payments –Mean Score Analysis:

Customer satisfaction towards e-payments can be influenced by various factors such as E-payment is helpful in emergency, E-Payment is a secured platform, E-Payment saves time and money, Reasonable cost of Transaction, Number of digital channels, Flexibility and Convenient in use.

Table 1.3
Customers Satisfaction towards E-payments - Rank Analysis

Customers Satisfaction	Mean	Standard Deviation	Rank
E-payment is helpful in emergency	4.852	1.464	2
E-Payment is a secured platform	4.653	0.872	4
E-Payment saves time and money	4.951	0.652	1
Reasonable cost of Transaction	4.528	0.582	5
Number of digital channels	4.426	0.654	6
Flexibility	3.894	0.632	7
Convenient in use	4.821	1.523	3

Source: Primary data

The rank analysis was performed by using the overall mean score on factors. The Customers satisfaction towards e-payments system; it is inferred from the Table that Out of 7 variables the mean score value is more than 4.00, for the variables namely, 'E-Payment saves time and money' (4.951), 'E-payment is helpful in emergency'(4.852), 'Convenient in use' (4.821), 'E-Payment is a secured platform' (4.653) and 'Reasonable cost of Transaction' (4.528). It is identified that all the above five variables are highly influencing the customers.

1.7.4 Difference between Educational Qualification and Customers Satisfaction towards E-payments services – ANOVA:-

The basic principle of ANOVA is to test and find out the differences among the means by examining the amount of variation within each of this sample, related to the amount of variance made viz. one based on samples between variance and the other based on within sample variance. ANOVA is used to uncover the main and interaction effects of categorical independent variables (called factors) on an interval metric variable. An analysis of variance effect is any difference between two or more independent variables with the dependent variable. The key statistic in ANOVA is the F-test of difference of group means, testing, if the means of the groups formed by values of the independent variable (or combinations of values for multiple independent variables) are different enough and not have occurred by chance. If the group means do not differ significantly then it is inferred that the independent variable(s) do not have an effect on the dependent variable, and then multiple comparison tests of significance are used to explore just to know which values of the independent(s) variables have the most to do with the relationship. To know the relationship between Educational Qualification and Customers Satisfaction towards E-payments services the ANOVA is used in the present study.

In the present study, one way ANOVA is performed to find out the difference between the Educational Qualification and Customers Satisfaction towards E-payments services.

Hypothesis: There is no significant difference between the Educational Qualification and Customers Satisfaction towards E-payments services.

Table 1.3
Difference between Educational Qualification and Customers Satisfaction towards E-payments services – ANOVA:-

ANOVA						
Factors		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
E-payment is helpful in Emergency	Between Groups	1.241	4	.310	.649	.000
	Within Groups	84.561	381	.478		
	Total	85.802	385			
E-Payment is a secured platform	Between Groups	1.364	4	.341	.770	.001
	Within Groups	78.399	381	.443		
	Total	79.764	385			
E-Payment saves time and money	Between Groups	.795	4	.199	.478	.003
	Within Groups	73.540	381	.415		
	Total	74.335	385			
Reasonable cost of Transaction	Between Groups	1.830	4	.458	1.047	.385
	Within Groups	77.379	381	.437		
	Total	79.209	385			
Number of digital channels	Between Groups	.553	4	.138	.286	.001
	Within Groups	85.732	381	.484		
	Total	86.286	385			
Flexibility	Between Groups	.152	4	.038	.079	.989
	Within Groups	84.683	381	.478		
	Total	84.835	385			

Convenient in use	Between Groups	2.578	4	.645	1.395	.000
	Within Groups	81.801	381	.462		
	Total	84.379	385			

The Table 1.3 reveals the ANOVA test results. Based on the result, the significant value is found to be lower than 0.05 for Convenient in use, Number of digital channels, E-Payment saves time and money, E-Payment is a secured platform and E-payment is helpful in Emergency. So, the null hypothesis is rejected and it is concluded that there is significant relationships between the Educational Qualification and Customers Satisfaction towards E-payments services. On the other hand, the significant value is found to be greater than 0.05 for Reasonable cost of Transaction and Flexibility. So, the null hypothesis is rejected and it is concluded that there is a significant relationships between the Educational Qualification and Customers Satisfaction towards E-payments services.

1.8 Conclusion

E-payments streamline the payment process, reducing the time and effort required for both consumers and merchants. Security is another critical aspect of e-payments, with advanced encryption and authentication measures safeguarding sensitive financial information. Additionally, e-payments promote financial inclusion by providing access to banking services for individuals who may not have access to traditional banking infrastructure. Overall, e-payments offer efficiency, security, and accessibility, driving the shift towards a cashless society and transforming the way we manage our finances. The researcher concluded that the customers are satisfied with the E-Payment saves time and money', 'E-payment is helpful in emergency, 'Convenient in use','E-Payment is a secured platform' and 'Reasonable cost of Transaction' (4.528). It is identified that all the above five variables are highly influencing the customers.

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SOCIAL AND EMOTIONAL LEARNING

Mr. Anbazhagan S
Ph.D Research Scholar
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University
Karapakkam, Chennai

Abstract

Being in an environment for the first time, meeting strange people is not easy and simple for everyone. Some people need help in controlling its own emotions or the others emotions and feelings. This help can come from the parents at home, teachers and classmates at school or colleagues at working place. The aim of this paper is to discuss the importance of Social Emotional Learning (SEL), its competences, skills involved in it etc. Social-emotional Learning, has been emerging as an effective process for cultivating the necessary skills, attitudes, competencies, and knowledge to learn and achieve well-being. These skills help to create a safe space for children to learn together and grow into an understanding and empathic adult. According to various researches, people with strong socio-emotional skills are better equipped to manage daily challenges, build positive relationships and make informed decisions.
Keywords: *Social emotional Learning, feelings, empathy, skills etc.*

Introduction

Being in an environment for the first time, meeting strange people is not easy and simple for everyone. Some people need help in controlling its own emotions or the others emotions and feelings. This help can come from the parents at home, teachers and classmates at school or colleagues at working place. Social Emotional Learning (SEL) is a process of learning life skills, such as how to deal with ourselves and the relationship with the others, as well as how to work effectively. In dealing with ourselves, SEL helps in recognition of our emotions and learning how to manage these feelings. In dealing with others, SEL helps develop understanding and empathy for others, and maintaining positive relationships. SEL also focuses on dealing with a variety of situations in a constructive and ethical way. (www. casel. org, retrieved March 2015). The programming of this process is based on the understanding that the best learning emerges in the context of supportive relationship that make learning challenging, engaging and meaningful. SEL is an approach that teaches students to recognize, regulate, and express the social and emotional aspects of their lives so they can operate successfully in the world and manage life tasks. (Elias et al., 1997, and CASEL, Safe and Sound, 2005)).

Social and Emotional Learning Defined:

In simple terms, social and emotional learning (SEL) is the capacity to recognize and manage emotions, solve problems effectively, and establish positive relationships with others, competencies that clearly are essential for all students. Thus, SEL targets a combination of behaviors, cognitions, and emotions. As described by the Collaborative for Academic, Social, and Emotional Learning (CASEL), SEL is the process of acquiring and effectively applying the knowledge, attitudes, and skills necessary to recognize and manage emotions; developing caring and concern for others; making responsible decisions; establishing positive relationships;

and handling challenging situations capably. Similar to the way students learn academic skills, they learn, practice, and apply SEL skills by engaging in positive activities in and out of the classroom. Initial skills that they have learned become enhanced, nuanced, and better integrated over time to address the increasingly complex situations children face in terms of academics, social relationships, citizenship, and health (Elias et al., 1997; Collaborative for Academic, Social, and Emotional Learning [CASEL], 2003).

SEL largely evolved from research on prevention and resilience (see Consortium on the School-Based Promotion of Social Competence, 1994), and interest in SEL sparked in the mid-1990s with the publication of Goleman's Emotional Intelligence (1995) and Gardner's Multiple Intelligences (1993). A high level of interest continues today, with research showing an increasing number of positive outcomes of SEL, and states and school districts adopting requirements for teaching SEL. Indeed, growing numbers of educators and parents recognize the relationships between academic and social– emotional learning, particularly within the context of schools' systems of support.

Social emotional Learning programs are aimed at developing five core social and emotional competencies:

Self-awareness: identifying and recognizing emotions; recognizing personal interests and strengths; maintaining a wellgrounded sense of self-confidence.

Self-management: regulating emotions to handle stress, control impulses, and motivating oneself to persevere in overcoming obstacles, setting and monitoring progress toward the achievement of personal and academic goals; expressing emotions appropriately.

Social awareness: being able to take the perspective of and empathize with others; recognizing and appreciating individual and group similarities and differences.

Relationship skills: establishing and maintaining healthy and rewarding relationships based on cooperation and resistance to inappropriate social pressure, preventing, managing, and constructively resolving interpersonal conflict; seeking help when needed (CASEL, Safe and Sound, 2005).

Outline of Effective Social and Emotional Learning Instruction:

- Based on theory and research and carefully planned
- Interactively teaches SEL skills for applications to daily life
- Builds connections to school through caring, engaging classroom and school practices
- Promotes developmentally and culturally appropriate instruction
- Leads to coordinated, integrated, and unified programming linked to academic outcomes
- Enhances school performance by addressing emotional and social dimensions of learning by engaging and interactive methods
- Involves school–family–community partnerships
- Establishes organizational supports and policies that foster success
- Provides high-quality staff development and support
- Addresses key implementation and sustainability factors, including continuous improvement, outcomes evaluation, and dissemination factors.

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Emotional Learning:

Guidelines for Educators (Elias et al., 1997). These guidelines, which are summarized in 10 major points in Table 1, describe in detail what effective SEL instruction entails. For example, it must be systematic, provided over multiple years, integrated with the academic curriculum, and supported by school–family– community partnerships and a caring supportive environment. In addition, nine useful guidelines specific to school climate, which were developed by the Ohio Department of Education, are presented in Table 2. SEL programming should be approached from a risk and resilience perspective. In other words, children may acquire risk processes, such as school failure, involvement with antisocial peers, or family poverty, that make it more likely that they will develop problem behaviors. The more risk processes they have, the higher their relative risk, although having risk processes does not guarantee that a student will develop problems, and many of them do not. On the other hand, protective mechanisms or development of competencies—such as bonding to school, learning to consider the perspectives of others, or possessing adequate social decision-making skills—keep children from harm's way or buffer them from the negative effects, and thus lead to more successful adaptation. These positive, health-promoting processes may be found within the child and at the family and community levels.

Social and Emotional Learning in the classroom:

Educators usually integrate SEL into their curricula through both explicit instruction on the competencies and, equally importantly, through ongoing reinforcement of these skills.
Explicit SEL instruction might include lessons on how to identify and label your feelings, build your emotional vocabulary, consider other people's perspectives and experiences, and brainstorm solutions to problems.

But then, the key to effectively teaching SEL competencies is reinforcing these lessons every day in the classroom. "It's not about a standalone activity," explains Dr. Mendel. "It's about having a school culture that's committed to engaging in social-emotional learning where it's infused into every day, with repetition of the lessons and skills."

For example, while teaching children a lesson on conflict resolution is important, so is coaching them through conflicts when they happen in real-time — reinforcing those skills and giving them a safe space to practice them.

"It's not always activity-based," Hoffman says. "It's thinking about what skills they need to know and how to engage in conversations about them. When they're doing things that cause harm to other people, you're practicing, 'How did that make someone else feel?' to build empathy. It's taking the times that they don't do things right as teaching moments."

SEL programs in schools are often structured across three tiers based on children's needs. Tier one is the standard program, taught to all students, with the aim of helping them develop the competencies and prevent behavioral or emotional problems from developing. Tier two is for children who haven't responded to tier one and show some signs of risk, such as behavioral issues, social difficulties, or academic struggles. Tier three is for students who require more intensive support, potentially through individualized counseling or a behavior intervention plan.

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Conclusion

It is important to also recognize that this kind of program and should start from home itself and then continue at school. Teachers and parents should have a continues cooperation in order to facilitate children adapt in an unfamiliar environment. The skills taught through SEL, all of which benefit ourselves and others, ultimately help us to cultivate more positive emotions. The goal, however, is not to feel positive emotions all the time, but rather to understand how emotions, both negative and positive, impact us. Instead of acting out of fear, hate, and anger, we can take a deep breath and try to empathize with what the other person is feeling or experiencing and then make the choice to respond with care. Teacher should understand that social and emotional learning (SEL) is critical to student success in school, work, and life. To be effective, schools must concentrate on their fundamental mission of teaching and learning. And they must do it for all children. That must be the overarching goal of schools in the twenty-first century

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LIFE SKILLS AS NEW EMPLOYMENT SKILLS

C. Sri Supriya
Ph.D Scholar, Department of Educational Technology, Bharathidasan University

Abstract

In past decades an employer expected an employee with a degree and technical knowledge for career but now in the 21st century the scenario has entirely changed and the employer demands an employee to possess content knowledge, required skill set along with 'Life Skills' which has become indispensable in the current job market. In today's economy, formal qualifications are no longer enough. The employee should be a problem solver with proficient communication, critical thinking, adaptability, interpersonal skills etc. Thus, comes the requirement of life skills as new employment skills. Life skills are the abilities that help you to function effectively in your personal and professional life.

The World Health Organization has defined life skills as, "the abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life". Unlike technical skills, life skills are transferable and applicable across various domains. They empower individuals to navigate challenges, collaborate with others, and demonstrate a holistic approach in their endeavor. These skills include effective communication, problem-solving, critical thinking, teamwork, adaptability, emotional intelligence, time management, leadership, resilience, etc. Therefore, this thematic paper concentrates on the significance of life skills as new employment skills.

Keywords: *proficient, employer, employee, demand and challenges, life skills, empower, holistic approach, problem solving, creativity.*

Introduction

According to the 'World Economic Forum' 2023- the accelerating transformation that had taken place in the labour market is remarkable and it demands for jobs and skills for tomorrow which could cater the needs of the developing and developed country. The Fourth Industrial Revolution, changing worker and consumer expectations, and the urgent need for a green and energy transition are also reconfiguring the sectoral composition of the workforce and stimulating demand for new occupations and skills. Every global markets want the labour market to be more competent in disseminating the work with skills. Therefore, every employee should possess the following skill to perform better and smarter. The skills are as follow: Analytical thinking, creative thinking, flexibility, motivation and self –awareness, lifelong learning, technology, empathy, leadership and quality control. Thus, the paper concentrates on the significance of 'Life skills as employable skills'.

Life Skills

The 21st century's one of the predominant skill is life skills. Life skills are defined as "a group of psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathize with others, and cope with and manage their lives in a healthy and a harmonious manner (UNICEF). In the work place 'Life skills' play a predominant role in developing the individual as well as the organization. Hence, life skills are indispensable in working place.

The following are the life skills: Communication, problem solving, leadership, Team work, technology, critical thinking, Time Management, interpersonal and creativity.

Communication

Business communication is the process of sharing information with people inside and outside a business. In the modern workplace, communication with customers, clients and stakeholders now takes place through many mediums. This means that today's worker needs to be skilled in face-to-face, video, written and more. Healthy relationships need clear communication, and the workplace is no different. The quality of workplace communications impacts employee morale, productivity, and company culture. So, if you want to succeed, strong communication skills are crucial.

The success of any project relies on strong communication, both internally and externally. This means that managers should communicate information around the purpose, benefits, and impacts of a project. And, if problems arise, open and constructive communication can be used to realign your team with your strategic goals.

The benefits of clear communication are endless. Employers who prioritise timely, informative and transparent communication, investing the energy and resources necessary to build these relationships, will quickly build trust. Meanwhile, employees who are able to communicate effectively with their colleagues, managers, clients and customers are key to driving business outcomes.

And, as employee engagement improves, so too does interdepartmental communication and employee productivity. Survey states that only 13 % of the managers communicate effectively with their staff and which could result in 25 % of productivity. Therefore, communication plays an important role as life skills and employable skills.

Problem Solving

Broadly speaking, problem solving refers to a person's ability to think laterally, logically and creatively to find innovative solutions in the face of challenges and new opportunities. Using the information available, a capable problem-solver can implement optimized solutions and find opportunities for improvement and streamlining. They are often more easily able to build relationships and excel with everyday decision-making processes.

Problem solving is a crucial and necessary skill to have for better outcomes and to face the challenge and to find solutions. In the words of authors Charles Conn and Robert McLean, "Great problem solvers are made, not born".

Becoming an employee who can problem solve efficiently involves a combination of factors including, but not limited to, experience, confidence, mindset and curiosity. The best problem solvers possess excellent communication skills – they are able to express their ideas and plans clearly and effectively, but can also actively listen to the expertise brought forward by others and synthesize it to create better solutions.

Problem solving is one of the top skills required for the ever-changing modern workforce. It enables better time management skills by honing one's ability to make decisions, prioritise pressing tasks and plan for contingencies.

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Leadership

Every employee should have leadership quality to improve one's organization and for the smooth function of the company to address the concern of the clients, stakeholders and the fellow colleagues with democratic approach. Every leader should be a transformational leader to equip and build his or her subordinate to plan, organize and execute the work with high performance.

Team Work

Being a good collaborator is a skill that helps you grow into a more well-rounded professional. It both positively influences other skill sets, like problem-solving and innovation, and is in turn positively influenced by building skills like communication or self-management. And, like all soft skills, it's not just an innate quality but something you can learn and refine. Collaboration helps to build better relationships with co-workers and acquire knowledge and skills from them. With the Harvard Business Review reporting that 55% of employees turn to their peers at work to learn a new skill, it's evident that great success is only from collaborating.

Technology / Digital Literacy

According to World Economic Forum, 2024 the future world is going to be ruled by AI [Artificial Intelligence] therefore every company has to provide new digital and learning paths to its employees to be successful in the global labour markets. Besides, the education system should be cognitive in developing the curriculum which could help the learners to acquire more technical competency to face the economic challenge with confidence. Digital literacy helps an employee to explore the digital platforms to express, to create, to save and to evaluate effectively and efficiently. A person with a high level of digital literacy recognises the applications of their skills in each platform. Combined with the knowledge of how to manage their digital footprint, this has vast applications for businesses.

Critical Thinking

According to a report from the World Economic Forum, HR experts have identified critical thinking as one of the top 5 skills over the next five years. From law, education and research to medicine, finance and business, the ability to deduce information without bias is essential. Regardless of the industry, critical thinking is especially crucial for roles that require strategic input and people management. It helps in diverse thinking and to learn from their mistakes and create solution for their problems.

Creativity

It helps in finding novice ideas for the problem to find solutions with out of box thinking. Creativity plays a crucial role from idea makers to leaders to share innovate thoughts for the growth of the organization and the stakeholders. As we face new and unusual economic challenges, companies need to embrace the power of business innovation so that we as individuals and a society can grow.

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Conclusion

In a world driven by technology and innovation, life skills are the cornerstone of personal and professional growth. As AI and automation continue to reshape industries, the cultivation of life skills sets an employee apart, to provide a competitive advantage in the evolving job market. Embracing and developing life skills is not just an option; it is the key to standing out and thriving in the age of technological transformation.

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EXPLORING THE ROLE OF INCIDENTAL LEARNING IN STEM EDUCATION

Dr. P. Subramanian
Assistant Professor
Department of Educational Planning and Administration
Tamil Nadu Teachers Education University
Karapakkam, Chennai

Abstract

The concept of incidental learning highlights the value of practical problem-solving experiences and exposure to a range of situations.It is aided by self-reflection and feedback, knowledge of cultural norms, and proactive participation in social situations. Incidental learning enhances formal instruction in educational settings by giving students chances to gain new information and abilities. Designed to be dynamic, interesting, and diverse, enriched environments provide a range of experiences, intriguing materials, and a setting that encourages curiosity and inquiry-driven learning. By incorporating real-world contexts and offering inclusive learning opportunities, these environments support a diverse student body. By allowing students to investigate subjects on their own, active inquiry promotes curiosity, ownership of learning, critical thinking, problem-solving, holistic learning, and an attitude of lifelong learning. Deriving significant insights from incidental learning, deep learning, metacognition, knowledge creation, critical thinking, application, and transfer all depend on reflection and discussion. Curricula that are designed with incidental learning as a focus might encourage curiosity, field trips, multimedia integration, and field trips. Students are encouraged to explore and find new paths and solutions through open-ended activities and exploratory tasks. Videos, podcasts, and interactive simulations are examples of multimedia resources that offer a variety of viewpoints and circumstances, which improve incidental learning. This article seeks to explore the role of hands-on science experiences in promoting incidental learning and enhancing students' problem-solving skills within the STEM disciplines.

Keywords: *Incidental learning, regular settings, vocabulary acquisition, problem-solving experiences, inquiry-driven learning, deep learning, critical thinkingand STEM education.*

Introduction

Informal learning refers to the acquisition of knowledge, skills, and attitudes that occurs outside of structured educational settings and formal instruction. Unlike formal learning, which takes place within classrooms, workshops, or training programs with specific curricula and defined objectives, informal learning is spontaneous, unstructured, and often driven by personal interests or needs. This type of learning occurs naturally through everyday experiences, interactions, and activities. Examples include self-directed learning, networking, coaching, mentoring, and performance planning that includes opportunities to review learning needs. Incidental learning refers to learning that occurs without deliberate intention or awareness. It happens when individuals acquire new information or skills as a byproduct of other activities or experiences, rather than through focused, formal instruction or study.

Characteristics of Incidental Learning

Unplanned Nature: Incidental learning occurs spontaneously and without deliberate intention or planning. It is not the primary goal or focus of the activity or experience but

instead happens naturally as a byproduct of engaging in other tasks or interactions. Individuals acquire new knowledge or skills incidentally, often without being consciously aware that learning is taking place. This characteristic highlights the serendipitous aspect of incidental learning, where valuable insights and information are gained indirectly through everyday experiences, observations, or exposure to various stimuli. The unplanned nature of incidental learning underscores its passive and spontaneous quality, contrasting it with more deliberate forms of learning that are structured and intentional.

Implicit Process: In incidental learning, individuals acquire new knowledge or skills without conscious awareness or deliberate effort. Learning occurs passively as a result of exposure to information or experiences, rather than through intentional study or instruction. Learners may absorb information through observation, exploration, or incidental exposure to stimuli in their environment. They may not actively seek to learn or recognize that learning is taking place. This characteristic highlights the subconscious nature of incidental learning, where individuals inadvertently pick up knowledge and skills simply by being exposed to the world around them. The implicit process of incidental learning contrasts with explicit learning, where individuals consciously engage in structured activities with the explicit goal of acquiring new knowledge or skills.

Contextual and Situational: Incidental learning is closely tied to the context and environment in which individuals are situated. It occurs in everyday situations and is influenced by the specific circumstances and experiences encountered by learners. This type of learning can take place during social interactions, such as conversations with peers or family members, where individuals may pick up new information or perspectives. It can also happen while exploring the environment, whether in a natural setting or within the community, where individuals encounter new stimuli and experiences that contribute to learning. Additionally, exposure to various forms of media, such as books, films, or digital content, can facilitate incidental learning by providing opportunities to encounter new ideas, cultures, or concepts. The contextual and situational nature of incidental learning emphasizes the importance of real-world experiences and diverse interactions in fostering continuous learning and personal development.

Examples of Incidental Learning

Vocabulary Acquisition: Children frequently acquire new words and phrases incidentally through exposure to various forms of communication, such as conversations, movies, or books. When children hear unfamiliar words used in context during everyday interactions or while engaging with media, they naturally begin to understand and integrate these words into their vocabulary without explicit instruction. This type of learning is considered incidental because it occurs as a result of exposure to language in authentic contexts, rather than through formal teaching or intentional vocabulary lessons. Over time, as children encounter new words repeatedly in different contexts, their vocabulary expands and becomes more nuanced. Incidental vocabulary acquisition highlights the power of immersion and exposure in language development, demonstrating how individuals can learn effortlessly by engaging with the world around them.

Problem-Solving Skills: Incidental learning of problem-solving skills occurs when individuals observe others successfully addressing challenges or when they themselves

encounter real-life problems that require solutions. Through these experiences, individuals naturally develop and refine their problem-solving strategies without formal instruction.

For example, a student may observe a peer using a creative approach to solve a math problem during class. By witnessing this process, the student unconsciously learns new problem-solving techniques and may apply them in future scenarios. Similarly, encountering real-life challenges—such as fixing a broken appliance, navigating a new city, or resolving interpersonal conflicts—can prompt individuals to adapt and employ problem-solving strategies based on trial and error or insights gained from previous experiences.

Technology Skills: Incidental learning of technology skills occurs when individuals learn to use new software or applications through independent exploration and experimentation, without formal training or instruction. This type of learning often occurs in everyday contexts where individuals encounter technology in their personal or professional lives.

Observational Learning: Individuals may observe how others communicate, engage in conversations, or navigate social situations, and unconsciously adopt similar behaviors or strategies.

Trial and Error: Through trial and error in social interactions, individuals learn what approaches or behaviours lead to positive outcomes (e.g., making friends, resolving conflicts) and adjust their social skills accordingly.

Feedback and Reflection: By receiving feedback from peers or experiencing the consequences of their actions in social contexts, individuals refine their social skills over time.

Cultural Norms: Incidental learning also involves understanding cultural norms, etiquette, and social conventions by interacting with diverse groups of people or consuming media that portrays different social contexts.

Importance in Education

In educational contexts, incidental learning complements formal instruction by providing additional opportunities for learners to acquire knowledge and skills. Here's how it can be leveraged:

Enriched Environments

In education, enriched environments refer to learning environments that are designed to be dynamic, stimulating, and diverse. These environments expose students to a wide range of experiences, resources, and stimuli, fostering incidental learning alongside formal instruction. The importance of enriched environments lies in their ability to enhance students' learning outcomes and holistic development through the following ways:

Diverse Experiences: Enriched environments provide students with opportunities to engage in varied activities, such as hands-on projects, group discussions, field trips, and multimedia exploration. These diverse experiences expose students to different perspectives, topics, and challenges, facilitating incidental learning as they encounter new information and ideas.

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Active exploration:

Active exploration refers to the process of encouraging students to independently explore topics, seek information, and discover knowledge on their own initiative. This approach is instrumental in fostering incidental learning, which occurs when students acquire new insights and skills through self-directed exploration and discovery. The importance of active exploration lies in its ability to promote the following aspects of learning:

Curiosity and Engagement: Encouraging students to actively explore topics taps into their natural curiosity and intrinsic motivation to learn. When students have the freedom to pursue their interests and questions independently, they become more engaged in the learning process and are more likely to retain and apply the knowledge they acquire.

Reflection and Discussion:

Reflection refers to the process of thinking critically about one's experiences, observations, and learning outcomes, while discussion involves engaging in conversations with peers or educators to share insights and perspectives. Encouraging students to reflect and discuss their experiences is crucial for deriving meaningful insights from incidental learning. The importance of reflection and discussion lies in their ability to promote the following aspects of learning:

Deep Learning: Reflection and discussion deepen students' understanding of incidental learning experiences. By prompting students to reflect on what they have learned and how it connects to their prior knowledge and beliefs, educators facilitate deeper processing of information and promote conceptual understanding.

Metacognition: Engaging in reflection enhances students' metacognitive awareness—their ability to monitor, regulate, and evaluate their own learning processes. Through reflection, students become more aware of their learning strategies, strengths, and areas for improvement, fostering self-directed learning and problem-solving skills.

Knowledge Construction: Reflection and discussion facilitate knowledge construction through collaborative sense-making. When students engage in discussions with peers or educators, they articulate their thoughts, share perspectives, and receive feedback, leading to richer interpretations of incidental learning experiences and the co-construction of knowledge.

Strategies for Facilitating Incidental Learning

Curriculum Design:

Integrate open-ended activities and exploratory tasks into the curriculum to promote incidental learning.

Open-Ended Activities: Incorporate open-ended tasks that encourage exploration and discovery. These activities should allow students to engage with the material in flexible and creative ways, promoting incidental learning as they explore different paths and solutions.

Exploratory Tasks: Design tasks that require students to actively seek information or solve problems independently. This can include research projects, inquiry-based learning, or problem-solving challenges where students must apply their knowledge in novel ways.

Multimedia Integration: Use of Various Media: Integrate multimedia resources such as videos, podcasts, interactive simulations, and online platforms. Exposing students to diverse

media can provide different perspectives and contexts, enhancing incidental learning through exposure to new information and experiences.

Field Trips and Experiential Learning: Real-World Interactions: Organize field trips or experiential learning opportunities that allow students to engage directly with the subject matter outside the classroom. This hands-on approach promotes incidental learning by immersing students in authentic experiences and environments.

Use of Multimedia

Utilizing various forms of multimedia, such as videos, podcasts, interactive simulations, and digital resources, is important in education for exposing students to diverse perspectives, contexts, and learning opportunities. The use of multimedia enhances incidental learning by providing students with engaging and interactive experiences that promote exploration, discovery, and deeper understanding. The importance of using multimedia in education includes the following aspects:

Enhanced Engagement: Multimedia resources capture students' attention and enhance engagement with the learning material. Videos, animations, and interactive simulations can make abstract concepts more concrete and relatable, fostering curiosity and promoting incidental learning as students interact with multimedia content.

Multisensory Learning: Multimedia offers a multisensory learning experience by combining visual, auditory, and sometimes tactile elements. This multisensory approach accommodates different learning styles and preferences, making learning more accessible and effective for diverse learners.

Diverse Perspectives: Multimedia exposes students to different perspectives, cultures, and contexts beyond what traditional textbooks or lectures may offer. Through videos, documentaries, or digital resources, students gain insights into real-world issues and experiences, fostering empathy, cultural awareness, and critical thinking.

Interactive Exploration: Interactive multimedia resources allow students to explore concepts and topics independently. By navigating digital simulations, virtual tours, or interactive websites, students actively engage with content, leading to incidental learning as they discover new information and make connections.

Real-World Applications: Multimedia often presents real-world applications of academic concepts. For example, videos demonstrating scientific experiments or documentaries showcasing historical events provide tangible examples that connect theoretical knowledge to practical contexts, promoting deeper understanding and incidental learning.

Importance of Hands-on Science Experiences in Education:

Hands-on science experiences are crucial for providing students with tangible, real-world applications of theoretical concepts learned in the classroom. This approach allows students to directly engage with scientific principles through practical activities, experiments, and investigations. The importance of hands-on science experiences includes the following aspects:

Enhanced Understanding: Hands-on activities help students bridge the gap between theory and practice by allowing them to see and manipulate physical materials, conduct experiments,

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and observe scientific phenomena firsthand. This direct engagement leads to a deeper and more concrete understanding of abstract scientific concepts.

Application of Knowledge: Hands-on experiences enable students to apply theoretical knowledge to solve real-world problems. By designing experiments, collecting data, and drawing conclusions based on observations, students develop problem-solving skills and gain practical insights into the relevance of scientific concepts.

Retention and Engagement: Active participation in hands-on activities promotes better retention of information and sustained engagement with the subject matter. When students are actively involved in their learning through hands-on experiences, they are more likely to remember and internalize key scientific principles.

Critical Thinking and Inquiry Skills: Hands-on science activities foster critical thinking and inquiry skills as students analyse data, make predictions, and draw conclusions based on evidence. Through trial and error, students learn to think analytically, evaluate outcomes, and refine their hypotheses, cultivating a scientific mindset.

Collaboration and Communication: Many hands-on science experiences involve teamwork and collaboration, encouraging students to share ideas, collaborate on projects, and communicate their findings effectively. These interpersonal skills are essential for success in STEM fields and in real-world professional settings.

Conclusion

Incidental learning is a valuable and natural process through which individuals acquire knowledge and skills in everyday life. In educational settings, leveraging incidental learning can enrich the learning experience and empower students to become independent, lifelong learners. By creating environments that support exploration and discovery, educators can harness the power of incidental learning to enhance educational outcomes.By giving students immersive experiences that support knowledge acquisition, skill development, and deeper comprehension, practical training improves incidental learning. Active engagement, contextual learning, learning by trial and error, exploration and discovery, multisensory engagement, and real-world problem-solving are all part of this. For students to see the practical applications of theoretical concepts, they must have hands-on science experiences. In order to succeed in STEM subjects and real-world professional settings, they improve comprehension, apply information to solve real-world problems, build critical thinking and inquiry skills, increase retention and engagement, and encourage teamwork and communication.Hands-on science experiences enhance incidental learning by creating dynamic, interactive learning environments that encourage exploration, discovery, and active engagement. By immersing students in authentic, experiential learning opportunities, educators empower them to acquire knowledge and skills naturally, preparing them for success in both academic pursuits and real-world challenges.By providing students with opportunities to apply theoretical knowledge in practical settings and encouraging them to learn through experimentation and reflection, educators promote meaningful incidental learning that extends beyond formal instruction.

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COMPETENCY-BASED EDUCATION: A PARADIGM SHIFT IN LEARNING

Mr. M. Podhuraj
Assistant Professor of physical science
St. Anne's College of education for women
Periyakulam

Dr. B. Amali Prabha
Assistant Professor of Commerce Education
Thiagarajar College of Preceptors (Aided)
Madurai

Abstract

In the rapidly evolving landscape of education, traditional models of teaching and learning are being challenged by innovative approaches that prioritize mastery and practical application over mere content delivery. One such approach, Competency-Based Education (CBE), is gaining traction as a student-centered paradigm that aligns education with the skills and competencies required for success in the 21st-century workforce.
Keywords: *Competency-based education, learning and innovative teaching*

Competency-Based Education

Competency-Based Education is an instructional model that focuses on the mastery of specific skills, knowledge, and abilities, rather than on the completion of a prescribed set of courses or the accumulation of credit hours. In a CBE system, learners progress at their own pace, demonstrating proficiency in clearly defined competencies before advancing to the next level. This approach allows for personalized learning paths, flexible pacing, and a emphasis on applied learning and real-world relevance.

The Principles of Competency-Based Education

CBE is built upon several core principles that distinguish it from traditional educational models:

1. Competency-Driven Curriculum: The curriculum is designed around specific competencies that learners must master, rather than being organized around courses or subjects. These competencies are derived from the skills and knowledge required for success in a particular field or industry.
2. Flexible Pacing: Learners progress at their own pace, based on their individual mastery of competencies. This allows for differentiated instruction and accommodates diverse learning styles and needs.
3. Mastery-Based Progression: Learners must demonstrate proficiency in a competency before advancing to the next level, ensuring a deep understanding and practical application of the skills and knowledge acquired.

4. Personalized Learning Paths: CBE allows for customized learning experiences that align with individual learners' goals, interests, and prior knowledge, creating a more engaging and relevant educational journey.
5. Authentic Assessments: Assessments in CBE are designed to measure the application of knowledge and skills in real-world contexts, often through project-based or performance-based assessments, rather than relying solely on traditional tests or exams.

Benefits of Competency-Based Education

CBE offers several potential benefits for learners, educators, and employers:

- Improved Student Engagement and Motivation: By focusing on mastery and practical application, CBE fosters a deeper understanding and engagement with the subject matter, increasing student motivation and persistence.
- Workforce Readiness: CBE aligns educational outcomes with the competencies and skills valued by employers, better-preparing learners for success in their chosen careers.
- Personalized Learning Experiences: The flexible and customizable nature of CBE allows for personalized learning paths that accommodate diverse learning styles, backgrounds, and goals.
- Cost-Effectiveness: By allowing learners to progress at their own pace and focusing on mastery rather than seat time, CBE can potentially reduce the overall cost of education for both learners and institutions.
- Lifelong Learning: The emphasis on mastering specific competencies aligns with the need for continuous learning and upskilling in today's rapidly evolving job market, promoting a culture of lifelong learning.

Competency-Based Education and Active Learning

One of the hallmarks of CBE is its emphasis on active learning and the practical application of knowledge and skills. Unlike traditional instructional models that rely heavily on passive content delivery, CBE encourages learners to engage in hands-on activities, projects, and simulations that mirror real-world scenarios and challenges. This alignment with active learning principles is a natural fit for innovative teaching methods such as problem-based learning, project-based learning, and flipped classrooms.

In a problem-based learning environment, for example, students work collaboratively to solve complex, authentic problems, drawing upon a range of competencies and applying their knowledge in practical contexts. Similarly, project-based learning engages students in extended, multidisciplinary projects that integrate various competencies and culminate in tangible, real-world products or presentations.

Competency-Based Education and Personalized Learning

Another key tenet of CBE is its emphasis on personalized learning paths and flexible pacing. By allowing learners to progress at their own pace and focusing on the mastery of specific competencies, CBE enables a high degree of individualization and differentiation. This aligns well with innovative teaching methods that leverage technology and adaptive learning

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platforms to create personalized learning experiences tailored to each student's needs, interests, and learning styles.

Adaptive learning systems, for instance, can adjust the content, pace, and instructional approaches based on individual learners' performance and preferences, ensuring that they receive targeted support and challenge at their level of mastery. Similarly, personalized learning plans and competency-based progressions can be integrated into blended learning environments, combining face-to-face instruction with online and self-paced components.

Competency-Based Education and Authentic Assessment

CBE's emphasis on authentic assessment, which measures learners' ability to apply knowledge and skills in real-world contexts, aligns seamlessly with innovative teaching methods that prioritize performance-based assessments and demonstrations of competency. Instead of relying solely on traditional tests and exams, CBE encourages the use of portfolios, capstone projects, simulations, and other forms of assessment that require learners to demonstrate mastery through practical applications.

For example, in a competency-based approach to design thinking or entrepreneurship education, learners might be tasked with developing and pitching a viable business plan or creating a prototype of a product or service. These authentic assessments not only measure competencies related to critical thinking, problem-solving, and communication but also provide learners with valuable experiences that mirror professional practice.

Challenges and Considerations

While the integration of Competency-Based Education principles into innovative teaching methods offers numerous benefits, it also presents several challenges that must be addressed:

1. Faculty and Institutional Readiness: Transitioning to a CBE model and adopting innovative teaching methods requires significant professional development, resource allocation, and institutional support. Faculty members must be equipped with the necessary skills and mindsets to facilitate active learning, personalized instruction, and authentic assessment.
2. Assessment and Credentialing: Developing valid and reliable assessments that accurately measure competency mastery and ensuring that CBE credentials are recognized and valued by employers and higher education institutions are ongoing challenges.
3. Student Support and Readiness: Succeeding in a self-paced, competency-based environment requires a high degree of self-regulation, time management, and technological proficiency from learners. Adequate support systems and resources must be in place to ensure student success.
4. Equity and Access: While CBE and innovative teaching methods have the potential to improve equity and access by addressing diverse learning needs, careful attention must be paid to ensuring that these approaches do not inadvertently exacerbate existing inequities or create new barriers for underserved populations.

Despite these challenges, the integration of Competency-Based Education principles into innovative teaching methods holds great promise for transforming education and better preparing learners for the demands of the modern workforce. By fostering active learning,

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personalization, and authentic assessment, CBE provides a robust framework for designing and implementing teaching approaches that cultivate the knowledge, skills, and dispositions necessary for lifelong learning and success in an ever-changing world.

Conclusion

As the demand for skilled, adaptable, and lifelong learners continues to grow, Competency-Based Education offers a promising approach to align education with the needs of the modern workforce. By focusing on mastery, practical application, and personalized learning paths, CBE has the potential to transform the educational landscape, empowering learners with the competencies they need to thrive in an ever-changing world.

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UTILIZATION OF ICT FACILITIES AND PROFESSIONAL DEVELOPMENT OF TEACHER EDUCATORS

Dr. S. Senthilraja
Assistant Professor in Computer Science
KRP College of Education, Pachampalayam
Sankari West, Namakkal, Tamilnadu

Abstract

The use of information and communication technology (ICT) has revolutionized how instructors can further their professional development. To make teaching and learning more engaging and effective, a variety of ICT-related teaching tools, including computers, smartphones, laptops, tablets, LCD screens, multimedia players, and projectors, are currently utilized in classrooms. The study's goals were to investigate how educators view the usage of information communication technology and to ascertain how ICT might enhance educators' professional development at the tertiary level. The study was a survey of a descriptive kind. Data were collected from 126 teacher educators randomly selected from the colleges in Namakkal District. The statistical techniques used for the present study are t-test and correlation. The study's findings demonstrated that ICT can help instructors advance their professional growth. It was discovered that university instructors were having a lot of trouble keeping up with technology advancements and using ICT in classrooms. The study suggested that refresher courses in ICT be held to help academicians advance their careers.

Keywords: *ICT, Professional development and Higher Education*

Introduction

The way that education is delivered and the mindset and attitude of educators must change, as must the educational system itself. ICT must be a component of the teaching tools that teachers carry, and they must be well-versed in the new toolkit. One of the fundamental changes educators need to accept is that the paradigm for students' learning is evolving. Through watching and listening, students are learning. For pupils today, exploration and discovery are the new standards for learning. The days of memorization are long gone. Students get a better understanding and increased confidence in the material they are taught when they explore, research, and apply the knowledge they have received to real-world situations. Teachers, in turn, gain a greater knowledge of the material they are teaching students by discovering fresh and creative ways that ICT might assist them. They can also customize the curriculum for particular student groups or groups of students. Teachers discovered that pupils perceived the material they were taught by ICT to be more pleasant, and the responses to student inquiries from educators were much more insightful and well-rounded.

Rationale of the Study

Since it provides teachers with access to an enormous array of information, ICT is the cornerstone of today's education and is utilized extensively to encourage pupils to study more precisely and successfully. Teachers, parents, and students can all benefit from new technologies by being able to complete administrative and related activities more quickly and efficiently. For ICT to be effectively adopted by ALL in the academic setting, teachers and other affiliated staff members need to be prepared, trained, and—above all—have a strong

desire to continuously expand their knowledge in order to use ICT to impart EDUCATION to their pupils. A teacher is aware that there is no shortcut for a student to absorb and apply the knowledge for their own "good." In order to understand the underlying theme and hidden theme, students must read, think critically, determine, infer, comprehend, correlate, and apply their newly acquired information to their daily lives and to their peers. ICT may help students accomplish all of this in leaps and bounds, but in addition to their subject-matter expertise, our teachers and their support staff must be proficient in using the most recent ICT. The new standard for communicating with students is to use ICT instead of chalk and board or other traditional methods. White board and marker. The new marker and white board, or chalk and board, is ICT. This new paradigm needs to be adopted by the Education Board and the policy makers. Technology has transformed the way that students learn from their teachers, and it is our educators' responsibility to ensure that technology is used effectively and pragmatically to meet the needs of our students in order for them to acquire the fundamental skills of reading, writing, critical thinking, and critical reading. Math and writing are the cornerstones of their success.

Objectives of the Study

- To find out the significant difference if any utilization of ICT facilities of teacher educators with regard to gender.
- To find out the significant difference if in the professional development of teacher educators with regard to gender.
- To find out the whether there is any significant relationship between the difference if any utilization of ICT facilities of teacher educators.

Hypotheses of the Study

- There is no significant difference between male and female teacher educators in their utilization of ICT facilities.
- There is no significant difference between male and female teacher educators in their professional development.
- There is no significant relationship between the utilization of ICT facilities and the professional development of teacher educators.

Methodology

The investigator has adopted survey methods for the present study. The tools used for the study are the ICT usage of scale and professional development scale constructed and validated by the investigators. Data collected from 126 teacher educators working in the colleges of Education in the Namakkal district were selected using simple random sampling techniques. The statistical techniques used for the present study are t-test and correlation analysis.

Analysis and Interpretation of Data

Hypothesis: 1

There is no significant difference between male and female teacher educators in their utilization of ICT facilities.

Table: 1 Difference the teacher educators in their utilization of ICT facilities with regard to Gender

Dimension between of utilization of ICT	Gender	N	Mean	SD	t Value	p-value	Remark at 5% level
Teaching and learning process	Male	171	16.39	2.80	0.29	0.785	NS
	Female	185	16.46	0.62			
Research Activity	Male	161	15.65	3.05	0.62	0.535	NS
	Female	195	15.46	3.18			
Information Sharing	Male	168	15.52	3.34	0.92	0.356	NS
	Female	188	15.22	3.44			
Knowledge Advancement	Male	151	15.12	3.12	1.24	0.216	NS
	Female	205	14.74	3.35			

It is inferred from the table 1 that the calculated p-value is greater than 0.05 for the dimensions. Teaching and learning process, Research activity, Information sharing and Knowledge advancement. The results showed that there no significant difference between the male and female teacher educators in their utilization of ICT facilities and the null hypothesis was accepted.

Hypothesis: 2

There is no significant difference between male and female teacher educators in their professional development.

Table: 2 Difference between the male and female teacher educators in their professional development

Variable	Gender	N	Mean	Standard Deviation	Calculated t value	Remarks at 0.05 level
Professional development	Male	159	15.45	2.98	1.74	NS
	Female	197	15.34	3.08		

It is inferred from the table 2 that the calculated p- value greater than the 0.05and hence there is no significant difference between the male and female teacher educators in their professional development. So null hypothesis is accepted.

Hypothesis: 3

There is no significant relationship between the utilization of ICT facilities and the professional development of teacher educators.

Table: 3 Relationship between the utilization of ICT facilities and the professional development of teacher educators

Dimension between of utilization of ICT	N	Calculated r value	p-value	Remark at 5% level
Teaching and learning process	356	0.284	0.000	S
Research Activity		0.356	0.000	S
Information Sharing		0.267	0.000	S
Knowledge Advancement		0.455	0.000	S

It is inferred from the table 3 that the calculated p- value is less than 0.01 and hence there is a significant relationship between the utilization of ICT facilities and the professional development of teacher educators. So null hypothesis is not accepted.

Conclusion

In today's culture, teaching is seen as a respectable vocation. ICT can be used to train instructors on how to use new digital resources and to keep them up to date on the most recent knowledge and abilities. In addition to becoming knowledgeable about the newest technology in communication and electronics (ICT). Technology related to information and communication (ICT) is a key factor in our society's rapid advancement (ICT). It has the power to alter the character of education and the roles that instructors and students play in the process of teaching and learning. Computers and other technologies are starting to be used in the classroom by Indian educators. Memory sticks, laptops, LCD projectors, desktop computers, EDUCOM, and Smart Classrooms are becoming more common in teacher education institutions. Because of this, we must integrate information and communication technology into teacher education in the twenty-first century. ICT-based education is becoming more widespread globally. But for the time being, ICT should be utilized in concert with a well-organized classroom environment.

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TECHNO PEDAGOGICAL APPROACH IN SCIENCE KNOWLEDGE

Dr. K. Sathya
Assistant Professor in Education KRP College of Education Pachampalayam Sankari West. Namakkal

Abstract

This present paper focus on Educational technology can support both the teaching and learning of science concepts and science processes. Pedagogical content knowledge since its inception as teacher - specific professional knowledge, has been researched extensively. Drawing on a wide range of literature, this paper seeks to clarify how the potential offered by PCK could be utilised to further develop science teacher education. An analysis of PCK models proposed by various researchers, together with methods of elucidating PCK in experienced and novice teachers, is provided. This knowledge is different from the knowledge of a disciplinary expert and also from the general pedagogical knowledge shared by teachers across disciplines. The paper argues that making PCK more explicit in the teacher education process may help novices adjust to teaching, as well as aiding experienced teachers in developing more reflective practices. Teachers must learn to use their knowledge base to provide the grounds for choices and action. Good teaching is not only effective behaviourally, but must also reset on a foundation of adequately grounded premises

Keywords: science, teacher education, pedagogical content knowledge pedagogical content knowledge, technology knowledge, technological pedagogical knowledge.

Introduction

Educational technology can support both the teaching and learning of science concepts and science processes. Technology allows teachers and students to model and explore concepts that are otherwise impossible or difficult to explore, to support student inquiry and to clarify and display student thinking. Specifically, technology integration should incorporate the technological skill and ability to use pedagogical knowledge as a base for integrating technology into teaching and learning It

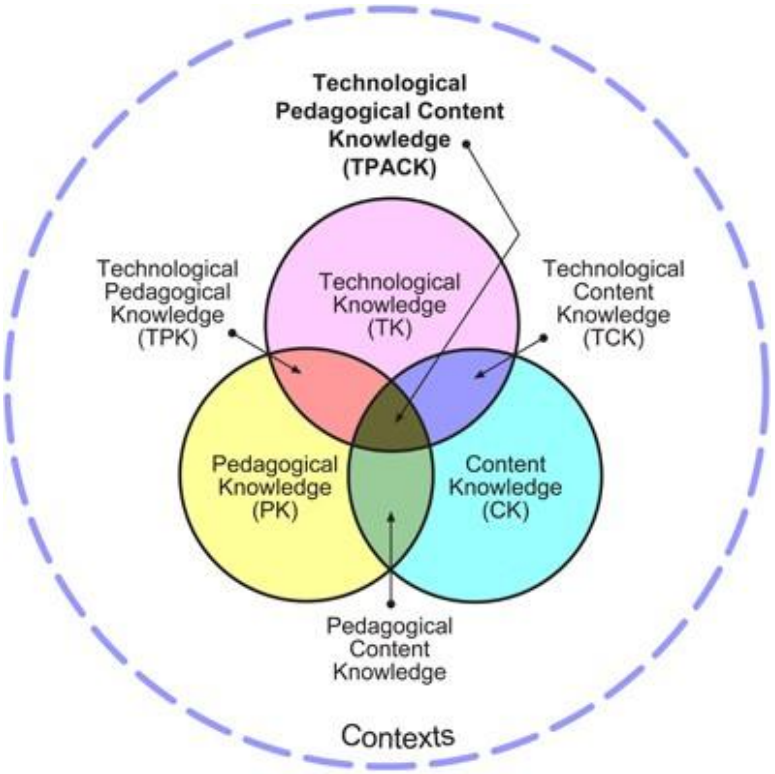
involves managing and coordinating available instructional aids and resources in order to facilitate learning. As educators know, teaching is a complicated practice that requires an interweaving of many kinds of specialized knowledge.

Integration of Technology

- Take advantage of the unique features of the technology
- Make scientific views more accessible
- Develop understandings of the relationship of science and technology

As teachers integrate technology into their teaching, it is often helpful to look at the knowledge required to help support thoughtful integration.

Researchers (Mishra and Kohler, 2006) have began to look at the knowledge used to integrate technology by examining Technological and Pedagogical Content Knowledge or TPACK.



This teacher decides to use two force sensors connected by a rubber band. The sensors are connected to a computer that displays real-time graphs. She asks students to predict what the shape of the graph will be when a student pulls on the rubber band with one force probe (The other probe is stationary). This produces an result that is unexpected by students (a discrepant event). In making her decisions for designing the lesson, the teacher is considering

- content knowledge
- pedagogical knowledge
- technological knowledge.

Technology is not a replacement for teaching, but a tool that can be used by students and their teachers to enhance learning.

Nature of Science

Research in teacher education focus on the specific demands of teaching when there is an epistemological shift from science as product to science as process, with emphasis on investigation and the societal context of science. Teacher education that emphasizes the empiricist perspective of science would not prepare future teachers for teaching science as a process or the societal context of science.

Pedagogical Content Knowledge

The idea of pedagogical content knowledge is consistent with, and idea of knowledge of pedagogy that is applicable to the teaching of specific content. This knowledge includes knowing what teaching approaches fit the content, and likewise, knowing how elements of the

content can be arranged for better teaching. This knowledge is different from the knowledge of a disciplinary expert and also from the general pedagogical knowledge shared by teachers across disciplines. PCK is con-cerned with the representation and formulation of concepts, pedagogical techniques, knowledge of what makes concepts difficult or easy to learn, knowledge of students' prior knowledge, and theories of epistemology. This knowledge of students includes their strategies, prior conceptions misconceptions that they are likely to have about a particular domain, and potential misapplications of prior knowledge

Technology Knowledge

Technology knowledge (TK) is knowledge about standard technologies, such as books, chalk and blackboard, and more advanced technologies, such as the Internet and digital video. This involves the skills required to operate particular technologies. In the case of digital technologies, this includes knowledge of operating systems and computer hardware, and the ability tousle standard sets of software tools such as word processors, spread sheets, browsers, and e-mail. TK includes knowledge of how to install and remove peripheral devices, install and remove software programs, and create and archive documents. Most standard technology workshops and tutorials tend to focus on the acquisition of such skills.

Technological Content Knowledge

Technological content knowledge (TCK) is knowledge about the manner in which technology and content are reciprocally related. Although technology constrains the kinds of representations possible, newer technologies often afford newer and more varied representations and greater flexibility in navigating across these representations. Teachers need to know not just the subject matter they teach but also the manner in which the subject matter can be changed by the application of technology.

Technological Pedagogical Knowledge

Technological pedagogical knowledge (TPK) is knowledge of the existence,components, and capabilities of various technologies as they are used in teaching and learning settings, and conversely, knowing how teaching might change as the result of using particular technologies. This might include an understanding that a range of tools exists for a particular task, the ability to choose a tool based on its fitness, strategies for using the tool and knowledge of pedagogical strategies and the ability to apply those strategies for use of technologies.

Technological Pedagogical Content Knowledge

This knowledge is different from knowledge of Teachers College Record disciplinary or technology expert and also from the general pedagogical knowledge shared by teachers across disciplines. TPCK is the basis of good teaching with technology and requires an understanding of the representation of concepts using technologies pedagogical techniques that use technologies in constructive ways to teach content knowledge of what makes concepts difficult or easy to learn and how technology can help redress some of the problems that students face; knowledge of students' prior knowledge and theories of epistemology, and knowledge of how technologies can be used to build on existing knowledge and to develop new epistemologies or strengthen old ones. This knowledge would not typically be held by technologically proficient

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subject matter experts, or by technologists who know little of the subject or of pedagogy, or by teachers who know little of that subject or about technology. Model of technology integration in teaching and learning argues that developing good content requires a thoughtful interweaving of all three key sources of knowledge: technology, pedagogy, and content.

Knowledge of Science

To teach science effectively, science teachers need to have an adequate level of knowledge of science. Thus, science teachers should refresh their knowledge of science to maximize their students' learning. Teachers in TEC were provided with opportunities to review and update their knowledge about science.

Knowledge of Pedagogy

Most beginning science teachers struggle with developing effective lesson plans. In order to create lesson plans that meet all students' needs, teachers need to have a deep understanding about student learning and strategies that help students construct knowledge and improve skills and abilities.

Knowledge of Students

Jason, Matt, Brenna, and Cassie all believed that students learn science best when they are " engaged in science." As such, all these teachers were advocates of inquiry-based teaching.

Science Concept Development and Assessment During Design and Technology Teaching

Science concepts constitute part of the knowledge needed for teaching design and technology observes that although technology education is perceived simplistically as applied science, it is in fact a cognitive system comprising a separate body of technological knowledge. Although an important source of knowledge for technology, science is one of several areas of relevant knowledge-generating activities.

The Process Approach To Science and Technology Education

In helping student to construct knowledge, the teacher can prepare a child's science experience in many ways, for instance, through a process skills approach, guided discovery learning, inquiry learning, interactive, problem-based learning and a project approach Two types of process skills are suggested by the Curriculum and Assessment Policy Statement, Life Skills Foundation Phase policy document namely the inquiry process and the technological process. In using a process skills approach, a teacher helps children to develop science knowledge while developing skills and processes to be able to undertake their own investigations Careful planning allows for the investigation of science concepts while developing science process skills.

Integration of Science and Technology Processes

Whereas the foundation phase education policy for life skills does not overtly advocate an integrated approach, it implies an integration of science, technology and social issues in stating, as a specific aim, that the life skills programme should expose learners to a range of knowledge, skills and values that strengthen their awareness of social relationships, technological processes

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and elementary science constructivist approach which the teaching of the scientific and technological processes would ensure. is encouraged that recent practice of STS instruction has shown and potential for explicating the constructivist epistemology of science for learners..

Conclusion

Technology Pedagogy Content Knowledge framework allows us to tease apart some of the key issues that are necessary for scholarly dialogue about educational technology. Our model considers how content, pedagogy, and technology dynamically co constrain each other. We show how the TPCK can be used to design pedagogical strategies and an analytic lens to study changes in educators' knowledge about successful teaching with technology. The goal of teacher education is not to indoctrinate or train teachers to behave in prescribed ways, but to educate teachers to reason soundly about their teaching as well as to perform skill fully. Sound reasoning requires both a process of thinking about what they are doing and an adequate base of facts, principles and experiences from which to reason. Teachers must learn to use their knowledge base to provide the grounds for choices and action. Good teaching is not only effective behaviourally, but must also reset on a foundation of adequately grounded premises. We believe that the approach that we have developed the basis for a more integrated perspective on research and pedagogy.

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MODERN TEACHING METHODS & NEW TRENDS IN EDUCATION

B. Sivaranjani & R. Vijayalakshmi
Student Teachers, Thiagarajar College of Preceptors

Abstract

Modern teaching has various effective teaching methods that foster student engagement and academic achievement. However, its systematic implementation has been lacking in India. This paper explores the various methods of modern teaching such as flipped classroom, project-based learning, problem-based learning, collaborative learning, cooperative learning, game-based learning, Independent learning and Inquiry-based learning, the Benefits of modern teaching methods and New trends in education system.

***Keywords**: Modern teaching, New Trends, Teaching, Academic Learning*

Introduction

In the world, current student generations are more knowledgeable than previous generations. Their quest for knowledge is very high. Education should be better to improve their knowledge and be responsive to the speed of their thinking. The traditional education system is not enough for this. A suitable modern teaching method is also required for this education system. That is engaging student interest. Modern teaching, in essence, is a particular teaching method that focuses on instructing students to improve their intellect by utilizing new and innovative ideas, as opposed to making them recite information memorized from a syllabus to pass a rigid examination.

Modern Teaching

The modern teaching method is a learner-centred and activity-based teaching method which is used to get learners fully involved. This approach recognizes the learner as the primary reason for curriculum planning and teaching. Modern teaching focuses on the entire learning process, rather than focusing strictly on the final result, and is dedicated to helping students build skills as part of a constructivist approach to learning. Teachers should follow modern teaching methods.

Aim of the Modern Teaching

Modern teaching methods are designed to make learning more engaging, interactive, and relevant to students. They provide students with the opportunity to take an active role in their learning, develop the skills they need to succeed in the 21st century and meet the diverse needs of the student population.

Modern Teaching Methods

There are some modern teachings are given below

- Flipped classroom.
- Project-based learning
- Problem–based learning

- Collaborative learning
- Cooperative learning
- Game-based learning
- Independent learning
- Inquiry-based learning

Flipped Classroom

A flipped classroom is a pedagogical model that flips traditional lectures and homework. The traditional lecture is viewed at home before class and homework activities are done in the classroom with the instructor present to guide students in their endeavours. Class time is used as a workshop where students engage in activities that will help them apply the lecture content and develop skills while interacting with other students. The instructor operates more as a facilitator who encourages inquiry and collaboration.

Advantages

- Teachers Spend Less Time Introducing New Topics.
- Students Develop Independent Learning Skills.
- Teachers Can Create More Engaging Lessons.
- Absent Students Do Not Fall Behind.
- Teachers Can Re-Use the Content They Create.
- Students Can Build a Deeper Understanding

Project-based Learning

Project-based learning is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems.

Advantages

- Deeper engagement and interaction with learning content
- Encouragement of higher order thinking and problem-solving skills
- Development of peer and professional networks
- Engagement with potential employers and career mentors
- Fostering 21st-century skills like collaboration and communication
- Enhanced autonomy and agency in learning
- A sense of mastery and self-efficacy
- Gaining valuable career insights.

Problem-based Learning

Problem-Based Learning (PBL) Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used as the vehicle to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts.

Advantages

- Activates, prior knowledge and facilitates new learning.
- Increases student ability to recall and apply knowledge.
- Increase motivation.
- Higher-order thinking
- Encourages students to learn how to learn.

Collaborative Learning

Collaborative learning can occur peer-to-peer or in larger groups. Peer learning, or peer instruction, is a type of collaborative learning that involves students working in pairs or small groups to discuss concepts or find solutions to problems.

Advantages

- Enhancing Problem-Solving Skills.
- Fostering Social Interaction.
- Promoting Diversity.
- Improving Communication Skills.
- Inspiring Creativity.
- Building Trust.
- Boosting Confidence.
- Encouraging Commitment.

Cooperative Learning

Cooperative learning involves students working together in small groups to accomplish shared goals or complete group tasks. It is widely recognized as a teaching strategy that promotes socialization and learning among students from pre-school through to tertiary level and across different subjects and curriculum areas.

Advantages

- Enhanced Academic Achievement
- Improved Social Skills
- Increased Motivation
- Development of Critical Thinking Skills
- Enhanced Communication Skills
- Promotion of Positive Interdependence
- Cultivation of Leadership Skills
- Increased Retention of Information

Game-based Learning

Game-based learning is a teaching method that uses the power of games to define and support learning outcomes. A GBL environment achieves this through educational games that have elements such as engagement, immediate rewards and healthy competition.

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Advantages

- Help children learn new concepts more quickly.
- Enhance problem-solving skills.
- Encourage collaboration and social skills.
- Boost confidence and self-esteem.
- Improve academic performance.
- Stimulate creativity and imagination.
- Encourage healthy competition.
- Teach life skills.

Independent Learning

Independent learning is a method or learning process where learners have ownership and control of their learning – they learn by their actions and direct, regulate, and assess their learning.

Advantages

- Boosted student motivation and confidence.
- Improved student performance
- Better understanding of the student's strengths and weaknesses
- Freeing teacher time to concentrate on different tasks and remediation.

Inquiry-based Learning

Inquiry-based learning is a learning process that engages students by making real-world connections through exploration and high-level questioning. It is an approach to learning that encourages students to engage in problem-solving and experiential learning.

Advantages

- Encourages critical thinking. ...
- Improves problem-solving skills. ...
- Encourages creativity. ...
- Improves communication skills. ...
- Connects learning to the real world. ...
- Helps students understand complex topics. ...
- Encourages engaged learning.

Benefits of Implementing Modern Methods in School

- Modern teaching methods promote engagement, active learning, and motivation among students.
- These methods can enhance creativity, imagination, and innovation among students.
- They can assist students in developing critical thinking, problem-solving, and decision-making skills.

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- Modern teaching methods encourage collaboration, teamwork, and social skill development.
- By leveraging technology and multimedia resources, modern teaching methods can make learning more interactive, dynamic, and inclusive.
- They can help students personalize their learning experience and take ownership of their learning journey.
- By aligning with educational standards and learning objectives, modern teaching methods can improve academic performance and achievement among students.
- These methods can help instructors adapt to different learning styles and preferences, promoting student-centred and differentiated instruction.
- They can help students develop 21st-century skills, such as digital literacy, communication, and global awareness, preparing them for future success in the workforce and society.

New Trends in Education in India

- Online Education
- Artificial intelligence
- Technology integration
- Skill development

Online Education

Students can turn anywhere with Internet access and electricity into a classroom. It can include audio, video, text, animations, virtual training environments and live chats with professors. It's a rich learning environment with much more flexibility than a traditional classroom. Online teaching software such as Google Classroom, Google Books, zoom, classroom management,class123, slack etc.,

Artificial intelligence

AI in education aims to achieve optimal outcomes for students by combining the strengths of machines and teachers. In India, the integration of AI in education has showcased remarkable potential, reshaped traditional methods, and brought forth a new era of personalized learning and innovation. Application of AI in education such as Learning assistance, personalized education
Improved accessibility, AI tutoring, Automated and improved grading

Technology Integration

Integration of technology in education simply refers to the use of technology to enhance the student learning experience. Utilizing different types of technology in the classroom, including a virtual classroom, creates learners who are actively engaged with learning objectives.

Skill Development

Skill development can have a positive impact on academic success. When students engage in skill-building activities, they enhance their cognitive abilities, critical thinking skills, and

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problem-solving capabilities. These skills are not only valuable in real-world scenarios but also in academic settings.

Conclusion

To conclude,the paper said that modern teaching methods is mostly experience –based and also learner-centered, whereas the traditional teaching approach was subject-centered or teacher-centered. Modern teaching methods are very efficient for the learner. We will use modern teaching methods in the classroom to engage student learning and also we will use new trends in the education system that are efficient to save saving and are interesting to learners.

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THE IMPACT OF REFLECTIVE PRACTICES ON TEACHER GROWTH AND DEVELOPMENT

V. Karthiyayini & M. Lavanya
B.Ed Teacher Trainee
Thiagarajar college of preceptors (Govt. Aided)
Madurai, Tamil Nadu, India.

Abstract

Reflective practices have emerged as a cornerstone of effective teacher development. This abstract explores the trans formative impact of reflection on educators' professional journeys. By critically analyzing their experiences, teachers gain a deeper understanding of their strengths, weaknesses, and biases. This self-awareness empowers them to experiment with new instructional strategies, refine their classroom practices, and ultimately enhance student learning outcomes. The abstract delves into the various methods of fostering reflective practice, highlighting the importance of creating a supportive environment where educators can openly analyze their experiences and collaborate with colleagues.

Keywords: *Reflective practices, Self-awareness, Collaborate, Observation, Exploration*

Introduction

The education landscape is in a constant state of flux, demanding educators to be adaptable, innovative, and lifelong learners. In this dynamic environment, teacher development plays a vital role in equipping educators with the necessary knowledge, skills, and mindsets to thrive. Reflective practices have emerged as a powerful tool within teacher development, fostering continuous growth and improvement.

This paper delves into the transformative impact of reflective practices on teacher growth and development. By critically analyzing their experiences, teachers gain a deeper understanding of their strengths, weaknesses, and underlying biases. This self-awareness empowers them to experiment with new instructional strategies, refine their classroom practices, and ultimately enhance student learning outcomes.

We will explore various methods of fostering reflective practice, highlighting the importance of creating supportive environments where educators can openly analyze their experiences and collaborate with colleagues. By examining the impact of reflection on different aspects of teacher development, this paper aims to illuminate the power of reflective practices in shaping effective educators who are well-equipped to navigate the ever-evolving world of education.

Models of Reflective Practice

Reflective practice serves as a cornerstone of teacher development, empowering educators to critically analyze their experiences and refine their instructional approaches. Various models provide frameworks to guide this process. Here are two prominent models:

- Kolb's Experiential Learning Cycle (1984): This cyclical model emphasizes the transformative nature of experience. It comprises four stages:
- Concrete Experience: The educator encounters a situation or problem in the classroom.

- Reflective Observation: The educator reflects on the experience, considering their observations, thoughts, and feelings.
- Abstract Conceptualization: The educator analyzes the experience, drawing connections to theory, research, or past experiences.
- Active Experimentation: The educator applies new insights and learnings to future classroom situations.
- Gibbs' Reflective Cycle (1988): This six-stage model offers a more structured approach to reflection:
- Description: The educator describes the situation or experience in detail.
- Feelings: The educator identifies their emotions and reactions during the experience.
- Evaluation: The educator considers the positive and negative aspects of the experience.
- Analysis: The educator analyzes the factors that contributed to the experience.
- Conclusion: The educator draws conclusions about their learnings from the experience.
- Action Plan: The educator formulates a plan to apply their learnings in future situations.

Refining Specific Teaching Skills Through Reflection

Reflective practices serve as a powerful tool for teacher development, enabling educators to not only analyze their experiences but also translate those learnings into concrete improvements in their teaching skills. Here's a closer look at how reflection can enhance specific teaching competencies:

- Lesson Planning: Reflection can prompt educators to analyze the effectiveness of their lesson plans. By considering student engagement, clarity of learning objectives, and successful teaching strategies, teachers can refine their plans for future lessons (Richards & Lockhart, 2000).
- Classroom Management: Reflecting on classroom behaviour patterns and discipline techniques allows educators to identify areas for improvement. They can experiment with new strategies and assess their effectiveness through further reflection (Claxton, 1993).
- Differentiated Instruction: Reflection can help educators critically examine how well their lessons cater to diverse student needs. By analyzing student performance data and reflecting on their teaching methods, educators can tailor their instruction to ensure all students are challenged and supported (Brookhart, 2017).

Fostering a Culture of Reflection in Schools

School administrators and instructional coaches play a pivotal role in cultivating a supportive environment that encourages reflective practice among educators. Here are some strategies to consider:

- Dedicated Time for Reflection: Allocate dedicated time within the school schedule for teachers to engage in reflective practices. This could be individual reflection time or collaborative reflection sessions with colleagues (Fullan, 2008).
- Professional Learning Communities (PLCs): Establish Professional Learning Communities (PLCs) focused on reflection. These communities can provide a safe

space for teachers to share experiences, analyze student work, and engage in collaborative reflection (DuFour, 2004).

- Reflective Practice Workshops: Organize workshops to introduce teachers to different models of reflective practice and equip them with practical strategies for reflection (Langford & Gore, 2002).
- Mentorship and Coaching: Provide mentorship and coaching programs that emphasize the importance of reflection. Mentors and coaches can model reflective practices and guide teachers through the process (Timperley, 2001).

Self-Care: The Engine of Effective Reflection

Reflective practices, while valuable for teacher development, can also be emotionally demanding. Educators may confront challenging experiences, shortcomings in their practice, or limitations within the educational system. Self-care becomes essential to sustain effective reflection and prevent burnout.

- Emotional Well-being: The reflective process can stir up negative emotions. Self-care practices such as mindfulness exercises, spending time in nature, or engaging in hobbies can help educators maintain emotional well-being and approach reflection with a balanced perspective (Chang, 2010).
- Maintaining Perspective: Self-care allows educators to detach from work-related stress and gain a fresh perspective when returning to reflection. This can lead to more objective analysis and prevent educators from becoming overly critical of themselves (Darling, 2017).
- Sustainability of Reflective Practice: By prioritizing self-care, educators are more likely to view reflection as a positive and sustainable practice, rather than a burden. This fosters a long-term commitment to continuous learning and improvement (Schon, 1983).

Cultivating a Culture of Reflection in Educational Settings

School leaders and instructional coaches play a critical role in establishing a supportive environment that encourages reflective practice among educators. By implementing specific strategies, they can foster a culture of continuous learning and improvement:

- Dedicated Time for Reflection: Traditionally, teacher schedules are packed with lessons and administrative duties. Carving out dedicated time for reflection demonstrates the school's commitment to teacher development and provides space for educators to engage in self-analysis (Fullan, 2008). This time can be used for individual reflection or collaborative reflection sessions with colleagues.
- Professional Learning Communities (PLCs): Professional Learning Communities (PLCs) focused on reflection provide a safe space for teachers to share experiences, analyze student work, and engage in collaborative reflection. Through facilitated discussions and peer feedback, educators can gain new perspectives and refine their teaching practices (DuFour, 2004).
- Reflective Practice Workshops: Equipping teachers with the tools and strategies for effective reflection is essential. Organizing workshops can introduce educators to

different models of reflective practice, such as Kolb's Experiential Learning Cycle or Gibbs' Reflective Cycle. These workshops can also provide practical guidance on conducting self-reflection and navigating challenging aspects of the process (Langford & Gore, 2002).

- Mentorship and Coaching Programs: Mentorship and coaching programs can provide invaluable support for teachers engaging in reflective practice. Mentors and coaches can model reflective practices during their interactions with teachers. They can also guide teachers through the reflective process, offering prompts, facilitating discussions, and providing constructive feedback on teachers' reflections (Timperley, 2001).

Mentorship and Coaching: Catalysts for Reflective Growth

Mentors and instructional coaches serve as powerful allies in an educator's journey of reflective practice. They can provide targeted support that empowers teachers to delve deeper into their experiences and translate reflection into concrete improvements.

- Modeling Reflective Practices: Effective mentors and coaches don't just advocate for reflection; they model it in their interactions with teachers. By openly reflecting on their own experiences and decision-making processes, they demonstrate the value of self-analysis and encourage similar behavior in teachers (Gutiérrez & Berliner, 2014).
- Guiding the Reflective Process: The reflective process can be challenging, especially for novice educators. Mentors and coaches can guide teachers through the process by providing prompts, facilitating discussions, and offering constructive feedback on teachers' reflections. This targeted support can help educators refine their self-reflection skills and gain new insights from their experiences (Moon, 1999).
- Safe Space for Exploration: Reflective practice often involves confronting uncomfortable truths or acknowledging areas for improvement. Mentors and coaches can create a safe and supportive space where teachers feel comfortable sharing their experiences and exploring their vulnerabilities without fear of judgment (Acharya & Bennett, 2003).
- Promoting Action Planning**:** The ultimate goal of reflection is to translate learnings into actionable improvements. Mentors and coaches can support teachers in developing concrete action plans based on their reflections. This ensures that reflection goes beyond self-analysis and translates into tangible growth in teaching practice (Langford & Gore, 2002).

Leveraging Technology to Enhance Reflective Practices

The landscape of education is constantly evolving, and technology offers new and innovative ways to support reflective practices among educators. Here's a look at how technology can be harnessed to empower educator reflection:

- Online Journals and Reflection Platforms: Digital platforms provide a convenient and accessible space for educators to document their experiences, thoughts, and learnings. These platforms can be used for individual reflection or for collaborative reflection with colleagues (Coffey et al., 2015).

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- Video Analysis Tools: Recording classroom lessons and using video analysis tools allows educators to revisit specific moments and analyze their teaching strategies in detail. This can be particularly helpful in reflecting on classroom management techniques or instructional delivery methods (van Eck & Dempsey, 2008).
- Online Communities and Forums: Online communities and forums dedicated to reflective practice offer educators a platform to connect with colleagues from around the world, share experiences, and engage in discussions about teaching challenges and triumphs (Zhao, 2016).
- Digital Portfolios: Digital portfolios allow educators to curate and showcase their reflections, lesson plans, student work samples, and other artifacts that demonstrate their growth and professional development journey (Wolf, 2007).

Challenges and Considerations

While technology offers numerous benefits, it's important to acknowledge some challenges:

- Accessibility: Ensuring equitable access to technology and necessary digital literacy skills is crucial for inclusive implementation (Warschauer & Artemeva, 2006).
- Time Constraints: Integrating technology into reflective practices should not create an additional burden. It's essential to find tools that are user-friendly and time-efficient (Coffey et al., 2015).
- Data Privacy: When using online platforms for reflection, educators should be mindful of data privacy concerns and ensure they are using tools with appropriate security measures.

Roadblocks on the Road to Reflection: Challenges and Limitations

While reflective practices hold immense potential for teacher development, there are certain challenges and limitations that educators and schools need to consider:

- Time Constraints: The demands of a teacher's schedule can leave limited time for dedicated reflection. Carving out designated time for self-analysis can be difficult, especially for educators with large workloads or heavy administrative duties (Farrell, 2007).
- Lack of Support: A school culture that does not prioritize reflection can hinder its effectiveness. Without encouragement from administrators or access to mentorship programs focused on reflection, educators may struggle to integrate reflective practices into their routines (Guskey, 2000).
- Superficial Reflection: Rushing through the reflection process or focusing solely on positive experiences can limit the potential for growth. Educators may engage in surface-level reflection without delving deeper into the complexities of their experiences (Schön, 1983).
- Emotional Challenges: Confronting shortcomings or failures in the classroom can be emotionally challenging. Educators may experience feelings of inadequacy or defensiveness, hindering their ability to engage in honest and objective self-reflection (Brookfield, 1998).

Strategies to Overcome Challenges

Despite these limitations, there are steps to address them:

- Schedule Dedicated Time: Schools can allocate dedicated time within the school week for teacher reflection. This demonstrates a commitment to professional development and creates space for self-analysis (Fullan, 2008).
- Mentorship and Coaching: Mentorship and coaching programs can provide guidance and support for teachers engaging in reflection. Mentors can model reflective practices and help teachers navigate the challenges of self-analysis (Timperley, 2001).
- Reflective Practice Training: Workshops or professional development sessions can equip educators with the tools and strategies for effective reflection. This can help them move beyond superficial reflection and delve deeper into their experiences (Langford & Gore, 2002).

Reflective Practices: A Pathway to Enhanced Student Learning:

While the primary focus of reflective practices lies in teacher development, the ultimate goal is to improve student learning outcomes. By critically analyzing their experiences, teachers gain insights that empower them to refine their instructional practices and create a more effective learning environment for students.

- Improved Instructional Design: Reflection allows teachers to assess the effectiveness of their lesson plans and teaching strategies. By identifying areas for improvement, they can refine their instruction to better align with student needs and learning objectives (Richards & Lockhart, 2000).
- Enhanced Classroom Management: Through reflection on classroom behaviour patterns and discipline techniques, teachers can identify areas for improvement and experiment with new strategies. This leads to a more positive and productive learning environment where students can focus on their studies (Claxton, 1993).
- Differentiated Instruction: Reflection prompts teachers to analyze how well their lessons cater to diverse student needs. By considering student performance data and reflecting on their teaching methods, educators can tailor their instruction to ensure all students are challenged and supported (Brookhart, 2017).
- Deeper Student Engagement: Reflective teachers are more adept at identifying student misconceptions or areas of confusion. This allows them to adapt their teaching in real-time, fostering deeper student engagement and promoting a growth mindset in the classroom (Hattie, 2009).

Evidence from Research

- Research highlights the positive correlation between teacher reflection and student learning:
- A study by Loughran (2002) found that teachers who engaged in regular reflection demonstrated improvements in their instructional practices, leading to gains in student achievement.

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- A meta-analysis by Joyce and Showers (2002) concluded that teacher professional development programs that emphasized reflection had a positive impact on student learning outcomes.

Reflective Practice for Teacher Leaders: Amplifying Impact

Teacher leaders, such as instructional coaches, department chairs, or curriculum specialists, play a pivotal role in fostering a culture of continuous learning within a school. However, their own growth is equally important. Reflective practice offers a powerful tool for teacher leaders to not only enhance their own abilities but also empower other educators to embrace reflection. Here's a closer look at the value of reflective practice for teacher leaders:

- Deeper Understanding of Educational Challenges: Through critical reflection on school-wide data, observations of teacher practice, and conversations with colleagues, teacher leaders gain a deeper understanding of the challenges and opportunities present within the school. This informs their leadership decisions and allows them to provide targeted support for teachers (Louis et al., 2010).
- Refining Leadership Strategies: Reflection allows teacher leaders to analyze the effectiveness of their leadership practices. By considering the impact of their coaching strategies or professional development initiatives, they can refine their approach to maximize positive outcomes (Timperley et al., 2007).
- Modeling Reflective Practice: Teacher leaders set the tone for the school culture. By openly engaging in reflection and sharing their experiences with colleagues, they inspire other educators to embrace self-analysis and continuous learning (Gronn, 2002).
- Supporting Teacher Reflection: Reflective teacher leaders are better equipped to support the reflective practice of other educators. They can model reflective questioning techniques, provide feedback on teachers' reflections, and create a safe space for honest and open discussions (Farrell, 2007).

Reflective Practice in a Virtual Setting: Adapting for Online Learning

The rise of online learning environments necessitates adapting established practices like reflective practice to this new context. While traditional classroom observations and interactions might be less frequent, fostering reflection in virtual settings remains crucial for teacher development. Here's how to encourage reflective practices in online education:

- Leveraging Asynchronous Reflection: Utilize online platforms for asynchronous reflection. Educators can use discussion forums, collaborative documents, or online journals to document their experiences with virtual teaching strategies, student engagement in the online environment, and the effectiveness of their online lesson plans (Coffey et al., 2015).
- Enhancing Video Analysis: Record virtual lessons or specific interactions with students. Educators can then analyze the recordings to reflect on their online teaching presence, communication methods, and their ability to address student needs in a virtual space (van Eck & Dempsey, 2008).
- Facilitating Online Discussions: Organize online discussions or webinars focused on reflective practice in virtual settings. This allows educators to share their experiences,

challenges, and successes with online teaching, fostering peer-to-peer learning and collective reflection on best practices (Zhao, 2016).

- Utilizing Online Reflection Prompts**:** Provide online prompts or questions to guide educators in their reflection process. These prompts can be tailored to specific aspects of online teaching, such as fostering online collaboration, managing online discussions, or providing effective feedback in a virtual environment (Langford & Gore, 2002).

Addressing Challenges

- Overcoming the Asynchronous Divide: While asynchronous reflection offers flexibility, fostering meaningful interaction is crucial. Encourage educators to respond to each other's reflections, creating a sense of community and shared learning.
- Ensuring Accessibility: Ensure that all educators have access to the necessary technology and digital literacy skills for online asynchronous reflection.
- Prioritizing Time Management: Time constraints can be a hurdle. Encourage educators to set aside dedicated time for reflection within their online teaching schedules.

Conclusion

This paper has explored the multifaceted impact of reflective practices on teacher growth and development. By critically examining their experiences, educators embark on a continuous learning journey that empowers them to refine their craft and cultivate a more effective learning environment for their students.

The benefits of reflective practices are undeniable. From honing specific teaching skills like lesson planning to fostering a deeper understanding of student needs, reflection allows teachers to become more responsive and impactful educators. Moreover, it cultivates a culture of continuous learning within the teaching profession, ensuring educators remain abreast of best practices and adapt to a constantly evolving educational landscape. Ultimately, the positive impact of reflective practices transcends the individual teacher, translating into improved student learning outcomes.

However, fostering a culture of reflection requires a supportive environment. Schools can play a pivotal role by allocating dedicated reflection time, establishing professional learning communities focused on reflection, and providing mentorship programs that guide teachers through the reflective process. Technology can also be harnessed to support reflection through online platforms, video analysis tools, and digital portfolios.

While challenges like time constraints and emotional hurdles exist, strategies such as scheduling dedicated reflection time and providing mentorship programs can help educators overcome them. By prioritizing reflective practices, schools can empower their teachers to become lifelong learners, ultimately leading to a more effective and impactful educational experience for all students.

Summary

This thematic paper explored the transformative power of reflective practices on teacher growth and development. By critically analyzing their classroom experiences, educators embark on a journey of continuous learning, leading to, Reflection fosters improvements in

specific areas like lesson planning, classroom management, and differentiated instruction. Educators can analyze their effectiveness and experiment with new approaches based on their learnings.Deeper Understanding of Students to more responsive teaching style that caters to diverse learners and ensures all students feel challenged and supported. Reflective practices cultivate a growth mindset among educators. By critically examining their work, they identify areas for improvement and actively seek out new knowledge and strategies to enhance their effectiveness. Ultimately, the goal of reflective practices is to improve student learning. By refining instruction and creating a more positive learning environment, teachers empowered by reflection can positively impact student achievement.

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CONFERENCE PAPER: REIMAGINING ASSESSMENT: A MULTIFACETED APPROACH TO MEASURING STUDENT GROWTH

K. Aruna & P. Dharani
Student Teachers,
Thiagarajar College of Preceptors, Madurai

Abstract

Traditional assessment practices often focus on summative evaluations, leading to a one-dimensional understanding of student learning. This paper proposes a multifaceted approach to assessment that integrates formative and summative methods, self-assessment, and peer assessment. By utilizing a variety of tools and strategies, educators can gain a richer picture of student progress and create a learning environment conducive to continuous growth. The paper will discuss the benefits of this approach, explore specific practices for implementation. Assessment skills are an important part of the assessment in the classroom for effective learning. These skills applied on the practices of teachers for classroom assessment. This study seeks to evaluate the competence and assessment practices of school teachers regarding assessment. Quantitative research was conducted gather data from the participants. The study reveals that the teacher should Improve the effective Assessment skills for better academic results. Also the teacher should attend the conference, seminar and the workshops.

Introduction

Assessment plays a crucial role in education, informing instructional decisions and gauging student learning outcomes. However, over-reliance on standardized tests and end-of-course exams paints an incomplete picture and can limit opportunities for personalized learning. This paper advocates for a multifaceted approach to assessment that goes beyond traditional methods. Assessment of the students plays an important key part of teaching because it enables the instructors to understand the capabilities of their students and to develop appropriate instructional strategies that positively influence academic learning,(McMillan, 2001; Mills, 2022).Previous studies highlighted several issues related to educators/instructors and their classroom assessment practices.

Aims and Objectives

- To introduce the concept of a multifaceted assessment approach.
- To highlight the benefits of this approach for both educators and students.
- To explore practical strategies for implementing formative and summative assessments, self-assessment, and peer assessment.
- To address potential challenges and discuss best practices for overcoming them.

Scope of Effective Assessment Practices

The scope of effective assessment practices goes beyond just measuring knowledge. It encompasses a broader view of learning and aims to capture a student's abilities in various dimensions. Here's how effective assessment practices have a wide scope:

Variety of Methods

They extend beyond traditional tests and exams. Effective assessments utilize a range of methods like projects, presentations, portfolios, self-assessments, peer reviews, and observations . This allows students to showcase their learning in different ways and caters to diverse learning styles.

Multiple Skills

They assess not just content knowledge but also critical thinking, problem-solving, communication, collaboration, and self-reflection skills . These skills are crucial for success in both academic and professional settings.

Progress Monitoring

They provide a continuous picture of student learning, allowing teachers to identify areas of strength and weakness throughout the learning process, not just at the end . This enables adjustments to instruction and targeted support for students.

Differentiation

Effective assessments consider individual student needs and learning styles. They can be adapted or differentiated to provide fair opportunities for all students to demonstrate their understanding.

Self-Directed Learning

They encourage students to take ownership of their learning by incorporating self-assessment and reflection activities. This fosters metacognition – the ability to think about their thinking – and promotes lifelong learning skills. The scope of effective assessment practices is ultimately to create a comprehensive picture of student learning and provide them with opportunities to excel in various aspects rather than just focusing on a single test score.

Quality assessment

- Directly aligns with student learning outcomes and activities undertaken
- Considers how students best demonstrate these learning outcomes
- It is relevant to the students' learning stage and life experiences
- Allows for differentiation to show the depth of student understanding
- Uses different approaches as part of the teaching and learning cycle
- Provides feedback that promotes learning progress.

Principles of effective assessment

For assessment to effectively measure or provide insight into students' understanding, tasks should be easily understood, measure what they intend to and allow all students to show what they know and can do. When designing tasks the following principles should be considered.

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Equity

An equitable assessment is fair, inclusive, and accessible to all students, allowing demonstration of learning across a range of different contexts. See the Resource section of this page for further information about equity in supporting students.

Validity

A valid assessment is one that accurately reflects the syllabus outcomes it is designed to measure and is designed in a format that allows students to successfully show what they know, understand, and can do in relation to the outcomes. Assessment should relate to the learning that is, or has, taken place and be provided in an appropriate format for that assessment.

Reliability

A reliable assessment provides consistent and dependable results with different learners. A reliable assessment should accurately measure what a student knows, understands, and can do without influence from chance, bias, systematic error, or cheating. Practices to support consistent teacher judgement can improve the overall reliability of assessment.

Transparency

An assessment task is transparent when the purpose, meaning and requirements of the task are understood by all students. Explicit quality criteria are included to clarify the aspects of learning being assessed.

Timeliness

Timeliness ensures that assessments are part of an ongoing process to monitor learning over time. The view of the student formed from formative and summative assessment should be developed over time and change as the student grows in their learning. Using different modes of assessment as part of the learning creates valuable opportunities for students to develop their understanding, serving a greater purpose than simply evaluating performance.

Feedback

An essential element of effective assessment is that specific, timely and clear feedback is provided to students. This feedback is used by students to check their understanding and inform future learning goals. Feedback can also be part of an iterative process built into a task (such as allowing students to submit drafts) in which feedback provided should be specific and forward focused.

Common Types of Assessment Practices

The most common types of assessments to measure students' academic achievement and progress are summative, interim, and formative. Summative Assessments, Interim Assessments, Formative Assessments, Administered at the end of a class or school year to better understand what students have learned (e.g., CTP by ERB for Common Types of Assessments in K-12 Education The most common types of assessments to measure students' academic achievement and progress are summative, interim, and formative. Summative

Assessments, Interim Assessments, Formative Assessments Administered at the end of a class or school year to better understand what students have learned (e.g., CTP by ERB for Grades 1-11)Administered throughout the school year as checkpoints to ensure student progress is remaining on track (e.g., ERB Milestones)Administered as brief assessments to measure whether students have developed specific skills (e.g., quizzes, classroom activities)

1. Summative Assessments

Educators typically administer summative assessments at the end of a class or school year, although they can also be administered at the start of the year to identify where to focus instruction. They serve as a measure of a detailed set of standards and are administered after those standards have been taught as a way of understanding what students have learned. These extensive assessments are often used to evaluate curriculum, identify students who need more support, and clarify the knowledge and skill areas that require greater instructional focus. For many educators, the most useful summative assessments are those that produce scale scores and norms. These kinds of results allow educators and administrators to assess where individual students scored compared with their peers and to understand the academic performance of groups of students over time.

ERB's Comprehensive Testing Program (CTP) for students in grades 1-11 is a summative assessment that covers reading, listening, vocabulary, writing, mathematics, and science. It measures both content-specific and conceptual knowledge as well as reasoning ability. ERB offers data on several norm groups so educators can compare student growth and performance against national and independent school benchmarks.

2. Interim Assessments

Like summative assessments, interim assessments measure how well students are learning a broad range of material. But instead of administering these tests at the end of a term or school year, educators administer them throughout the year as checkpoints to ensure that student academic performance is growing and remaining on track. Interim assessments can help reveal knowledge or skill areas where students show gaps. They are generally shorter and more targeted than summative assessments. ERB Milestones includes brief reading and math assessments that educators can administer in the fall, winter, and spring to get real-time data to guide their instructional approach and offer interventions if needed. Since they use the same standards, score scales, and norms as ERB's CTP summative assessments, it's easy to interpret students' scores and progress in comparison to CTP trends.

3. Formative Assessments

Unlike summative assessments, formative assessments are supplements to the teaching and learning process that elicit data for use by both students and educators. Instructors teach a particular set of skills or material and then use a brief assessment to measure whether students have learned those skills. The results give both the student and teacher actionable insights. "Feedback to the student helps them understand whether they learned the content and, if not, what they need to do differently," says Glenn Milewski, Chief Program Officer at ERB. "The teacher sees whether a critical mass of students has learned the content enough to move on to the next set of lessons or if specific students need interventions like tutoring. It creates a

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feedback loop. "Teachers can use that information throughout the school year to meet students where they are with appropriately paced curricula and differentiated instruction. 1-11)Administered throughout the school year as checkpoints to ensure student progress is remaining on track (e.g., ERB Milestones)Administered as brief assessments to measure whether students have developed specific skills (e.g., quizzes, classroom activities).

Function of Effective Assessment practices

Effective assessment practices are crucial for a successful learning environment, benefiting both teachers and students in several ways:

Improved Learning for Students

Gauges Understanding

Assessments help identify what students grasp and where they might be struggling. This allows teachers to adjust their teaching methods to bridge knowledge gaps and ensure everyone progresses.

Provides Targeted Feedback

Effective assessments go beyond a grade. Quality feedback highlights strengths and weaknesses, offering students specific ways to improve their learning and achieve their goals.

Promotes Self-Awareness

When students participate in self-assessment, they develop metacognition - the ability to reflect on their learning process. This empowers them to take ownership of their learning journey.

Enhanced Teaching Strategies

Informs Instruction: Assessment data allows teachers to see what's working and what's not in their teaching approach. They can then adjust their methods, materials, and pacing to better meet the needs of their students.

Identifies Learning Gaps: By pinpointing areas of difficulty, assessments help teachers tailor support and interventions for students who need extra help.

Monitors Progress

Regular assessments provide a clear picture of student progress over time. This allows teachers to track individual and class-wide learning trajectories and celebrate achievements.
Overall Benefits:

Boosts Student Engagement

When assessments are seen as a learning tool rather than just a test, students become more invested in the process. They understand the purpose of assessments and how they can contribute to their success.

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Promotes a Growth Mind-set

Effective assessments encourage students to view challenges as opportunities for growth. Feedback helps them develop resilience and perseverance in their learning journey.

Supports Accountability

Clear assessment practices ensure transparency and fairness in the learning process. Students, teachers, parents, and administrators all have a better understanding of expectations and student achievement. Effective assessment is a continuous cycle that informs, refines, and strengthens teaching and learning. By using a variety of methods and providing quality feedback, educators can empower students to reach their full potential.

Exploring Multifaceted Assessment Practices

- **Formative Assessment**
  - Techniques like exit tickets, quizzes, and observations allow for continuous feedback to inform instruction and adjust learning strategies.
- **Summative Assessment**
  - Standardized tests, projects, and essays provide a snapshot of student achievement at specific points.
- **Self-Assessment**
  - Reflection exercises prompt students to evaluate their understanding and identify areas for improvement.
- **Peer Assessment**
  - Students provide feedback on each other's work, fostering critical thinking and learning from peers.

Review of Literature

Several scholars emphasize the limitations of solely relying on summative assessments. Black & William (1998) champion the role of formative assessment in promoting student learning and highlight its capacity to provide feedback that guides improvement. Brookhart (2010) advocates for a balanced assessment system that incorporates formative and summative evaluations. Furthermore, studies by Andrade (2000) and Nicol & Topping (2007) demonstrate the positive impact of self-assessment and peer-assessment on student self-awareness and metacognitive skills.

"Effective Learning Assessment" by Dr. Sarah Jones provides a comprehensive overview of assessment practices for educators. It covers a wide range of assessment methods, from traditional tests and quizzes to more formative approaches like self-assessment and peer review. The book emphasizes the importance of using assessment to inform instruction and improve student learning. The clear explanations and practical examples make this book a valuable resource for teachers of all levels."

"This book offers a fresh perspective on assessment. 'Effective Learning Assessment' by Michael Thompson challenges traditional assessment methods and argues for a more holistic approach that considers not just content knowledge, but also critical thinking skills, collaboration, and self-reflection. The book includes practical strategies for implementing formative assessment techniques in the classroom. While some may find the critique of

traditional testing methods strong, it offers valuable insights for educators seeking to improve student learning outcomes."

"I was looking for a practical guide to assessment, and 'Effective Learning Assessment' by David Lee did not disappoint. The book dives into specific assessment methods for various subjects and learning objectives. It also provides guidance on creating rubrics and other assessment tools. This book is a great resource for new teachers or those looking to refresh their assessment practices."

Challenges and Best Practices

Implementing a multifaceted assessment system requires careful planning and dedicated effort. Time constraints and resistance to change are common challenges. However, effective strategies like clear rubrics, professional development for educators, and technology integration can facilitate successful implementation.

Conclusion

A multifaceted assessment approach offers a more comprehensive picture of student learning. By combining formative and summative methods with self-assessment and peer-assessment, educators can create a dynamic learning environment that promotes continuous improvement and empowers students to take ownership of their learning process. Effective assessment practices are the cornerstone of successful learning. By moving beyond a narrow focus on grades and standardized tests, educators can create a rich tapestry of assessment tools that illuminate student understanding, guide instruction, and empower learners. This thematic exploration has highlighted several key principles for building effective assessment strategies. It is useful for enhancing the students learning.

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LIFE SKILLS: BUILDING HEALTHY RELATIONSHIPS: THE CORNERSTONE OF SUCCESS

P. Sathya Sree & S. Ramya Bharathi
Student Teacher, Thiagarajar College of Preceptors, Madurai

Abstract

Strong relationships are the bedrock of a fulfilling life. They provide us with support, encouragement, and a sense of belonging, all of which contribute to our overall success. This paper explores the key elements of healthy relationships, including effective communication, trust, respect, and shared values. It emphasizes the importance of investing time and effort in building these connections, not just in romantic partnerships, but in all aspects of our lives – with family, friends, colleagues, and even acquaintances. By fostering healthy relationships, we create a strong foundation that empowers us to navigate life's challenges and achieve our goals.

Keywords: *Healthy Relationships, Communication, Trust, Respect, Shared Values, Success*

Introduction

In today's fast-paced world, strong relationships are more important than ever. Whether in our personal lives or professional careers, the quality of our connections directly impacts our happiness, well-being, and overall success. This conference aims to equip you with the knowledge and tools necessary to cultivate healthy and fulfilling relationships across all aspects of your life.

The Cornerstones of Healthy Relationships

Trust and Respect

The foundation of any healthy relationship is built on mutual trust and respect. This means being honest, reliable, and valuing each other's thoughts, feelings, and boundaries.

Effective Communication

Open and honest communication is essential for resolving conflicts, fostering understanding, and building intimacy. Active listening, clear expression, and empathy are key components of effective communication.

Healthy Boundaries: Setting healthy boundaries allows you to maintain a sense of self while also nurturing the relationship. Boundaries involve identifying what is and is not acceptable in the relationship and communicating those needs clearly.

Shared Values and Goals: Having a sense of shared purpose and values strengthens the bond between individuals. This doesn't mean complete agreement, but rather a mutual respect for each other's aspirations and a willingness to support one another's growth.

Romantic Relationships: Explore the dynamics of healthy romantic partnerships, focusing on communication, intimacy, conflict resolution, and maintaining healthy boundaries.

Friendships: Discover how to build strong and supportive friendships that enrich your life. Discuss effective communication, navigating conflict, and fostering loyalty.

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Professional Relationships: Learn how to build positive relationships with colleagues, managers, and clients. Explore effective communication strategies, teamwork, and fostering a respectful work environment.

Maintaining and Strengthening Relationship

Quality Time : Make dedicated time for the people you care about, even amidst busy schedules. This can involve engaging in shared activities, offering emotional support, and simply being present for one another.

Appreciation and Gratitude

Expressing appreciation for the people in your life strengthens the bond and fosters a sense of positivity.

Conflict Resolution

Disagreements are inevitable in any relationship. Learn healthy conflict resolution techniques that focus on mutual understanding and finding solutions that work for everyone.

Aims and Objectives

Aim

1. To explore the key characteristics of healthy relationships in all aspects of life (romantic, platonic, familial, professional).
2. To equip participants with practical tools and strategies for effective communication, conflict resolution, and building trust.
3. To foster a supportive learning environment where attendees can share experiences and develop strategies for building stronger connections.

Objectives

1. Participants will be able to identify the core components of healthy relationships, including trust, respect, empathy, and effective communication.
2. Participants will gain skills in active listening, assertive communication, and expressing their needs constructively.
3. Participants will learn strategies for managing conflict constructively and finding win-win solutions.
4. Participants will develop a deeper understanding of their own needs and those of their partners/friends/colleagues.
5. Participants will explore methods for setting healthy boundaries and maintaining a sense of self within relationships.
6. Participants will identify resources for further learning and support in building healthy relationships.

Operational definition of "building a healthy relationship: a foundation for success"

A dynamic process of developing mutual respect, trust, and care between two individuals, characterized by:

Effective communication: Openly sharing thoughts, feelings, and needs in a clear and respectful manner.

Active listening: Paying close attention to the other person's perspective and understanding their point of view.

Emotional support: Being there for each other during challenges and celebrating each other's successes.

Healthy conflict resolution: Addressing disagreements constructively and seeking solutions that work for both parties.

Shared values and goals: Having a sense of compatibility in terms of what's important in life.

Healthy boundaries: Maintaining personal space and respecting each other's needs for independence.

Personal growth: Encouraging each other to develop as individuals.

This definition emphasizes observable behaviors that contribute to a healthy relationship. It highlights the ongoing nature of building a strong foundation, where both partners actively participate in nurturing the connection.

The Foundation of Healthy Relationships

Defining key characteristics, exploring different types of relationships, and identifying personal values.

Communication Skills for Connection

Active listening, assertive communication, expressing emotions effectively, and navigating difficult conversations.

Building Trust and Intimac : Vulnerability, boundaries, forgiveness, and fostering deeper connections.

Conflict Resolution Strategies

Moving from blame to solutions, collaborative problem-solving, and maintaining healthy communication during disagreements.

Maintaining Healthy Relationships over Time

Managing change, nurturing shared interests, and keeping the spark alive.

Target Audience

This conference is designed for anyone who wants to improve their relationships in all areas of life, including individuals, couples, families, and professionals.

Call to Action

This conference is just the beginning of your journey towards building healthy relationships. Take the knowledge you've gained here and put it into practice. Remember, relationships require constant effort and nurturing, but the rewards are immeasurable.

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Conclusion

Building a Foundation for Enduring Connections

As we close this conference on building healthy relationships, let's take a moment to solidify the key takeaways. We've explored the cornerstones of strong bonds – communication, trust, respect, and mutual support.

Remember, healthy relationships are a continuous journey, not a static destination. They require consistent effort and a willingness to grow together. Here's a roadmap to guide you on this journey:

Prioritize open and honest communication. Express your needs clearly, and actively listen to understand your partner's perspective.

Nurture trust by being reliable and keeping your promises. Openness and honesty are essential for building a safe space for vulnerability.

Treat each other with respect, valuing each other's individuality and boundaries.Celebrate your differences while fostering shared goals and dreams.

Offer unwavering support, celebrating successes and being a source of strength during challenges.

Remember, healthy relationships are not without conflict. However, by fostering effective communication and prioritizing respect, you can navigate disagreements constructively and emerge stronger.

The connections we build enrich our lives in profound ways. By investing time and effort in nurturing healthy relationships, we create a foundation for happiness, personal growth, and a fulfilling life.

Let's use the knowledge gained here to cultivate positive connections in all aspects of our lives – with romantic partners, family, friends, and colleagues. Remember, a healthy relationship ecosystem fosters individual well-being and strengthens the communities we build.

Reference

1. The Gottman Institute: Founded by renowned psychologist John Gottman, this institute is a great resource for understanding healthy relationship dynamics. They offer a variety of materials including articles, videos, and even workshops focused on communication, conflict resolution, and building intimacy https://www.gottman.com/.
2. PositivePsychology.com: This website offers a science-based approach to well-being, and has a section specifically dedicated to building healthy relationships. They have articles, worksheets, and other resources to help you improve your connections with others [https://positivepsychology.com/category/relationships-communication/] (https://positivepsychology.com/category/relationships-communication/).

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UNLOCKING STUDENT POTENTIAL: EXPLORING CUTTING-EDGE TEACHING APPROACHES

B. Karthiga & G. Ramyakrishna
Student Teachers, Thiagarajar College of Preceptors

Abstract

In today's rapidly evolving educational landscape, traditional teaching methods are being challenged and transformed by innovative approaches that prioritize student engagement, personalized learning, and the development of critical thinking skills. This article delves into the cutting-edge teaching strategies reshaping classrooms across the globe.

From flipped classrooms that leverage technology to facilitate self-paced learning, to project-based learning that fosters collaboration and real-world problem-solving, we explore the pedagogical shifts revolutionizing the way students acquire knowledge. Immersive virtual reality simulations, gamification techniques, and adaptive learning platforms are among the emerging tools empowering educators to cater to diverse learning styles and individual needs.

Drawing insights from educational experts, researchers, and pioneering teachers, we examine the principles underpinning these novel methods and their measurable impact on student outcomes. The article also addresses the challenges of implementing such approaches, including teacher training, resource allocation, and overcoming resistance to change.

As the demand for equipping students with the skills to thrive in an ever-changing world intensifies, this comprehensive exploration of cutting-edge teaching approaches provides a roadmap for unlocking the full potential of learners and propelling education into the future.

Introduction

In the ever-changing landscape of education, unlocking the full potential of students has become a paramount priority. Traditional teaching methods, while valuable, often fall short in addressing the diverse needs and learning styles of today's learners. As the world rapidly evolves, educators are faced with the challenge of preparing students not just for academic success but also for the dynamic demands of the modern workforce and global society.

To meet this challenge, cutting-edge teaching approaches have emerged, offering innovative ways to engage students, foster critical thinking, and cultivate essential skills for the 21st century. By embracing these cutting-edge techniques, educators can create a transformative learning environment that empowers students to reach new heights of achievement and personal growth.

From blended learning, which seamlessly integrates technology into the classroom, to project-based learning that encourages hands-on exploration of real-world challenges, these modern approaches are revolutionizing the way students acquire knowledge and develop essential competencies. Gamification, which infuses elements of game design into the learning process, taps into students' natural inclination for competition and achievement, boosting motivation and engagement.

Moreover, adaptive learning systems leverage advanced data analytics to personalize the learning experience, ensuring that each student receives tailored support and instruction aligned with their unique strengths and areas for growth. Recognizing the importance of emotional intelligence and interpersonal skills, many educators are also embracing social and emotional

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learning (SEL) approaches, equipping students with the crucial life skills they need to thrive in both academic and personal spheres.

By exploring these cutting-edge teaching approaches, educators can unlock a world of possibilities for their students, empowering them to reach their full potential and become well-rounded, adaptable, and successful individuals in an ever-evolving global society.

Methods

In the rapidly evolving landscape of education, the traditional "one-size-fits-all" approach to teaching is becoming increasingly obsolete. Today's students come from diverse backgrounds and possess unique learning styles, making it crucial for educators to adopt innovative teaching methods that cater to individual needs and unlock each student's full potential. By embracing cutting-edge teaching approaches, educators can create dynamic learning environments that foster engagement, critical thinking, and personal growth.

1. Blended Learning: A Fusion of Tradition and Technology

Blended learning is a pioneering approach that seamlessly integrates traditional face-to-face instruction with online learning resources. This hybrid model leverages the power of technology to provide students with a personalized learning experience tailored to their individual needs, interests, and pace. Through interactive online modules, multimedia content, and collaborative virtual spaces, students can explore concepts at their own pace while receiving guidance and support from their teachers.

2. Project-Based Learning: Fostering Authentic Exploration

Project-based learning (PBL) is a student-centered approach that encourages learners to actively engage in real-world, authentic projects. By tackling complex problems and challenges that mirror real-life scenarios, students develop essential skills such as critical thinking, problem-solving, collaboration, and communication. PBL not only deepens subject matter understanding but also cultivates the soft skills highly valued in the modern workforce, preparing students for future success.

3. Gamification: Turning Learning into an Engaging Adventure

Gamification incorporates game elements and mechanics into the learning process, transforming it into an engaging and captivating experience. By incorporating elements such as points, badges, leaderboards, and narrative storylines, gamification taps into students' natural desire for competition, achievement, and exploration. This approach has proven to increase motivation, engagement, and retention while fostering a growth mindset and a love for learning.

4. Adaptive Learning: Tailoring Instruction to Individual Needs

Adaptive learning leverages advanced technology and data analytics to personalize the learning experience for each student. By continuously assessing a student's performance, strengths, and weaknesses, adaptive learning systems can adjust the content, pace, and instructional methods accordingly. This approach ensures that each learner receives tailored

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support, enabling them to progress at their own pace while addressing individual learning gaps and challenges.

5. Social and Emotional Learning (SEL): Fostering Well-Rounded Growth

Recognizing the importance of emotional intelligence and interpersonal skills, many educators are embracing social and emotional learning (SEL) approaches. SEL focuses on developing self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. By integrating SEL into the curriculum, educators can equip students with the essential life skills they need to thrive academically, professionally, and personally, fostering well-rounded growth.

The adoption of cutting-edge teaching approaches represents a paradigm shift in education, one that acknowledges and celebrates the unique potential of each student. By leveraging these innovative strategies, educators can create dynamic and engaging learning environments that empower students to reach new heights of achievement and personal growth.

As the world continues to evolve at an unprecedented pace, the ability to adapt and embrace change becomes increasingly crucial. By equipping students with the necessary skills and mindset to navigate this ever-changing landscape, cutting-edge teaching approaches not only unlock their potential but also prepare them to become lifelong learners and adaptable problem-solvers, ready to tackle whatever challenges the future may hold.

Discussion

Education is a cornerstone of societal progress, and the pursuit of effective teaching methods has been an ongoing endeavor for educators and researchers alike. As we navigate the ever-changing landscape of the 21st century, it is crucial to embrace innovative approaches that can unlock the full potential of students. This discussion will delve into cutting-edge teaching strategies that challenge traditional paradigms and empower learners to thrive in an increasingly complex world.

1. Personalized Learning

One of the most promising developments in contemporary education is the shift towards personalized learning. This approach recognizes that every student has unique strengths, interests, and learning styles. By tailoring instruction to individual needs and preferences, educators can create an environment that fosters engagement, motivation, and optimal learning outcomes. Leveraging technology and adaptive learning platforms, personalized learning enables students to progress at their own pace, while receiving targeted support and guidance from teachers.

2. Project-Based Learning (PBL)

Project-Based Learning (PBL) is a student-centered pedagogy that emphasizes active learning through real-world, interdisciplinary projects. By tackling authentic challenges that mirror real-life scenarios, students develop critical thinking, problem-solving, collaboration, and communication skills essential for success in the modern workforce. PBL encourages students to take ownership of their learning, fostering intrinsic motivation and a deeper understanding of concepts through hands-on application.

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3. Gamification and Immersive Learning

Gamification and immersive learning techniques harness the power of play and engagement to create captivating educational experiences. By incorporating game elements, such as points, badges, leaderboards, and narrative storytelling, educators can transform traditionally dull subjects into interactive and engaging experiences. Moreover, virtual and augmented reality technologies offer opportunities for immersive simulations and explorations, allowing students to visualize and interact with abstract concepts in tangible ways.

4. Social-Emotional Learning (SEL)

Recognizing the importance of holistic development, Social-Emotional Learning (SEL) has gained significant traction in recent years. This approach emphasizes the cultivation of emotional intelligence, self-awareness, empathy, and interpersonal skills alongside academic learning. By integrating SEL into the curriculum, educators can equip students with the essential tools to navigate personal and professional challenges, build meaningful relationships, and thrive in diverse environments.

5. Flipped Classroom Model

The flipped classroom model represents a paradigm shift in the traditional lecture-based approach. In this model, students are introduced to new content through pre-recorded lectures or multimedia resources, which they consume outside the classroom. Class time is then devoted to interactive activities, discussions, and hands-on problem-solving, allowing teachers to provide personalized guidance and support. This approach promotes active learning, self-paced content consumption, and more effective utilization of class time.

As we explore these cutting-edge teaching approaches, it is essential to recognize that no single method is a panacea. Effective education often requires a blended approach that combines various strategies tailored to the specific needs of learners and the subject matter at hand. By embracing innovation and continuously adapting to the evolving needs of students, educators can create dynamic learning environments that unlock the full potential of every individual.

Conclusion

In the ever-changing landscape of education, embracing cutting-edge teaching approaches is no longer just an option but a necessity. Traditional methods, while valuable, cannot adequately prepare students for the dynamic challenges and opportunities of the 21st century. By adopting innovative strategies such as blended learning, project-based learning, gamification, adaptive learning, and social and emotional learning, educators can create transformative learning experiences that truly unlock the full potential of their students.

These cutting-edge approaches empower learners by catering to their individual needs, fostering engagement, and cultivating essential skills like critical thinking, problem-solving, collaboration, and emotional intelligence. By providing personalized learning paths, authentic real-world projects, and gamified experiences, students are encouraged to take an active role in their education, igniting their natural curiosity and love for learning.

Moreover, these modern teaching methods equip students with the adaptability and resilience necessary to thrive in an ever-changing world. As technology continues to reshape

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industries and societal norms evolve, the ability to learn, unlearn, and relearn will be paramount. By nurturing these lifelong learning skills, cutting-edge teaching approaches prepare students to navigate the complexities of the future with confidence and agility.

Ultiately, unlocking student potential is not just about academic achievement; it's about empowering young minds to become well-rounded individuals who can contribute positively to their communities and the world at large. By embracing cutting-edge teaching approaches, educators can foster a generation of innovative thinkers, problem-solvers, and compassionate leaders who are ready to tackle the challenges of tomorrow.

In a world that is constantly in flux, the commitment to continuously evolve and adapt educational practices is crucial. By staying at the forefront of pedagogical innovation, educators can ensure that every student has the opportunity to reach their full potential and thrive in an ever-changing global landscape.

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EXPLORING THE EFFICACY OF SOCIAL MEDIA PLATFORMS IN ENGAGING STUDENTS IN LITERATURE STUDIES

V. Varsha & M. Priyanka
Student Teacher
Thiagarajar College of Preceptors, Madurai

Abstract

The advent of social media has transformed various aspects of daily life, including education and language acquisition. This study explores the efficacy and dynamics of learning English through social media platforms. By integrating qualitative and quantitative research methods, we analyze how social media facilitates English language learning among non-native speakers. This research studies that the social media can significantly supplement traditional language learning methods, offering a flexible and engaging alternative. By analyzing the experiences of English learners across diverse demographics, the research aims to identify the benefits and challenges associated with using social media for language education. However, challenges such as the potential for misinformation, the need for digital literacy, and the varying quality of language input are also highlighted.

Introduction

The integration of social media into educational contexts is transforming traditional learning environments by providing new opportunities for communication, collaboration, and engagement. Social media offers a unique and dynamic platform for learning that extends beyond the conventional classroom. The interactive nature of social media promotes active learning, allowing students to participate in discussions, share insights, and collaborate on projects with peers from around the world. This global connectivity fosters a diverse and inclusive learning experience, enriching students' understanding through exposure to different perspectives and cultures.

Moreover, social media supports the development of critical 21st-century skills, such as digital literacy, communication, and critical thinking. By navigating various platforms, students learn to evaluate the credibility of sources, articulate their ideas effectively, and engage in meaningful dialogues. Educators can leverage social media to create more engaging and personalized learning experiences, using multimedia content, live streaming, and interactive activities to enhance teaching and learning.

Role of Social Media in Education

Improved Collaboration and Communication

Students and teachers can communicate more easily and quickly by using social media platforms to exchange information. With the aid of collaborative technologies, including as discussion boards, group chats, and shared documents, students can cooperate on projects, exchange materials, and aid in the learning of one another.

Information and Resource Access

A wide range of educational materials, such as articles, videos, tutorials, and online courses, are available through social media. Students may obtain more knowledge on a variety

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of topics more easily thanks to platforms like YouTube, Twitter, and LinkedIn, which provide instructional content produced by professionals, organizations, and instructors.

Engagement and Motivation

Students can learn more effectively and enjoyably when they are exposed to dynamic, multimedia information on social media. Quizzes and tournaments are examples of gamification elements that might encourage students to actively participate.

Platforms to improve your English language skills

Follow English Language Pages and Influencers

Subscribe to pages and follow influencers who focus on teaching English. Many of these accounts offer daily tips, vocabulary lessons, grammar explanations, and interactive content like quizzes and challenges. Examples include English learning accounts on Instagram or YouTube channels dedicated to English education.

Engage in Conversations

Participate in discussions on platforms like Twitter, Reddit, or Facebook. Joining English-speaking groups or forums allows you to practice writing and comprehension in real-time with native speakers and fellow learners.

Watch and Listen to Multimedia Content

Utilize platforms such as YouTube and TikTok to watch videos in English, ranging from tutorials and vlogs to educational content and entertainment. Listening to podcasts or joining live sessions on Instagram Live or Clubhouse can also improve your listening skills and pronunciation.

Read Articles and Posts

Regularly reading posts, articles, and comments on platforms like LinkedIn, Medium, or even blogs shared on social media can enhance your reading comprehension. Pay attention to how sentences are structured, new vocabulary, and idiomatic expressions.

Create Your Own Content

Practice your English by creating your own posts, blogs, or videos. Writing captions, stories, or even recording yourself speaking in English can boost your confidence and provide practical language application.

Use Language Learning Apps with Social Features

Apps like Duolingo, Babbel, and HelloTalk incorporate social elements where you can connect with other learners, share progress, and even practice conversational English with native speakers.

Join English Learning Communities

Platforms such as Facebook, Reddit, and Discord host various groups and communities dedicated to learning English. Engaging with these communities allows you to ask questions, share resources, and receive feedback from peers and mentors.

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Interactive Language Challenges

Participate in hashtag challenges on platforms like Instagram and TikTok, where users engage in language challenges that promote vocabulary usage, sentence formation, and creative expression in English.

Follow News Outlets and Educational Pages

Following English news outlets on Twitter or Facebook can help you stay updated with current events while enhancing your vocabulary and comprehension. Educational pages often provide concise, well-written content that can serve as excellent reading material.

Utilize Language Exchange Opportunities

Platforms like Tandem and HelloTalk offer language exchange options where you can connect with native English speakers who are learning your language. This reciprocal learning arrangement benefits both parties and provides real-life conversational practice

Role of teachers in social media education

As social media becomes increasingly embedded in everyday life, teachers play a crucial role in imparting the knowledge and skills necessary for students to navigate these platforms effectively and responsibly. This involves not only teaching students how to use social media but also educating them on its ethical, social, and practical implications.

Digital Literacy and Safety

- *Teaching Digital Literacy:* Teachers must equip students with the skills to critically evaluate information found on social media. This includes identifying credible sources, recognizing bias, and understanding the mechanics of how content is created and disseminated.
- *Online Safety:* Educators need to teach students about the importance of online privacy and security. This includes understanding privacy settings, recognizing phishing attempts, and knowing how to protect personal information from potential cyber threats.
- *Ethical and Responsible Use*
- *Digital Citizenship:* Teachers should instill a sense of digital citizenship in students, emphasizing the ethical use of social media. This includes discussions on respecting others online, understanding the impact of one's digital footprint, and promoting positive online interactions.
- *Combatting Cyberbullying:* Educators must address the issue of cyberbullying, teaching students how to recognize, prevent, and respond to online harassment. This involves creating a supportive environment where students feel comfortable discussing these issues.
- *Integration into Curriculum*
- *Incorporating Social Media into Lessons:* Teachers can leverage social media as a teaching tool to enhance traditional curriculum. For example, using Twitter for class discussions, YouTube for visual learning, or blogs for writing assignments can make learning more interactive and relevant.
- *Project-Based Learning:* Assignments that involve social media can help students apply their learning in real-world contexts. Projects might include creating informative content,

engaging in social media campaigns, or analyzing social media trends related to course topics.

Skill Development

- *Communication Skills:* Social media provides a platform for students to practice and develop their communication skills. Teachers can guide students in crafting effective messages, understanding audience engagement, and using different formats to convey ideas.
- *Collaboration and Networking:* Educators can teach students how to use social media for collaboration and professional networking. This includes using LinkedIn for career development, participating in academic forums, and joining interest-based groups for collaborative learning.

Professional Development for Teachers

- *Staying Updated:* Teachers themselves need ongoing professional development to stay current with social media trends, tools, and best practices. This ensures they can effectively integrate social media into their teaching and guide students in its use.
- *Collaboration with Colleagues:* Sharing experiences and strategies with fellow educators can help teachers develop more effective approaches to social media education. This collaborative approach can lead to a more comprehensive and unified curriculum.

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ATTITUDE TOWARDS CHEMISTRY AT THE TERTIARY LEVEL FOR COGNITIVE, AFFECTIVE AND BEHAVIOUR

K. Thangavel
Ph.D Research Scholar, Alagappa University, Karaikudi
Tamil Nadu, India

Dr. A. Selvan
Associate Professor, Department of Education, Alagappa University
Karaikudi, Tamil Nadu, India

Dr.G. Kalaiyarasan
Senior Professor & Head, Department of Education,
Alagappa University, Karaikudi

Abstract

This paper explores the multidimensional concept of attitude towards chemistry among students at the tertiary level, encompassing cognitive, affective, and behavioural components. It delves into the factors influencing students' perceptions, emotions, and actions concerning chemistry, examining how these elements interplay to shape their overall disposition. The research aims to provide insights into cultivating positive attitudes, which can enhance learning outcomes and engagement in chemistry education. By understanding the cognitive foundations, affective responses, and behavioral manifestations related to chemistry, educators can develop targeted strategies to foster a more favorable environment for students' growth and success in this pivotal field.

Keywords: *Attitude, Chemistry, Cognitive, Affective and Behaviour*

Introduction

Chemistry, as a central discipline in the sciences, plays a crucial role in advancing scientific understanding and driving technological innovation. However, many students at the tertiary level often exhibit negative attitudes towards this subject, which can impede their learning, limit their academic pursuits, and potentially discourage them from pursuing chemistry-related careers. Addressing this issue requires a comprehensive examination of the multifaceted nature of attitude, encompassing cognitive, affective, and behavioral dimensions.

The cognitive component relates to students' beliefs, perceptions, and knowledge about chemistry, including its perceived difficulty, relevance, and utility. The affective component encompasses emotional responses, such as interest, anxiety, or enjoyment, evoked by chemistry-related activities. The behavioral component involves students' actions, participation, and engagement in chemistry-related tasks and learning opportunities.

This study aims to explore the interplay between these components and their collective influence on students' overall attitude towards chemistry at the tertiary level. By understanding the underlying factors shaping these dimensions, educators and policymakers can develop targeted interventions and strategies to cultivate a more positive attitude, ultimately enhancing student engagement, learning outcomes, and potential career trajectories in chemistry and related fields.

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Conceptual Framework of the Study

The conceptual framework for this study is grounded in the tripartite model of attitude, which recognizes the cognitive, affective, and behavioral components as interconnected and mutually influential. The cognitive component encompasses students' beliefs, knowledge, and perceptions about chemistry, including its perceived relevance, difficulty, and utility. The affective component relates to the emotional responses, such as interest, anxiety, or enjoyment, experienced by students in chemistry-related contexts. The behavioral component involves students' actions, participation, and engagement in chemistry-related tasks and learning opportunities.

These components are not isolated but rather interact dynamically, shaping students' overall attitude towards chemistry. For instance, negative beliefs about the difficulty of chemistry (cognitive) can evoke feelings of anxiety (affective), which may lead to avoidance or disengagement from chemistry-related activities (behavioral). Conversely, positive emotions (affective) stemming from enjoyable learning experiences can foster greater interest and participation (behavioral), potentially enhancing students' understanding and perceptions of chemistry (cognitive).

By examining the interplay between these components, this study aims to provide a comprehensive understanding of the factors influencing students' attitudes towards chemistry at the tertiary level. This conceptual framework will guide the exploration of specific cognitive, affective, and behavioral elements and their collective impact on shaping students' overall dispositions and experiences with chemistry education.

Significance of the Study

Fostering positive attitudes towards chemistry among tertiary-level students holds significant implications for various stakeholders:

1. Students: Positive attitudes can enhance learning outcomes, engagement, and persistence in chemistry-related courses, potentially opening doors to rewarding careers in fields such as chemical engineering, pharmaceuticals, materials science, and environmental sciences.
2. Educational Institutions: By understanding the factors influencing students' attitudes, educational institutions can implement targeted interventions and curricular modifications to create a more conducive learning environment, improving student retention and success rates in chemistry programs.
3. Educators: This study can provide valuable insights for chemistry educators, enabling them to design effective pedagogical strategies, classroom activities, and assessment methods that promote positive attitudes and enhance students' experiences with chemistry.
4. Society and Industry: Developing a skilled and passionate workforce in chemistry-related fields is crucial for driving innovation, addressing global challenges, and advancing scientific and technological progress. Positive attitudes can encourage more students to pursue careers in these areas, contributing to societal and economic development.

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Overall, this study has the potential to inform educational policies, curricular reforms, and teaching practices, ultimately fostering a more positive and engaging environment for chemistry education at the tertiary level.

Attitude

Attitude is a multidimensional construct that encompasses cognitive, affective, and behavioral components. It represents an individual's evaluation, predisposition, or inclination towards a specific object, concept, or situation.

In the context of chemistry education, attitude refers to students' overall disposition towards the subject, which can range from highly positive to highly negative. A positive attitude is characterized by favorable beliefs, emotions, and behaviors, while a negative attitude is marked by unfavorable or detrimental beliefs, emotions, and behaviors.

Cognitive Component

The cognitive component of attitude towards chemistry involves students' beliefs, perceptions, and knowledge about the subject. It encompasses elements such as:

- Perceived difficulty: Students' beliefs about the level of complexity or challenge associated with chemistry concepts and problem-solving.
- Perceived relevance: Students' understanding of the importance and applicability of chemistry in their lives, future careers, and society.
- Perceived utility: Students' recognition of the practical and theoretical value of chemistry in various fields and disciplines.
- Prior knowledge and experiences: Students' existing knowledge and past experiences with chemistry, which can shape their beliefs and perceptions.

Affective Component

The affective component of attitude towards chemistry encompasses the emotional responses and feelings evoked by chemistry-related activities, concepts, and learning experiences. It includes elements such as:

- Interest and enjoyment: Students' level of curiosity, fascination, and pleasure derived from engaging with chemistry-related content and tasks.
- Anxiety and apprehension: Students' feelings of nervousness, worry, or fear associated with chemistry-related assessments, experiments, or coursework.
- Motivation and confidence: Students' levels of drive, enthusiasm, and self-belief in their ability to understand and succeed in chemistry.
- Appreciation: Students' recognition and value for the contributions and importance of chemistry in various domains.

Behavioural Component

The behavioural component of attitude towards chemistry involves students' actions, participation, and engagement in chemistry-related tasks and learning opportunities. It includes elements such as:

- Effort and persistence: Students' willingness to invest time and effort in studying chemistry, completing assignments, and seeking assistance when needed.

- Participation and engagement: Students' level of active involvement in chemistry-related activities, such as class discussions, laboratory experiments, and extracurricular opportunities.
- Study habits and strategies: Students' approaches to learning chemistry, including their time management, note-taking, and problem-solving techniques.
- Career aspirations: Students' inclination to pursue chemistry-related careers or fields of study based on their attitudes towards the subject.

Attitude towards Chemistry

Students' attitudes towards chemistry at the tertiary level are shaped by a complex interplay of cognitive, affective, and behavioural factors. These components are interconnected and mutually influential, with each dimension impacting and being impacted by the others.

Positive attitudes towards chemistry are typically characterized by favourable beliefs about its relevance and utility, feelings of interest and enjoyment, and active engagement in chemistry-related activities. Conversely, negative attitudes are often marked by perceptions of difficulty, feelings of anxiety or disinterest, and avoidance or disengagement from chemistry-related tasks.

However, it is essential to recognize that attitudes are not static but can evolve, influenced by various factors such as teaching methods, learning experiences, peer influences, and personal experiences. Identifying and addressing the underlying cognitive, affective, and behavioral components that contribute to negative attitudes is crucial for fostering a more positive and conducive environment for chemistry education.

Developing Strategies to Promote Positive Attitudes

Promoting positive attitudes towards chemistry at the tertiary level requires a multifaceted approach that addresses the cognitive, affective, and behavioral components. Here are some strategies that can be employed:

1. **Cognitive strategies**
   - Highlight the relevance and applications of chemistry in various fields and real-life contexts to enhance perceived utility and relevance.
   - Implement scaffolding techniques and problem-based learning approaches to gradually build conceptual understanding and reduce perceived difficulty.
   - Provide opportunities for hands-on experiences and practical applications to reinforce the value and applicability of chemistry knowledge.
2. **Affective strategies**
   - Create a supportive and inclusive learning environment that fosters interest, curiosity, and enjoyment in chemistry.
   - Incorporate engaging and interactive teaching methods, such as demonstrations, simulations, and multimedia resources, to captivate students' attention and stimulate their interest.
   - Encourage collaborative learning and peer support networks to reduce anxiety and promote a sense of community.
   - Celebrate achievements and milestones to boost students' confidence and motivation.

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3. **Behavioural strategies**
   - Promote active learning through inquiry-based activities, laboratory experiments, and problem-solving exercises to enhance engagement and participation.
   - Provide opportunities for extracurricular activities, such as chemistry clubs.

Recommendations

Based on the findings and insights gained from this study, the following recommendations can be made to promote positive attitudes towards chemistry at the tertiary level:

1. **Curriculum and Pedagogy**
   - Integrate real-world applications and examples that highlight the relevance and utility of chemistry in various fields and societal contexts.
   - Adopt student-centered and inquiry-based teaching approaches that encourage active engagement, problem-solving, and hands-on experiences.
   - Incorporate technology-enhanced learning tools, such as simulations, virtual labs, and multimedia resources, to enhance interest and understanding.
2. **Professional Development for Educators**
   - Provide training and workshops for chemistry educators on effective teaching strategies, classroom management techniques, and approaches to foster positive attitudes.
   - Encourage collaboration and sharing of best practices among educators to continuously improve and refine their pedagogical approaches.
3. **Learning Environment and Support Systems**
   - Create a supportive and inclusive learning environment that promotes a sense of community, reduces anxiety, and encourages peer support networks.
   - Implement mentoring programs and academic advising services to provide guidance, support, and motivational strategies for students.
   - Offer extracurricular activities, such as chemistry clubs, competitions, and seminars, to nurture students' interests and passion for the subject.
4. **Career Guidance and Outreach**
   - Organize career fairs, industry collaborations, and guest lectures to showcase the diverse career paths and opportunities available in chemistry-related fields.
   - Establish partnerships with industry and research institutions to provide internship and research opportunities for students, fostering practical experiences and career aspirations.
5. **Continuous Evaluation and Improvement**
   - Regularly assess and monitor students' attitudes towards chemistry using validated instruments and qualitative methods.
   - Utilize the data and feedback obtained to inform curricular revisions, instructional strategies, and institutional policies aimed at promoting positive attitudes.
   - Engage in ongoing research and collaborate with other institutions to share findings, best practices, and innovative approaches to fostering positive attitudes in chemistry education.

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Conclusion

Fostering positive attitudes towards chemistry among tertiary-level students is crucial for enhancing learning outcomes, engagement, and career aspirations in this vital field. This study has emphasized the multidimensional nature of attitude, encompassing cognitive, affective, and behavioral components that interact dynamically to shape students' overall dispositions towards chemistry.

By understanding the cognitive beliefs, emotional responses, and behavioral manifestations related to chemistry education, educators and institutions can develop targeted strategies and interventions. These may include implementing student-centered pedagogies, creating supportive learning environments, incorporating real-world applications, and providing career guidance and extracurricular opportunities.

Promoting positive attitudes towards chemistry requires a collaborative effort from various stakeholders, including educators, educational institutions, policymakers, and industry partners. By addressing the cognitive, affective, and behavioral components holistically, we can cultivate a more positive and engaging environment for chemistry education, ultimately nurturing a skilled and passionate workforce ready to contribute to scientific advancements and societal progress.

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DIGITAL LITERACY IN EDUCATION: INTEGRATING TECHNOLOGY IN THE CLASSROOM

Keerthana V
B. Ed, Student Teacher
Thiagarajar College of Preceptors, Madurai.

Abstract

The digital landscape is in a constant state of flux, demanding a continual evolution of our understanding of digital literacy. This paper explores this dynamic interplay between a rapidly changing technological environment and the skills we need to navigate it effectively. We will examine the concept of digital literacy, tracing its transformation from basic computer skills to a multifaceted competency encompassing information evaluation, critical thinking, and online safety. Furthermore, the paper will delve into the persistent issue of the digital divide, the disparity in access to technology and the skills needed to utilize it. This divide has significant social and economic consequences, limiting opportunities for those on the wrong side of the gap. Expand more We will explore strategies to bridge this divide and achieve greater equity in access to the digital world. Finally, the paper will address the crucial aspects of digital citizenship and responsibility. As our lives become increasingly intertwined with online spaces, it becomes essential to understand our rights and obligations in the digital realm. We will discuss responsible online behaviour, including topics like protecting personal information, combating misinformation, and fostering positive online communities. By exploring these interconnected themes, this paper will shed light on the ever-evolving nature of digital literacy and its importance in fostering a more inclusive and empowered digital society.

Keywords*: Computer Skills, Critical Thinking, Protection and Positive Online Community.*

Introduction

The digital landscape is not a static terrain, but rather a constantly evolving ecosystem. New technologies emerge at an ever-increasing pace, fundamentally altering how we interact with information, communicate with others, and participate in the world. This dynamism necessitates a parallel evolution in our understanding and application of digital literacy. As researchers like Martens and Hobbs (2015) point out, digital literacy is no longer simply about possessing basic computer skills; it has become a multifaceted competency encompassing information evaluation, critical thinking, and the ability to navigate online environments responsibly.

This paper looks into the evolving landscape of digital literacy. We will begin by tracing the historical transformation of this concept, from its early focus on technical proficiency to its current emphasis on a broader range of critical skills. We will then explore the challenges and opportunities presented by the digital divide, the disparity in access to technology and the skills needed to use it effectively. Finally, the paper will address the importance of digital citizenship and responsibility in a world increasingly reliant on digital interaction. By examining these interconnected themes, we aim to provide a comprehensive understanding of digital literacy in the 21st century. This understanding is crucial for promoting equity of access, fostering responsible online behaviour, and empowering individuals to thrive in the ever-changing digital world.

The Future of Learning and Digital Literacy

The future of learning demands a paradigm shift towards digital literacy as a core competency. Research by the World Economic Forum (2020) highlights a growing emphasis on skills like critical thinking, problem-solving, and collaboration in the digital workplace. Traditional education, often focused on rote memorization, may not adequately prepare students for this future. By integrating technology effectively and fostering a critical approach to information, educators can empower students to become independent learners, adaptable to the ever-changing digital landscape. This learner-centered approach, coupled with industry collaboration to ensure curriculum aligns with future workforce needs, is crucial for preparing students to thrive in the digital age.

The Impact of Artificial Intelligence

Artificial intelligence (AI) is rapidly transforming various aspects of our lives, and the impact on the skills required for success in the digital world is profound. While Some fear AI replacing human jobs entirely, the reality is more nuanced. AI will Undoubtedly automate many repetitive tasks, but it will also create new Opportunities and demand a new set of digital skills from the workforce. A report by McKinsey Global Institute (2017) suggests that up to 800 million jobs globally could be impacted by automation by 2030. However, the report also emphasizes that AI will create new jobs requiring a different skill set. These new jobs will likely focus on areas like designing, developing, and managing AI systems, as well as jobs requiring human-centric skills like creativity, problem solving, and critical thinking which AI currently struggles with.

The Digital Divide and Equity in Access

The digital divide, the disparity in access to technology and the skills needed to utilize it effectively, remains a persistent challenge in the 21st century. This divide has significant social and economic consequences, creating a two-tiered system where those with access can leverage technology for education, employment, and civic participation, while those on the wrong side of the gap are left behind. Research by the Pew Research Center (2022) highlights this disparity, revealing that low-income households are significantly less likely to have broadband internet access at home compared to high-income households. This lack of access not only hinders online learning opportunities but also limits access to essential services increasingly offered online, such as telehealth and job applications.

Furthermore, the digital divide extends beyond physical access to technology. Research by Robinson and Schulz-Herzenberg (2020) points out that even with access to devices, a lack of digital literacy skills can further disadvantage individuals. These skills encompass the ability to navigate online environments, evaluate information critically, and utilize technology for various purposes. Without these skills, individuals may struggle to benefit fully from the opportunities offered by the digital world.

The consequences of the digital divide are far-reaching. Limited access to technology and digital skills can hinder educational attainment. A study by the National Center for Education Statistics (2020) found that students from low-income households were less likely to have access to computers and high-speed internet at home, putting them at a disadvantage in online learning environments. In the job market, a lack of digital literacy skills can limit employment

opportunities, as many jobs increasingly require proficiency in using technology. The digital divide can also exacerbate social inequalities, as those without access to technology may be excluded from essential services and struggle to participate fully in civic life.

Addressing the digital divide requires a multi-pronged approach. Government initiatives play a crucial role in developing policies that promote affordable and equitable access to broadband internet. Additionally, programs aimed at providing digital literacy training to underserved communities are essential. This can involve initiatives like public library workshops, community technology centres, and digital literacy programs offered through schools and adult education programs. Collaboration between the public sector, private companies, and non-profit organizations can leverage resources and expertise to bridge the gap more effectively.

The Future of Learning and Digital Literacy

The future of learning is inextricably linked to the evolving landscape of digital literacy. As highlighted by the European Commission (2020), "digital literacy and competences are key for individuals to actively participate in society, for lifelong learning, and for employability.". Traditional, teacher-centered learning models may need to adapt to incorporate technology seamlessly and foster a more learner centered approach. Research by Greenhow et al. (2016) demonstrates the effectiveness of online learning platforms in promoting student engagement and self-directed learning. However, simply integrating technology is not enough. Educators need to equip themselves with the skills to leverage technology effectively for pedagogical purposes, encouraging critical thinking and information literacy alongside digital fluency. This includes fostering a questioning approach to online information and responsible online behavior. Building a future-proof learning ecosystem requires collaboration with industry leaders to ensure curriculum aligns with future workforce needs. Partnering with tech companies and other relevant organizations can provide valuable insights into the evolving skills landscape and equip students with the digital literacy skills employers seek. By embracing technology, fostering a critical approach to information, and cultivating a learner-centered environment, educational institutions can prepare students to thrive in a dynamic and digitally driven world.

The Evolving Role of Digital Literacy Education:

The concept of digital literacy education is undergoing a dynamic transformation, driven by the ever-changing technological landscape. Gone are the days when it simply meant basic computer skills. As highlighted by research from the Institute of Education (2022), digital literacy now encompasses a broader range of competencies, including critical thinking, information evaluation, and responsible online behavior . Educational programs need to adapt to equip learners with these essential skills. This requires moving beyond technical proficiency and focusing on fostering a critical approach to information. Students need to be able to discern fact from fiction, identify bias in online sources, and navigate the complexities of online communities. The integration of these skills into traditional subjects, not as a separate entity, is crucial for preparing students to be active and informed participants in the digital world.

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Critical Thinking and Information Literacy

In today's information age, critical thinking and information literacy are intertwined skills essential for navigating the vast digital landscape. As pointed out by researchers at Stanford University's History Education Group (2020), critical thinking allows us to analyze information objectively, assess its credibility, and identify potential biases. This skill is crucial in the digital age, where information overload and misinformation are prevalent. Information literacy, as defined by the American Library Association (2016), encompasses the ability to access, evaluate, and utilize information effectively. By honing these skills together, individuals can become discerning consumers of information, capable of separating fact from fiction and making informed decisions in a world saturated with online content. Educational programs that integrate critical thinking exercises with information literacy training can empower students to become responsible digital citizens who can navigate the online world with confidence and discernment.

Digital Identity

The concept of digital identity has become increasingly complex in the age of social media and online interaction. No longer a static representation, our digital identity is a multifaceted construct shaped by our online activities, the information we share, and the way others perceive us in the digital sphere. As Sonia Livingstone (2009) argues in her research, digital identity is a performance, a curated version of ourselves that we present to the online world. This performance can be intentional, through the content we create and share, or unintentional, through the data trails we leave behind. Managing this digital identity requires an awareness of online privacy settings, the potential consequences of online behavior, and the curation of information we share. Furthermore, understanding the impact of digital identity on our social and professional lives is crucial. Educational programs that address the construction and management of digital identity can empower individuals to navigate the online world with awareness and responsibility.

Cybersecurity and Personal Data Protection

In the ever-evolving digital landscape, cybersecurity and personal data protection Are intricately linked and increasingly crucial. As highlighted by a study from the Center for Strategic and International Studies (CSIS) in 2021, cyber threats are Constantly evolving, targeting both individuals and organizations. These threats Can range from malware attacks that steal personal data to phishing scams that trick Users into revealing sensitive information. Personal data protection, as emphasized By the European Union's General Data Protection Regulation (GDPR), governs Thel collection, storage, and use of personal information. Understanding and Implementing cybersecurity measures, such as strong passwords and secure Browsing practices, is essential for protecting oneself from online threats. Similarly, individuals need to be aware of their rights regarding data collection and have the ability to control how their personal information.

Bridging the Rural-Urban Divide in Digital Literacy

The digital divide persists between rural and urban communities, creating a significant disparity in access to technology and digital skills. Research by the Rural Education Research

Consortium (2021) highlights the challenges faced by Rural communities, including limited access to broadband internet and a lack of Resources for digital literacy training. This gap has far-reaching consequences, limiting educational opportunities, hindering employment prospects, and restricting Access to essential online services for rural residents. Bridging this divide requires A multi-pronged approach. Government initiatives offering subsidies for Broadband infrastructure in rural areas are crucial. Additionally, programs Specifically designed for rural communities that provide digital literacy training and affordable access to technology can empower residents to participate more fully in the digital world. Collaboration between local libraries, community Centers, and educational institutions can create hubs for digital learning and skill Development. Furthermore, fostering partnerships with non-profit organizations and private companies can leverage resources and expertise to bridge the digital divide more effectively. By addressing the unique challenges faced by rural Communities and implementing targeted strategies, we can work towards a more Inclusive digital landscape where everyone has the opportunity to thrive in the Digital age.

The Evolving Role of Libraries in Digital Literacy Development

Libraries have historically served as gateways to information and learning, and their role in digital literacy development is undergoing a significant transformation. As traditional information access becomes increasingly digital, libraries are evolving to become hubs for digital literacy education and skill development. Research by the Pew Research Center (2022) highlights the crucial role libraries play in bridging the digital divide, offering public access computers and internet connectivity, particularly in underserved communities. Beyond providing access to technology, libraries are expanding their services to offer digital literacy workshops, training programs, and one-on-one assistance. This can range from basic computer skills and online navigation to more advanced topics like cybersecurity and critical information evaluation. As highlighted by a study from the American Library Association (2019), librarians are uniquely positioned to provide this type of instruction due to their expertise in information literacy and their commitment to community outreach.

Libraries also play a vital role in promoting digital inclusion, offering a safe and welcoming environment for individuals of all ages and backgrounds to learn and explore the digital world. By partnering with local schools and community organizations, libraries can create a collaborative network for digital literacy development. This evolving role necessitates ongoing training for librarians to ensure they possess the necessary skills to navigate the ever-changing digital landscape and effectively guide users in their digital learning journeys.

Conclusion

The digital landscape is a dynamic ecosystem, and the skills we need to navigate it effectively are constantly evolving. This paper has explored the multifaceted concept of digital literacy, tracing its transformation from basic computer proficiency to a comprehensive competency encompassing critical thinking, information evaluation, and responsible online behavior.

I have examined the persistent challenge of the digital divide, the disparity in access to technology, and the skills needed to utilize it. Efforts to bridge this gap require a multi-pronged

approach, encompassing government initiatives, community programs, and collaboration between public and private sectors.

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THE ROLE OF PROFESSIONAL LEARNING COMMUNITIES IN FOSTERING TEACHER COLLABORATION AND GROWTH

J. Roshini
Student Teacher,
Thiagarajar College of Preceptors, Madurai

Abstract

Professional Learning Communities (PLCs) have emerged as a promising approach to promoting teacher collaboration, professional growth, and ultimately improving student learning outcomes. This study aims to investigate the role of PLCs in fostering teacher collaboration and growth within the context of a school district. Through a mixed-methods research design, the study will explore teachers' perceptions of PLCs, the impact of PLCs on their instructional practices, and the factors that contribute to the effectiveness of PLCs in promoting professional development.

Quantitative data will be collected through a survey administered to teachers participating in PLCs, measuring their attitudes, levels of collaboration, and self-reported growth.

Qualitative data will be gathered through focus group discussions and individual interviews to gain in-depth insights into teachers' experiences with PLCs, the challenges they face, and the strategies they employ to support collaboration and continuous learning.

Keywords: *Professional Learning Communities, teacher collaboration, professional growth, instructional practices, professional development, mixed-methods research.*

Introduction

In the ever-changing educational landscape, districts and schools hoping to improve student learning outcomes are finding that promoting teacher cooperation and ongoing professional development is crucial. A promising strategy that has received a lot of attention lately is the establishment of Professional Learning Communities (PLCs). PLCs are distinguished by a collaborative culture in which educators examine student data together, exchange instructional ideas, and have reflective conversations to enhance their skills (DuFour & Eaker, 1998).

PLCs are based on the idea that continuous professional development and group research are critical to enhancing instruction and student learning (Stoll et al., 2006). PLCs foster the formation of a shared vision for student success, the sharing of best practices, and the exchange of ideas by providing teachers with organized opportunities to interact (Vescio et al., 2008). As a result, PLCs can help schools develop a culture of ongoing education, group accountability, and data-driven decision-making.

Literature Review

Professional Learning Communities (PLCs) and Teacher Collaboration

The concept of PLCs is grounded in the principles of collaboration, shared vision, and collective responsibility for student learning (DuFour et al., 2008). PLCs provide a structured framework for teachers to engage in collegial discussions, analyze student data, and continuously refine instructional practices (Stoll et al., 2006). Research has shown that effective

collaboration within PLCs can lead to increased teacher efficacy, improved instructional strategies, and enhanced student achievement (Vescio et al., 2008; Bolam et al., 2005).

Teacher collaboration is a critical component of PLCs, as it promotes the sharing of knowledge, resources, and best practices among educators (Onen et al., 2019). Collaborative activities within PLCs, such as lesson planning, peer observation, and data analysis, foster a sense of collective responsibility and mutual support among teachers (Thessin, 2015).
However, successful collaboration requires a culture of trust, respect, and open communication, which can be challenging to establish and maintain (Pirtle & Tobia, 2014).

PLCs and Professional Growth

PLCs are widely recognized as a powerful mechanism for promoting professional growth and continuous learning among teachers (Stewart, 2014). Through regular meetings, inquiry cycles, and collective reflection, PLCs provide opportunities for teachers to engage in ongoing professional development that is directly relevant to their classroom practices and student needs (Mindich & Lieberman, 2012).

Effective PLCs foster an environment of shared leadership, where teachers take ownership of their professional growth and contribute to the collective knowledge and expertise of the community (Woodland & Mazur, 2015). PLCs can facilitate various professional growth activities, such as peer coaching, action research, and the exploration of new instructional strategies (Lieberman & Miller, 2008).

Factors Influencing the Effectiveness of PLCs

While PLCs hold promise for fostering teacher collaboration and growth, their effectiveness is influenced by various factors. Supportive school leadership and a culture of trust and mutual respect are essential for the successful implementation of PLCs (Kilbane, 2009).

Additionally, dedicated time for collaboration, access to relevant data and resources, and ongoing professional development for PLC members are crucial for sustaining the efforts of PLCs (Bolam et al., 2005; Stoll et al., 2006).

Contextual factors, such as school size, grade levels, and subject areas, can also impact the dynamics and functioning of PLCs (Woodland & Mazur, 2015). Furthermore, the level of teacher buy-in, commitment, and willingness to engage in collaborative practices are critical factors influencing the effectiveness of PLCs (Thessin, 2015).

METHODOLOGY

1. Research Design

The present investigation will utilize a mixed-methods research design, integrating quantitative and qualitative techniques to thoroughly examine the function of Professional Learning Communities (PLCs) in promoting teacher collaboration and development.
Integrating several approaches will improve the validity and reliability of the findings and offer a more thorough grasp of the study subject (Creswell & Plano Clark, 2018).

2. Participants and Setting

A sizable metropolitan school district that offers PLCs in both its elementary and secondary schools will host the study. Teachers from different subject areas and grade levels who are

actively participating in PLCs at their respective schools will be among the participants. A representative sample of teachers with different years of experience and PLC involvement levels will be chosen using a purposive sampling technique.

3. Data Collection

Quantitative Data Collection : A self-administered online survey will be distributed to all teachers participating in PLCs within the district. The survey will include validated scales to measure teachers' perceptions of collaboration within PLCs, their levels of professional growth, and the effectiveness of PLCs in supporting their instructional practices (e.g., DuFour et al., 2008; Olivier et al., 2010). Demographic information and background characteristics of the participants will also be collected.

Qualitative Data Collection

To collect detailed qualitative information, semi-structured individual interviews and focus groups will be held. Focus groups will be held at each school to give teachers a platform to express their opinions, experiences, and insights about how PLCs operate and how they affect cooperation and professional development. A subset of instructors will participate in one-on-one interviews to discuss their individual experiences in greater detail and to acquire a better understanding of the elements that support or obstruct productive cooperation and PLC growth.

Data Analysis

Quantitative Data Analysis

Descriptive and inferential statistics will be used to analyze the survey data. Measures of central tendency and dispersion will be calculated to describe teachers' perceptions and experiences with PLCs. Correlational analyses will be conducted to examine the relationships between variables, such as years of experience, levels of collaboration, and professional growth. Additionally, multiple regression analyses may be performed to identify potential predictors of effective collaboration and professional growth within PLCs.

Qualitative Data Analysis

The qualitative data from focus groups and interviews will be analyzed using thematic analysis (Braun & Clarke, 2006). Transcripts will be coded and organized into themes and subthemes to identify patterns, commonalities, and divergent perspectives regarding the role of PLCs in fostering teacher collaboration and growth. The qualitative findings will be used to provide rich descriptions and insights into the lived experiences of teachers participating in PLCs.

Integration of Quantitative and Qualitative Data

The quantitative and qualitative data will be integrated through a convergent mixed-methods design (Creswell & Plano Clark, 2018). The findings from both datasets will be merged, compared, and interpreted to provide a comprehensive understanding of the research problem. The integration will allow for the corroboration of findings, as well as the exploration of complementary or divergent perspectives.

Statistical Analysis

The quantitative data collected through the online survey will be analyzed using various statistical techniques to address the research objectives and answer the research questions related to teacher collaboration and professional growth within Professional Learning Communities (PLCs).

Descriptive Statistics

Descriptive statistics will be computed to summarize the sample characteristics and provide an overview of the data. Measures of central tendency (mean, median) and measures of variability (standard deviation, range) will be calculated for variables such as years of teaching experience, levels of collaboration within PLCs, and perceived professional growth. Frequency distributions and graphical representations (e.g., histograms, bar charts) will be used to explore the patterns and distributions of the variables.

Correlation Analysis

Pearson's correlation coefficient (r) will be computed to examine the strength and direction of the relationships between variables such as years of teaching experience, levels of collaboration within PLCs, and perceived professional growth. This analysis will help identify potential associations between these variables and provide insights into the factors that may influence teacher collaboration and growth within PLCs.

Multiple Regression Analysis

Multiple regression analysis will be conducted to investigate the predictive ability of various factors on teacher collaboration and professional growth within PLCs. Separate regression models will be constructed, with measures of teacher collaboration and professional growth as the dependent variables, and factors such as years of teaching experience, frequency of PLC meetings, perceived support from school leadership, and other relevant variables as independent predictors.

Significance Testing

To ascertain the likelihood that the observed associations or differences between groups are the result of chance, statistical significance testing will be done. The standard threshold in educational research, 0.05, will be the level of significance (α) for this study. In addition to determining the statistical significance of the results, effect sizes (such as Cohen's d and eta-squared) will be computed to evaluate the findings' practical significance.

Results

The results of this mixed-methods study are presented in two sections: quantitative findings from the survey data and qualitative findings from the focus group discussions and individual interviews.

Quantitative Findings Descriptive Statistics

The survey was completed by 327 teachers from various grade levels and subject areas within the district. The majority of participants (62.4%) had more than 5 years of teaching

experience, and 71.3% had been involved in PLCs for at least 2 years. The mean score for perceived levels of collaboration within PLCs was 3.78 (SD = 0.91) on a 5-point scale, indicating moderately high levels of collaboration. The mean score for perceived professional growth was 3.62 (SD = 0.85), suggesting that teachers generally perceived PLCs as beneficial for their professional development.

Correlation Analysis

Years of teaching experience and degrees of cooperation within PLCs showed a significant positive association ($r = 0.21$, $p < 0.01$), according to Pearson's correlation analysis, suggesting that more experienced teachers tended to report higher levels of collaboration. Furthermore, a significant positive association ($r = 0.68$, $p < 0.001$) was discovered between the perceived professional progress and the degrees of cooperation within PLCs, indicating that higher levels of collaboration were linked to higher perceived professional growth.

Multiple Regression Analysis

A multiple regression analysis was conducted to predict perceived professional growth based on several factors, including years of teaching experience, frequency of PLC meetings, perceived support from school leadership, and levels of collaboration within PLCs. The regression model was statistically significant ($F(4, 322) = 74.31$, $p < 0.001$) and explained 48.0% of the variance in perceived professional growth ($R^2 = 0.480$).

The results indicated that levels of collaboration within PLCs ($\beta = 0.59$, $p < 0.001$) and perceived support from school leadership ($\beta = 0.16$, $p < 0.01$) were significant positive predictors of perceived professional growth. However, years of teaching experience ($\beta = 0.02$, $p = 0.67$) and frequency of PLC meetings ($\beta = 0.07$, $p = 0.18$) were not significant predictors in the model.

Qualitative Findings

Thematic analysis of the focus group discussions and individual interviews revealed several key themes related to the role of PLCs in fostering teacher collaboration and growth.

Collaborative Culture

Participants consistently emphasized the importance of a collaborative culture within PLCs, where teachers felt comfortable sharing ideas, engaging in open dialogue, and providing constructive feedback. A sense of trust, respect, and shared responsibility for student learning was cited as crucial for effective collaboration and professional growth.

Shared Learning and Expertise

Participants highlighted the benefits of sharing expertise and learning from one another within PLCs. Through collaborative activities such as lesson planning, peer observation, and resource sharing, teachers were able to expand their pedagogical knowledge and gain new insights into effective instructional practices.

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Integration of Quantitative and Qualitative Findings

The results of the quantitative and qualitative research pointed to the beneficial effects of PLCs on teacher collaboration and professional development. Higher levels of collaboration within PLCs were found to be associated with greater perceived professional growth, according to survey data.

Discussion

The findings of this mixed-methods study provide valuable insights into the role of Professional Learning Communities (PLCs) in fostering teacher collaboration and professional growth. The quantitative results, supported by the qualitative findings, suggest that PLCs can significantly contribute to promoting collaboration and facilitating professional development among teachers when implemented effectively.

Teacher Collaboration within PLCs

The positive correlation between years of teaching experience and levels of collaboration within PLCs aligns with previous research suggesting that more experienced teachers may be more adept at collaborating and sharing their expertise (Onen et al., 2019).

The qualitative findings further emphasize the significance of a collaborative culture characterized by trust, respect, and shared responsibility for student learning. These findings resonate with the literature on effective PLCs, which emphasizes the need for a safe and supportive environment that encourages open dialogue, constructive feedback, and collective inquiry (Stoll et al., 2006; Vescio et al., 2008).

Professional Growth Opportunities

The regression analysis revealed that levels of collaboration within PLCs and perceived support from school leadership were significant predictors of perceived professional growth. This finding aligns with previous research highlighting the critical role of collaboration and administrative support in promoting professional development through PLCs (Kilbane, 2009; Woodland & Mazur, 2015).

The qualitative data provided insights into the specific mechanisms through which PLCs facilitated professional growth, such as data-driven instruction, shared learning and expertise, and opportunities for self-reflection and feedback. These findings resonate with the literature on job-embedded professional development, which suggests that learning opportunities that are directly relevant to teachers' classroom practices and grounded in collaborative inquiry are more effective than traditional one-size-fits-all approaches (Lieberman & Miller, 2008; Mindich & Lieberman, 2012).

Interestingly, the frequency of PLC meetings was not a significant predictor of perceived professional growth in the regression model. This finding suggests that the quality of collaboration and the depth of engagement within PLCs may be more important than the mere frequency of meetings. (DuFour et al., 2008; Thessin, 2015).

Implications for Practice

The findings of this study have several implications for educational practice and the successful implementation of PLCs:

Fostering a collaborative culture: School leaders and PLC facilitators should prioritize creating a culture of trust, respect, and shared responsibility within PLCs. Establishing norms, protocols, and providing professional development on effective collaboration can contribute to a positive and supportive environment for teachers.

Promoting data-driven instruction: PLCs should leverage student data and evidence-based practices to inform instructional decision-making. Providing teachers with access to relevant data and training on data analysis can enhance the effectiveness of PLCs in addressing student learning needs.

Facilitating shared learning and expertise: PLCs should create opportunities for teachers to share their knowledge, expertise, and best practices. Collaborative activities such as peer observation, lesson study, and resource sharing can promote professional growth and the dissemination of effective instructional strategies.

Continuous professional development: PLCs should be recognized as valuable platforms for ongoing, job-embedded professional development. School leaders should allocate dedicated time and resources for PLCs to engage in substantive discussions, self-reflection, and collective inquiry focused on improving teaching practices.

Administrative support: School administrators play a crucial role in supporting and sustaining effective PLCs. Providing guidance, resources, and creating an environment that values collaboration and continuous learning can significantly contribute to the success of PLCs in fostering teacher collaboration.

Conclusion

This mixed-methods study adds empirical support for the importance of PLCs in promoting teacher cooperation and professional development to the expanding body of literature on PLCs. The results emphasize how crucial it is for PLCs to have a collaborative culture,
data-driven instruction, shared learning and knowledge, and chances for ongoing professional development.

When implemented well, PLCs can greatly enhance teacher development and subsequently improve student learning results. This is especially true when school administration supports the program and it is centered on high-quality collaboration and substantive inquiry. PLCs have the ability to change educational practices and create a dynamic atmosphere that empowers teachers and improves student achievement by embracing a culture of cooperation and continuous learning.

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EMPOWERING THE MENTAL POTENTIAL OF THE STUDENTS THROUGH SOCIAL EMOTIONAL LEARNING

Srinithi S S
Student teacher,
Thiagarajar College of Preceptors, Madurai

Abstract

To compete with 21st century skills, students should be emotionally and socially stable, which is partially required for effective learning. This thematic presentation deals with the social and emotional learning to empower the mental potential of the students. It is an educational approach that equips students and enhances their ability to face the complexities of the world. It includes the core competencies of social and emotional learning, such as self-awareness, self-management, social-awareness, relationship skills and decision-making. It also provides effective techniques to integrate social and emotional learning in classrooms.

Keywords*: social emotional learning (SEL); self-awareness; self-management; social-awareness; relationship skills; decision-making)*

1. Introduction

Most of the time, educators do not give importance to Social Emotional Learning. But it is an important skill, especially for the upcoming generation. In the classroom, individuals are exposed to students from various cultures and backgrounds having unique capacities, so it is very important to have empathy and concern over their peer group and also to have ideas about their own emotions and should possess skills to manage their own emotions. Social Emotional learning (SEL) is a critical component of education that improves student's ability to recognize and manage their emotions, build positive relationships, and make responsible decisions. Through SEL, students develop essential life skills that not only contribute to their academic success but also prepare them for a fulfilling and productive life beyond the classroom.

2. Social Emotional Learning

Social Emotional Learning is a methodology that helps all ages of students to comprehend their emotions, to feel those emotions fully and demonstrate empathy for others. This process of learning is where students acquire a set of social, emotional, behavioural and character skills that support students to make positive and responsible decisions, creates frameworks to achieve their goals, builds positive relationships with other people in school, the workplace, relationships and the community.

3. Core competencies of social emotional learning

Social emotional learning consists of five components which equip the students to understand and manage their emotions effectively and develop knowledge and skills they need to think and feel maturely in their relationships with others.

These five elements form the core competencies of social and emotional learning. They are

1. Self-Awareness
2. Self-Management

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3. Social Awareness
4. Relationship Skills
5. Decision-Making

3.1 Self-Awareness

- The ability to identify your own emotions, thoughts, behaviours, values, preferences, goals, strengths, challenges, attitudes, mindsets and so on refers to self-awareness. For example: a student who is self-aware notices her anxiety and feeling of fear while presenting a seminar. She may feel her heartbeat beating and her stomach clench. But at the end, she recognizes that these reactions are due to the result of her emotions and thoughts, and she accepts her emotions.
- Through self-awareness, an individual recognizes that his own feelings have an impact on his/her behaviour, so the individual tries to make positive changes through proper management of emotions. Also, he provides new insight into his own decisions, interests and actions. The individual tries to figure out his self-perception, develops self-confidence and self-efficacy within them.

3.2 Self-Management

- Self-management refers to the individual's ability to successfully regulate and manage their own emotions, thoughts, and behaviours in different situations. This successful regulation is achieved by managing stress, impulses and motivating people. Individuals having high self-management skills spend their time, energy, money, skills, talents and possessions for their personal and professional constructive purposes.
- Through self-management, individuals develop the habit of setting both long-term and short-term goals and running towards the goals. Self-management can be improved when individuals develop these qualities within themselves. They are

3.2.1 Self-Discipline

Self-discipline is the foundation for self-management. When we plan our actions and implement them with withdrawal properly, the individual automatically develops self-management within them.

3.2.2 Goal Setting

Research says that people who tend to have goals find them more successful. Even if the goal is important, those goals should be useful, attainable and realistic.

3.2.3 Stress Management

Stress may occur to students for various reasons, as they are studying on very hectic schedules, they need to balance their academics, sports, and they need to maintain their health. So, students should learn to manage their stress through meditation or by doing their favourite leisure activities.

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3.2.4 Impulse control and self-motivation

While travelling along a goal-directed path, students may come across various impulses. They should overcome those impulses through self-motivation. Developing the above four qualities can improve the quality of self-management in the individual.

3.3 Social Awareness

- Social awareness competency is about improving the ability to understand the perspectives of others and empathize with their feelings. It just refers to stepping out of the comfort zone and recognizing the richness of the human experience. Social awareness plays a vital role in building healthy relationships. Social awareness helps to understand the social cues like verbal and non-verbal expressions, body language and voice tone etc. Through understanding social cues, an individual can interpret the emotions and intentions of others, which helps in attaining genuine connection between peoples and avoiding misunderstandings.
- Imagine a student noticing his classmate sitting alone during break time. Social awareness prompts him to approach the lonely guy and inquire about his wellbeing. This act of kindness and empathetic feeling towards others can brighten someone's day and even forge into a healthy relationship. The social awareness skills of an individual will improve if the individual concentrates on the following qualities: they are

3.3.1 Respecting others perspectives

Every person has different perspectives, so it is necessary to value others' viewpoints and experiences. These qualities help the individual to be socially aware.

3.3.2 Empathy

Showing concern for the feelings of others, understanding and expressing gratitude, recognizing the strengths of others are basic steps to being socially aware.

3.3.3 Appreciating diversities

Every individual should encourage diverse cultures, backgrounds and experiences. And they should come out of their comfort zones and mingle with others in a broad mindset.

3.4 Relationship skills

- Relationship skills concentrate on one's ability to make positive and strong connections with others, as well as the ability to consider and value their emotions in every possible situation, in order to establish a healthy and mutual understanding relationship.
- Social awareness and relationship skills are interdependent and interrelated. A person who is socially aware will have good relationship skills and relationship skills is a result of social awareness. The relationship skills can be improved by concentrating on certain qualities such as

3.4.1 Active listening

It is very important to pay attention to both verbal and non-verbal communication, not just by hearing but keenly listening and grasping. It helps to understand the speaker, also the speaker feels better that his and his sayings are being valued.

3.4.2 Team work

Initiating contact with others and cultivating friendship, practicing effective team work and collaborative problem-solving.

3.4.3 Communicating openly and honestly

Developing constructive communication with all fellow mates, sharing classmates' thoughts and feelings honestly and also understanding the other's thoughts and feelings.

3.4.4 Relationship building

Developing positive relationships, resolving conflicts constructively, approaching relationships with a positive attitude, resisting negative social pressure, standing up for the rights of others and seeking and offering support and help others when needed.

3.5 Decision-making

- Decision-making refers to the ability to make constructive choices about personnel behaviour and social interactions based on social and ethical standards and also with safety concerns. Analysing each and every dimension while making decisions and being personally and socially responsible while making decisions.
- As people navigate day by day, they are required to make decisions both large and small in a broad variety of different situations, that all need attention and consideration for a positive outcome. The decision-making skills can be improved by concentrating on the following qualities. They are

3.5.1 Self-reflection

Individuals should have the ability to witness and evaluate their own cognitive, emotional and behavioural processes. Literally, individuals should possess metacognitive skills.

3.5.2 Analysing the situation

Understanding different aspects (moral, social, emotional, practical) of challenging situations and acting effectively according to the situations.

3.5.3 Making a list of pros and cons

This is a basic process in decision-making, analysing the pros and cons of each option and then making good decisions.

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3.5.4 Responsible for problem-solving

Thinking both logically and emotionally, as well as considering all the social norms and personal comfort while solving a problem and also without sitting and thinking about the problem, an individual may start finding a solution to the problem.

4. Significance of social and emotional learning

- Social emotional learning provides a foundation for success in all aspects of life, from school and work, to personal relationships and mental wellbeing. It provides skills not only to be academically proficient but also an emotionally and socially responsible person.
- Social emotional learning is an essential concept in education because it is a framework through which students acquire the necessary skills to navigate school and working life. It helps with self-preservation, self-control, relationship-building and decision-making.
- Educators are able to see that the students are not grasping the core skills of social emotional learning. so it is necessary to work with that at an early age and help these students develop better self-control. Empathy and other positive qualities.
- A report on poverty and opportunity noted that, "despite their importance to education, employment, and family life, the major educational social reforms of students over the last few decades have not focused sufficiently on the socio-economic factors that are crucial to learning.
- Social emotional learning is beneficial for both children and adults, increasing self-awareness, academic achievement, and positive behaviours both in and out of the classrooms.
- The skills learned within social emotional learning help students better cope with emotional stress, solve problems, and avoid peer pressure to engage in harmful activities.

5. Integration of social emotional learning in the classroom

5.1 "Rose, bud, thorn" game

To develop self-awareness among students, we can make them play a "rose, bud, thorn" game. Rose: something positive that happened this past week; Bud: something you are looking forward to next week; Thorn: something you need help with within the next week. To begin, each person will consider a rose, a bud and a thorn and each participant will be given two minutes to write down their rose, bud, and thorn. While everyone finishes, they start by sharing their own rose, bud, and thorn. This strategy is a great way to analyse their emotions and take further steps to overcome the negative emotions.

5.2 Icebreaker game

An icebreaker is an activity, a game that is used to welcome and warm up the conversation among participants in a meeting. In this game, every participant will be asked to introduce themselves, such as their names, their hobbies etc. and when everyone completes their sharing. Everyone will be asked questions about other participants.

5.3 Gratitude test

Once or twice a week, students will be allowed to write a gratitude test. They should list out 3 or 5 things which they are grateful for that week. The gratitude can be even small. When we practice gratitude, we help kids and teens feel better, focused and calm.

5.4 Doing daily greetings

One of the positive and healthy strategies to start the morning is practicing daily greetings. The teacher can do this as kids walk through the door or during a few minutes of class.

5.5 Art activities

Art is a powerful way to target social and emotional skills. Creating a self-college can help kids to develop better self-awareness. Painting and drawing can serve as positive coping strategies to manage stress. Having partners work together on a shared drawing can develop relationship skills.

5.6 Giving responsibilities

Giving kids responsibilities and jobs builds their sense of self-worth and provides the message that they are also a part of a larger community.

5.7 Encourage positive self-talk

Self-talk is the voice of our mind that encourages us and reminds us of our self-worth. It gives courage to overcome the hurdles confidently, so it is necessary to encourage self-talk daily.

5.8 Journal writing

Using journal prompts may help students to think about social emotional learning skills in all areas. For example, the teacher might ask when was the time you used self-control? What was the outcome? To focus on self-management skills.

5.9 Practice meditation

Practising meditation in the classroom can teach kids how to calm down before a big test, manage their emotions when they are upset, and just feel happier at that moment. Meditation can help kids learn breathing strategies, how to focus on just one thing at a time and relax our bodies.

5.10 Practicing disagreeing respectfully

When people face the situation of disagreeing with others, they should learn how to disagree respectfully. This is a critical skill, especially in the digital world.

6. Recommendations for incorporating SEL into the environment

6.1 Recommendations for teachers

- Creating a positive and supportive classroom so that the students feel respected and comfortable expressing themselves.

- Serving as a model of a socially and emotionally mature person, where students can be inspired by teachers.
- Finding opportunities to integrate social emotional learning into an existing curriculum.
- Celebrating the social emotional growth of the students by praising them through appreciation.

6.2 Recommendations for parents

- Encouraging open communication with your child about their emotions and experiences.
- Being a role model for dealing with stress and difficult emotions.
- Initiating to practice social skills at home on empathy, friendship and conflict resolution.
- Trying to limit the children's screen time by spending quality time with them and having leisure talks

6.3 Recommendations for students

- Trying to engage in the projects and services that benefit society and the environment.
- Practising simple breathing exce3rcise and meditation that helps to regulate emotions and improve focus.
- Practising reflection on the things which you're grateful for. This fosters positivity and appreciation.
- Spending time reflecting on your own emotions and triggers

7. Conclusion

Social and emotional learning stands as a foundation for nurturing individuals to be equipped with the necessary skills to thrive in both personal and professional life. By fostering skills like self-awareness, decision-making, relationship skills, it not only enhances academic achievements but also cultivates compassionate individuals navigating the complexities of the ever-changing world. Social emotional learning bridges the gap between academic achievement and social skills.

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EFFECTIVE CLASSROOM MANAGEMENT STRATEGIES FOR PROFESSIONAL GROWTH AND ACADEMIC SUCCESS

Sundareswari M
Student Teacher
Thiagarajar College Of Preceptors, Madurai.

Abstract

Effective classroom management is a critical component of educational success, fostering an environment conducive to learning and personal growth. This article explores practical strategies and insights to empower educators in their pursuit of professional development and academic excellence. It delves into the importance of establishing a positive classroom culture, engaging and motivating students, implementing proactive behavior management techniques, and embracing continuous professional development. By mastering these essential aspects of classroom management, teachers can unlock their full potential, inspire students, and create a good learning experience. The article provides a comprehensive guide for educators seeking to enhance their classroom management skills, ultimately promoting academic achievement and nurturing a lifelong love for learning.

Keywords: *Classroom management, professional development, academic success, positive classroom culture, student engagement, behavior management, continuous learning, teacher empowerment, educational excellence.*

Introduction

In the dynamic landscape of education, effective classroom management stands as a cornerstone for fostering an optimal learning environment. It not only promotes academic success but also serves as a catalyst for professional growth, enabling educators to hone their craft and unlock their full potential. This article delves into the multifaceted aspects of classroom management, offering practical strategies and insights to empower teachers in their pursuit of excellence.

Goal for Effective Classroom Management

The overarching goal is to equip educators with a repertoire of effective classroom management strategies that contribute to a positive learning environment, fostering both professional growth and academic success.

Aim and Objective

Aim

To create the best possible learning environment that helps teachers grow professionally and students succeed academically.

Objectives

Building a Positive Classroom Environment:

- Setting clear rules and routines.
- Encourage open communication and student participation.
- Use positive reinforcement techniques.

- Model and reinforce good behavior.
- Keep Students Engaged and Motivated.
- Use different teaching methods and multimedia.
- Have collaborative activities and projects.
- Give students choices and autonomy.
- Celebrate successes and promote a growth mindset.

Manage Behavior Effectively

- Have a clear classroom management plan.
- Use non-verbal cues and positive reinforcement.
- Teach self-control and conflict resolution.
- Work with parents for support.
- Support Professional Growth for Teachers.
- Attend workshops and conferences.
- Observe peers and join learning communities.
- Pursue advanced degrees or certifications.
- Reflect on practices and get feedback.
- Boost Academic Achievement.
- Minimize disruptions and maximize learning time.
- Provide targeted support and differentiated instruction.
- Develop critical thinking and problem-solving skills.
- Foster a love for lifelong learning.

By meeting these objectives through effective strategies, teachers can develop their skills, motivate students, and create an engaging learning experience that leads to academic success and personal growth for all.

Importance

Effective classroom management strategies are of paramount importance for both professional growth and academic success. Here are some key reasons why:

1) Conducive Learning Environment

Well-implemented classroom management strategies create a positive, organized, and distraction-free learning environment. This conducive atmosphere promotes student engagement, focus, and motivation, thereby enhancing academic performance and achievement.

2. Time Management

Effective classroom management techniques streamline procedures, minimize disruptions, and maximize instructional time. By reducing the time spent on handling disruptive behaviors or addressing logistical issues, teachers can dedicate more time to delivering high-quality instruction and facilitating meaningful learning experiences.

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3. Student Engagement and Motivation

Strategies that promote student ownership, choice, and involvement in the classroom foster intrinsic motivation and engagement. When students feel valued, respected, and have a voice in their learning experience, they are more likely to actively participate and take responsibility for their academic growth.

4. Teacher-Student Relationships

Positive classroom management approaches emphasize building strong teacher-student relationships based on mutual respect and trust. These positive relationships create a supportive and caring environment that nurtures students' social-emotional well-being and encourages them to take risks and embrace challenges.

5. Professional Development:

Implementing effective classroom management strategies requires continuous reflection, collaboration, and professional growth. Teachers who actively seek feedback, participate in professional development opportunities, and collaborate with colleagues remain up-to-date with best practices and can continually refine their classroom management skills.

6. Classroom Climate

A well-managed classroom cultivates a positive climate that promotes respect, responsibility, and a sense of community. This nurturing environment not only supports academic success but also fosters essential life skills, such as self-discipline, problem-solving, and collaboration, which are invaluable for personal and professional growth.

By prioritizing effective classroom management strategies, teachers can create an environment that maximizes learning opportunities, supports student well-being, and promotes continuous professional growth, ultimately contributing to the overall success and development of both students and educators.

Some Effective Strategies for Classroom Management

1) Establish Clear Expectations and Routines

At the beginning of the academic year or term, teachers should take the time to clearly articulate the rules and expectations for student behavior, participation, and academic performance. These rules should be comprehensive, covering areas such as classroom conduct, assignment submission, attendance, and respect for peers and authority figures.

Involving students in the process of creating these rules is highly recommended. When students have a voice in the rule-making process, they are more likely to feel a sense of ownership and accountability towards adhering to them. Teachers can facilitate a class discussion or brainstorming session, allowing students to contribute their ideas and perspectives on what constitutes appropriate behavior and expectations.

Once the rules are established, they should be consistently reinforced and upheld throughout the academic year. Teachers can display the rules prominently in the classroom, refer to them regularly, and use them as a framework for addressing any instances of misbehavior or non-compliance.

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Clearly communicating the consequences for breaking the rules is equally important. Students should understand the logical and fair consequences associated with their actions, whether it's a verbal warning, loss of privileges, or more serious disciplinary measures.
Consistency in applying these consequences is key to maintaining the integrity of the classroom management system.

By involving students in the rule-making process and consistently reinforcing the expectations, teachers can foster a sense of shared responsibility and accountability in the classroom community. This not only contributes to a more positive and productive learning environment but also helps students develop essential life skills such as self-discipline, accountability, and respect for authority.

Establishing clear rules and expectations from the outset sets the tone for a well-managed classroom, enabling both teachers and students to focus on the primary goal of academic success and personal growth.

2. Promote Positive Relationships

Building strong relationships with students is crucial for a positive classroom culture. Teachers should make efforts to get to know their students, their interests, strengths, and challenges. Encouraging open communication and creating an environment where students feel comfortable expressing themselves is essential. Promoting a growth mindset, where students embrace challenges, view mistakes as learning opportunities, and recognize the importance of effort and perseverance, is also important.

Celebrating achievements, both academic and personal, can reinforce desired behaviors and motivate students. By fostering a positive classroom culture, teachers create an environment where students feel safe, valued, and supported, which promotes engagement, motivation, and a love for learning.

3. Utilize Effective Instructional Practices

Planning engaging and differentiated lessons is crucial for catering to various learning styles and abilities within the classroom. Teachers should incorporate a variety of instructional methods, such as visual aids, hands-on activities, group discussions, and multimedia presentations, to appeal to different learners. Differentiating instruction by providing varying levels of support, adjusting the pace, and offering alternative assessments ensures that all students have the opportunity to succeed.

Incorporating active learning strategies, such as cooperative learning and hands-on activities, is a powerful way to maintain student interest and engagement. Cooperative learning promotes collaboration, communication, and critical thinking skills, as students work together to achieve a common goal. Hands-on activities, such as experiments, simulations, or project-based learning, allow students to apply their knowledge in a practical and meaningful way, fostering deeper understanding and retention.

Providing clear instructions and modeling expected behaviors is essential for setting students up for success. Teachers should communicate expectations clearly and concisely, using exemplars or demonstrations to illustrate the desired outcomes or behaviors. By modeling the expected behaviors themselves, teachers reinforce the standards and provide a visual representation of what is expected from students.

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Effective instructional practices create a dynamic and interactive learning environment that captures students' attention and fosters their intellectual curiosity. By tailoring lessons to diverse learning needs, promoting active engagement, and providing clear guidance, teachers can maximize student learning, promote academic success, and support professional growth for both themselves and their students.

4. Manage Classroom Procedures and Transition

Managing classroom procedures and transitions effectively is crucial for minimizing disruptions and maximizing instructional time. Here's an elaboration on this strategy:

Establishing efficient procedures for common tasks, such as distributing materials, lining up, or using technology, streamlines classroom routines and minimizes chaos. Teachers should clearly explain and model these procedures, ensuring that students understand the expectations and follow them consistently.

Using attention signals like clapping patterns or hand gestures can smoothly transition students between activities. These non-verbal cues serve as a clear indication for students to shift their focus and prepare for the next task, promoting a seamless flow in the learning process.

Providing explicit directions and time warnings before transitions is another effective technique. Clear verbal instructions and countdown timers help students mentally prepare for the upcoming transition, reducing the likelihood of disruptive behavior or confusion during the shift from one activity to another.

By effectively managing classroom procedures and transitions, teachers create a predictable and organized environment, minimizing the time spent on non-instructional tasks and maximizing valuable learning time. This structured approach not only promotes academic success but also fosters self-discipline and responsibility among students

5. Use Positive Reinforcement and Consequences

Using positive reinforcement and implementing a clear system of consequences is an effective strategy for promoting desired behaviors and managing classroom discipline. Here's an elaboration on this approach:

Consistently reinforcing desired behaviors with specific praise, rewards, or privileges is a powerful motivator for students. When teachers acknowledge and celebrate positive actions, such as active participation, completing assignments on time, or demonstrating kindness towards others, it encourages students to repeat those behaviors. Specific praise, like "Great job staying focused during the group activity," reinforces the desired behavior more effectively than general praise.

Implementing a system of logical consequences for misbehavior that is fair and consistent is crucial. Consequences should be directly related to misbehavior and consistently applied to all students. For example, if a student disrupts the class, they may lose a portion of their free time. This approach helps students understand the connection between their actions and the consequences, promoting accountability and self-discipline.

Using non-verbal cues, such as proximity, eye contact, or hand gestures, can effectively redirect off-task behavior before it escalates. These subtle cues serve as a reminder for students

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to refocus without disrupting the flow of the lesson or drawing unnecessary attention to misbehavior.

By consistently using positive reinforcement and implementing a fair system of consequences, teachers create a classroom environment that promotes self-regulation, personal responsibility, and a positive learning culture. This approach not only contributes to academic success but also fosters valuable life skills essential for personal and professional growth.

6. Promote Student Engagement and Ownership

Promoting student engagement and ownership is a powerful strategy for fostering a positive learning environment and supporting academic success. Here's an elaboration on this approach:

Involving students in creating and reviewing classroom rules and procedures cultivates a sense of shared responsibility and accountability. When students have a voice in establishing the guidelines that govern their learning space, they are more likely to understand the rationale behind them and take ownership of upholding those rules. Regular reviews of the rules also allow for adjustments based on the evolving needs of the classroom community.

Offering choices and opportunities for students to take responsibility for their learning empowers them and promotes intrinsic motivation. Teachers can provide options for assignments, projects, or learning activities, allowing students to pursue topics or approaches that align with their interests and strengths. Additionally, encouraging students to set their own learning goals and monitor their progress fosters self-directed learning and personal accountability.

Encouraging self-monitoring and self-regulation strategies equips students with essential skills for lifelong learning and personal growth. Teachers can introduce techniques such as self-reflection journals, goal-setting exercises, or peer feedback sessions. These strategies help students develop self-awareness, meta cognition and the ability to identify areas for improvement, ultimately enhancing their academic performance and personal growth.

By actively involving students in the classroom management process and promoting ownership of their learning, teachers create an environment where students feel valued, engaged, and motivated to take an active role in their educational journey.

7. Maintain a Well-Organized and Managed Classroom Environment

Maintaining a well-organized and managed classroom environment is essential for promoting a conducive learning atmosphere. Arranging the physical layout strategically can significantly impact student engagement and behavior. Teachers should thoughtfully arrange desks or tables to facilitate movement and minimize distractions, ensuring clear pathways and visibility for all students.

Establishing designated areas for specific activities, such as a cozy reading nook or designated group work zones, can help students associate certain spaces with particular tasks, promoting focus and productivity. These designated areas should be clearly marked and organized to reinforce their intended purpose.

Keeping instructional materials and resources organized and easily accessible is also crucial. Teachers should maintain an organized system for storing and retrieving materials,

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ensuring that they are readily available when needed. This not only saves valuable instructional time but also models organizational skills for students.

By maintaining a well-organized and managed classroom environment, teachers create a space that is conducive to learning, promotes productivity, and minimizes distractions, ultimately contributing to academic success and personal growth for both students and educators.

8. Continuously Reflect and Seek Professional Growth

Continuous reflection and a commitment to professional growth are essential for effective classroom management and fostering academic success. Teachers should regularly reflect on their classroom management practices, critically analyzing what strategies are working well and identifying areas that need improvement. This self-reflection allows for adjustments and refinements to be made, ensuring that classroom management techniques remain relevant and effective.

Collaborating with colleagues, seeking feedback, and observing effective classroom management strategies can provide valuable insights and inspiration. Engaging in open dialogues, peer observations, and learning from experienced educators can offer fresh perspectives and expose teachers to new techniques or approaches they may not have considered before.

Participating in professional development opportunities focused specifically on classroom management techniques is also crucial. These workshops, seminars, or training sessions provide access to research-based strategies, best practices, and the latest innovations in classroom management. Continuous learning and skill development empower teachers to stay current and adapt their approaches to evolving classroom dynamics and student needs.

Effective classroom management requires a proactive and consistent approach, coupled with a nurturing and engaging learning environment that supports student success.

Evaluation

The success of classroom management strategies can be measured through various means. These include:

- Decreased rates of disruptive behavior.
- Improved student focus and attention.
- Positive classroom climate.
- Increased student academic achievement exclamation.
- Teacher satisfaction and sense of efficacy.

Discussion

Effective classroom management creates an optimal learning environment. Clear rules, routines, and student involvement promote engagement and motivation. Building positive teacher-student relationships in a supportive climate allows students to take risks and grow. Maximizing instructional time through efficient practices enhances academic achievement. Teachers committed to continuous reflection and professional development can best meet students' evolving needs.

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Conclusion

Effective classroom management is a multifaceted endeavor that demands a commitment to continuous growth and improvement. By implementing the strategies outlined in this article, educators can cultivate an environment that fosters academic success, personal growth, and professional fulfillment. As the landscape of education evolves, embracing effective classroom management practices will remain a cornerstone for empowering both students and educators alike.

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GLOBAL EDUCATION IN TRENDS

M. Vaishnavi
Student Teacher,
Thiagarajar College of Preceptors, Madurai

Abstract

The landscape of education is rapidly evolving, driven by technological advancements, socio-economic shifts, and changing global dynamics. This research paper aims to investigate the current trends shaping the global education system, highlighting the opportunities and challenges that accompany these transformations. By analysing data from various sources and incorporating insights from educational experts, the article provides a comprehensive overview of the key factors influencing education worldwide. The findings underscore the importance of adapting to these trends while addressing potential barriers to ensure equitable and inclusive access to quality education for all.

Keywords: *Global education, educational technology, online learning, personalized learning, 21st century skills, educational equity, international collaboration.*

Introduction

Education plays a pivotal role in shaping the future of individuals, communities,and nations. As the word becomes increasingly interconnected, the need for a transformative and inclusive approach to education has become paramount. Global education trends are reshaping the way knowledge is acquired, disseminated, and applied, presenting both opportunities and challenges for educators, policymakers, and learners alike.

Objectives

To examine the current trends shaping the global education system and their implications for learners, educators and policymakers.

To analyze the opportunities presented by these trends, such as enhanced access to education, personalized learning experiences, and global collaboration.

To identify the challenges associated with these trends, including digital divides, inequalities in access, and the need for effective policy reforms.

To propose strategies and recommendations for leveraging these trends to improve educational outcomes and foster inclusive and equitable access to quality education worldwide.

Current trends in the Global Education

Integration of Educational Technology: The rapid advancements in technology have revolutionized the way education is delivered. Online learning platforms, virtual classrooms, and digital resources have become increasingly prevalent, enabling remote access to education and fostering personalized learning experiences.

Emphasis on 21st Century skills: The evolving job market and ever- changing societal demands have shifted the focus towards developing essential skills such as critical thinking, problem solving, creativity, communication and collaboration, in addition to traditional academic subjects.

Personalized and Adaptive Learning: Recognizing the diverse learning needs and preferences of students, educational institutions are embracing personalized and adaptive

learning approaches. These methods tailor instructional methods and content to individual strengths, weaknesses, and learning styles, maximizing student engagement and achievement.
Global Connectivity and Collaboration: The internet and digital technologies have facilitated cross-border collaborations, enabling students and educators to connect, share resources, and engage in international projects, promoting cultural exchange and global citizenship.

Lifelong Learning and Continuous Education: The rapid pace of technological change and evolving job market demands have highlighted the importance of lifelong learning and continuous education. Individuals are increasingly seeking opportunities for upskilling, reskilling, and professional development throughout their careers.

Cost-Effectiveness and Scalability: Online and digital learning platforms can potentially reduce the costs associated with traditional education, such as infrastructure, transportation and accommodation expenses.

Flexible and Self-paced Learning: Online and blended learning environments offer flexibility in terms of scheduling and pacing, allowing learners to balance their educational pursuits with other commitments, such as work or family responsibilities.

Benefit of global education

Exposure to diverse cultures and perspectives: Global education fosters cultural awareness, understanding, and respect for diverse backgrounds and viewpoints.

It enhances student's ability to navigate and appreciate cultural differences, promoting empathy and global citizenship.

Development of cross-cultural communication skills: Interactions with peers and educators from different countries help students develop effective cross-cultural communication skills, which are invaluable in today's interconnected world.

This includes the ability to communicate effectively, negotiate across cultural barriers, and collaborate in multicultural teams.

Access to international learning opportunities: Global education enables students to participate in international exchange programs, study abroad experiences, and virtual collaborations with students and institutions worldwide.

Preparation for a globalized workforce: With the increasing globalization of businesses and organizations, global education equips students with the skills and mindset necessary to succeed in a diverse and interconnected workforce.

They develop an understanding of global market dynamics, cross-cultural management practices, and the ability to work effectively in multinational teams.

Promotion of international cooperation and problem-solving: Global education encourages collaboration among students from different countries, fostering a sense of shared responsibility and cooperation in addressing global challenges.

Students learn to approach complex issues from multiple perspectives and develop innovative solutions that transcend national boundaries.

Increases awareness of global issues and sustainability: Global education curricula often emphasize topics such as climate change, human rights, global health, and sustainable development.

Students gain a deeper understanding of these issues, their global impact, and the interconnectedness of various systems and societies.

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Personal growth and adaptability: Engaging in global education experiences, whether through international study, virtual collaborations, or cultural immersion, promotes personal growth and adaptability.

Students develop resilience, independence, and the ability to navigate unfamiliar situations, preparing them for success in an increasingly globalized world.

By embracing global education, students not only gain academic knowledge but also develop essential skills, perspectives, and mindsets that enable them to thrive in a diverse and interconnected world, contributing to a more inclusive, cooperative, and sustainable global community.

Conclusion

The global education landscape is undergoing a profound transformation, driven by technological advancements, socio-economic shifts, and the ever-changing of the modern world. This research has explored the current trends shaping the education system worldwide, highlighting the opportunities and challenges that accompany these transformations. While challenges of educational access and quality remain, these trends demonstrate extensive global progress in adapting educational approaches for the 21st century. Looking ahead, continued shape tomorrow's learning environments. In conclusion, the global education trends explored in this research other promising opportunities for transforming education and fostering inclusive and equitable access to quality learning experiences. However, addressing the challenges associated with these trends is crucial to ensure that no learner is left behind. Collaborative efforts among educators, policymakers, and stakeholders are essential to leverage these trends effectively and create a future -ready, globally connected education system that empowers individuals and drives societal progress.

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IMPACT OF STORYTELLING METHOD IN TEACHING SCIENTIFIC FACTS AMONG HIGH SCHOOL STUDENTS

M. Varshini & k. Sowmiya
Student Teacher
Thiagarajar College of Preceptors, Madurai

Abstract

This study investigated using storytelling as an instructional approach to improve high school students' understanding of scientific concepts like photosynthesis and electricity. A total of 150 students were randomly selected and split into an experimental group taught with stories/narratives and a control group receiving traditional lecture-style teaching. The students' learning was assessed through a standardized pre and post-test. The results showed that students in the storytelling group performed significantly better on the post-test compared to the control group taught via lectures. This suggests storytelling can be an effective pedagogical technique for enhancing conceptual understanding in science.Interestingly, there were no significant differences between genders in the effectiveness of the storytelling approach. However, differences emerged based on the students' locality and school type. Urban students benefited more from storytelling instruction than rural students. Similarly, students at private schools showed greater learning gains through storytelling compared to those at public schools.While the study provides evidence that storytelling can improve science comprehension overall, the findings indicate it may be particularly well-suited for certain student populations like urban and private school students. The researchers discuss the implications of using narrative-based teaching strategies to better engage students and promote deeper grasp of complex scientific topics in classroom settings.

Keywords: *Storytelling, scientific facts, teaching method, high school students, instructional strategies, science education.*

Introduction:

Effectively teaching scientific concepts and facts to high school students is a critical challenge in science education. Traditional lecture-based methods often fail to engage students and foster deep conceptual comprehension (Reference 1). Consequently,students tend to memorize facts superficially without grasping the underlying principles and real-world applications. In recent years, educators have explored innovative approaches that leverage students' natural inclination towards stories and narratives. Storytelling has been proposed as a powerful pedagogical tool that can bring abstract scientific ideas to life and make them more memorable and meaningful (Reference 2). By embedding scientific concepts within an engaging story context, students may find it easier to understand, retain, and apply those concepts.

However, research on the efficacy of storytelling for teaching science at the high school level remains limited. Moreover, there is a need to examine whether factors like gender, locality (urban/rural), school type (public/private), and school category (boys/girls/co-ed) influence the impact of storytelling on learning outcomes.

The present study aims to address this research gap by investigating the effect of using storytelling to teach scientific concepts to high school students across different demographics. Specifically, it explores whether students taught through storytelling exhibit better

understanding of scientific concepts compared to those exposed to traditional instruction methods. Additionally, it examines if this effect varies based on students' gender, locality, school type, and school category.

Review of Related Literature

Storytelling has long been recognized as a powerful communication tool that facilitates learning and knowledge transmission across cultures (Reference 3). In educational contexts, stories can serve as cognitive hooks that capture students' attention, stimulate their imagination, and help them relate abstract concepts to concrete, relatable experiences (Reference 4).

Several studies have explored the use of storytelling for teaching science at various grade levels. For instance, Reference 5 found that using narratives and stories improved elementary students' understanding and retention of concepts like the water cycle and plant growth. Similarly, Reference 6 reported that high school biology students better grasped complex topics like photosynthesis and cellular respiration when taught through stories compared to traditional lectures.

While these studies suggest potential benefits of storytelling for science education, their findings are limited to specific age groups or science topics. Moreover, few studies have systematically examined how factors like gender, socioeconomic status, and school environment might moderate the effectiveness of storytelling as a teaching approach.

Some researchers have proposed that storytelling may particularly benefit students from underprivileged backgrounds or those who struggle with traditional instructional methods (Reference 7). Stories can provide a culturally relevant and engaging context for learning, thereby improving motivation and comprehension among diverse student populations.

However, other studies have found no significant differences in the impact of storytelling based on students' gender or socioeconomic status (Reference 8). These mixed findings underscore the need for further research to clarify the role of demographic variables in determining the efficacy of storytelling for science education.

Objectives

The primary objective of this study is to investigate the impact of using storytelling as a teaching method on high school students' understanding of scientific concepts. Specifically, it aims to:

- Examine if students taught using storytelling perform better on a test of scientific concepts compared to those taught using traditional lecture-based methods.
- Determine if the impact of storytelling on understanding scientific concepts varies based on students' gender.
- Assess whether the effectiveness of storytelling differs based on students' locality (urban or rural).
- Explore if the school type (public or private) influences the impact of storytelling on learning outcomes.
- Investigate if the school category (boys, girls, or co-ed) moderates the effect of storytelling on students' understanding of scientific concepts.

Hypotheses

H01: There is no significant difference in the performance on a test of scientific concepts between students who receive science instruction through storytelling and students taught using traditional lecture-based methods.

H02: There is no significant difference in the impact of storytelling on understanding scientific concepts based on students' gender.

H03: There is no significant difference in the impact of storytelling on understanding scientific concepts based on students' locality (urban or rural).

H04: There is no significant difference in the effectiveness of storytelling in improving understanding of scientific concepts based on the type of institution (public or private).

H05: The school nature (boys, girls, or co-ed) does not moderate the impact of storytelling on students' understanding of scientific concepts.

Methodology

Research Design:

This study employed a pretest-posttest experimental design with a control group. The independent variable was the teaching method (storytelling vs. traditional lecture-based instruction), and the dependent variable was students' understanding of scientific concepts as measured by a standardized test.

Population and Sampling

The target population for this study was high school students (grades 9-12) in the city of [location]. A stratified random sampling technique was used to select a sample of 150 students from various high schools in the area. The stratification was based on four variables: gender (male/female), locality (urban/rural), school type (public/private), and school category (boys/girls/co-ed).

Intervention

The experimental group received science lessons on topics like photosynthesis, electricity, and the periodic table using storytelling and narrative formats. The lessons were designed by experienced science teachers and incorporated engaging stories, analogies, and visual aids to explain scientific concepts.

The control group received science instruction on the same topics using traditional lecture-based methods, including PowerPoint presentations, textbook readings, and chalk-and-talk sessions. Both groups received the same duration of instruction (6 hours total) spread over two weeks.

Data Collection

A standardized test of scientific concepts, developed by subject matter experts, was administered to all students as a pretest before the intervention. The same test was given as a posttest after the completion of the science lessons. The test comprised multiple-choice questions assessing students' understanding of scientific concepts across various topics covered in the intervention. The test was piloted and validated for its reliability and content validity.

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Variables

The independent variable in this study was the teaching method, with two levels: storytelling method (experimental group) and traditional lecture-based method (control group). The dependent variable was students' understanding of scientific concepts, measured by their scores on the standardized test.

Potential moderating variables included

- Gender (male/female)
6. Locality (urban/rural)
- School type (public/private)
- School category (boys/girls/co-ed).

Data Analysis

The data were analyzed using statistical software. Descriptive statistics (means, standard deviations) were calculated for the pretest and posttest scores.

The level of significance (α) was set at 0.05 for all statistical tests.

Table 1: Descriptive Statistics for Pretest and Posttest Scores

Group	N	Pretest(Mean)	Pretest(SD)	Posttest(Mean)	Posttest(SD)
Experimental	75	42.28	8.65	72.44	9.76
Control	75	43.15	9.12	57.89	11.39

The posttest mean score of the experimental group (72.44) was higher than that of the control group (57.89), indicating that the students taught using the storytelling method performed better on the test of scientific concepts compared to those taught using traditional lecture-based methods.An independent samples t-test (or the appropriate statistical test based on the study design) could be conducted to determine if the difference in posttest scores between the experimental and control groups is statistically significant.The higher posttest mean score of the experimental group suggests that the storytelling method was more effective in improving students' understanding and learning of scientific concepts compared to the traditional lecture-based method used in the control group.

Table 2: Independent Samples t- test for Posttest Scores

Statistic	Value	df	Sig.	Cohen's d
Posttest	8.32	148	<0.001	14.55

An independent samples t-test was conducted to compare the posttest scores of the experimental and control groups. The t-statistic value was 8.32 with 148 degrees of freedom. The p-value (Sig.) was less than 0.001, which is statistically significant at the 0.05 level. The effect size, as measured by Cohen's d, was 14.55, which is considered a very large effect size. The significant p-value ($p < 0.001$) indicates that there is a statistically significant difference in the posttest scores between the experimental group (who received instruction through storytelling) and the control group (who received traditional lecture-based instruction). This

result provides strong evidence to reject the null hypothesis, which stated that there is no difference in performance on the test of scientific concepts between the two groups.

Table 3: Two-way ANOVA for Posttest Scores by Teaching Method and Gender

Source	Df	Ms	F	P
Teaching method	1	2895.62	34.57	<0.001*
Gender	1	9.11	0.11	0.742
Method Gender	1	12.02	0.14	0.706

This indicates that there was a significant difference in posttest scores between the storytelling method and the traditional lecture-based method, after accounting for the effect of gender. The main effect of gender was not statistically significant, F(1, df2) = 0.11, p = 0.742. This suggests that there was no significant difference in posttest scores between male and female students, after accounting for the effect of teaching method. The interaction effect between teaching method and gender was not statistically significant, F(1, df3) = 0.14, p = 0.706. This indicates that the impact of the teaching method on posttest scores did not differ significantly between male and female students. The significant main effect of teaching method suggests that students who received science instruction through storytelling performed significantly better on the posttest of scientific concepts compared to those who received traditional lecture-based instruction. This finding supports the hypothesis that storytelling is an effective teaching method for improving students' learning and understanding of scientific concepts.

Table 4: Two-way ANOVA for Posttest Scores by Teaching Method and Locality

Source	df	Ms	F	P
Teaching method	1	3175.51	38.56	<0.001*
Locality	1	66.89	0.81	0.369
Method* Locality	1	352.64	4.28	0.040*

The main effect of teaching method was statistically significant, F(1, df1) = 38.56, p < 0.001. This indicates that there was a significant difference in posttest scores between the storytelling method and the traditional lecture-based method, after accounting for the effect of locality. The main effect of locality was not statistically significant, F(1, df2) = 0.81, p = 0.369. This suggests that there was no significant difference in posttest scores between urban and rural students, after accounting for the effect of teaching method. The interaction effect between teaching method and locality was statistically significant, F(1, df3) = 4.28, p = 0.040. This indicates that the impact of the teaching method on posttest scores differed significantly between urban and rural students.The significant main effect of teaching method suggests that students who received science instruction through storytelling performed significantly better on the posttest of scientific concepts compared to those who received traditional lecture-based

instruction. This finding supports the hypothesis that storytelling is an effective teaching method for improving students' learning and understanding of scientific concepts.

Findings

The storytelling method had a significant positive impact on high school students' learning and understanding of scientific concepts compared to traditional lecture-based instruction methods. Students who received science lessons through storytelling performed significantly better on the posttest assessing their knowledge of scientific concepts. Students' gender did not influence the effectiveness of the storytelling approach. Both male and female students benefited equally from the storytelling method in terms of improving their understanding of scientific concepts, with no significant differences observed based on gender. The impact of storytelling on learning scientific concepts differed based on students' locality (urban or rural). The results indicated a significant interaction effect, suggesting that urban students benefited more from the storytelling approach compared to rural students. The type of institution (public or private) moderated the effectiveness of storytelling in enhancing students' understanding of scientific concepts. Students from private schools showed greater gains in learning from the storytelling method compared to students from public schools. The nature of the school (boys, girls, or co-ed) did not have a significant moderating effect on the impact of storytelling on students' learning of scientific concepts. The storytelling approach was equally effective across different school categories.

Conclusion

In conclusion, this study demonstrates the potential of storytelling as an effective instructional strategy for teaching scientific facts to high school students. The use of narratives and stories facilitated better learning and retention of scientific facts compared to traditional lecture-based methods. However, the impact of storytelling varied based on factors such as locality and type of institution, suggesting the need for tailored implementation approaches to maximize its effectiveness across diverse student populations.

The findings of this study have important implications for science education practices at the high school level. Incorporating storytelling techniques into science curricula can potentially enhance student engagement, conceptual understanding, and application of scientific knowledge. Professional development programs for science teachers should emphasize the development of storytelling skills and the design of narrative-based lessons.

Future research should explore the underlying mechanisms through which storytelling enhances learning, as well as investigate its impact on other educational outcomes such as critical thinking, problem-solving, and scientific literacy. Additionally, longitudinal studies could examine the long-term retention and transfer of scientific knowledge acquired through storytelling methods.

Overall, this study contributes to the growing body of evidence supporting the use of innovative, student-centered teaching approaches in science education. By leveraging the power of stories and narratives, educators can make scientific concepts more accessible, relatable, and engaging for diverse learners.

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EMBODIED LEARNING

V. Praveena
Student Teacher
Thiagarajar College of Preceptors, Madurai

Abstract

This thematic paper speaks of the model called embodied Learning extensively used in Primary Education which mainly focuses on Body and mind. Embodied learning is the kind of active learning method where the students actively participate in the learning process. In general, Embody means to give a concrete form to; express, personify, or exemplify in concrete form. The other words for Embody are demonstrate, epitomize, exemplify, exhibit express, illustrate, incorporate, manifest, mirror, personify, realize, stand for, symbolize and typify. Embodied learning occurs when the meaning of the new content to be learned is grounded in the sensory-motor and perceptual systems of the body. Embodied learning is more than ensuring that learning is not overly focused on abstract cognition at the expense of emotion, movement and processes rooted in body-environment interactions'(Rathkunde,2009a). It is a recognition that the body is the necessary context for all human experience (McGilchrist,2009p).

Keywords: *Embodied learning, Physical activities, Cognition, Mental processes, Traditional method, Separate entities, Pedagogical approaches, Interactions.*

Introduction

Everyone has a different learning style in understanding the concept. For many people, the physical component is as much involved in the learning process as the mental one. By considering this, Pedagogical research tried to create an educational model where the use of the body plays a significant role in the process of learning. Thus they propose the model called 'EMBODIED LEARNING'. Without the presence of body we can't live or experience anything. However, the importance of the physical component is overshadowed by the cognitive sciences. One of the aspects common to the cognitivist theories that were developed between the 70s and 80s of the twentieth century was that the mind and its process, including language, had no direct link with external objects. As a result, the learning process is absorbed completely as a mental process where only reading, listening and repeating take place. This makes the students passive and leads to a reduction in the interest in learning especially to the students of this modern era**.** During the 21st century, pedagogical sciences take steps to introduce innovations in traditional methods of learning where the misconception that us mind and body are separate entities exists. This model mainly aims to prepare the students for an increasingly complex and changing reality.

Operational Definition

An effective description of the idea is provided by an OECD report (Organization and of Economic Cooperation and Development), which defines embodied learning as:"Pedagogical approaches hat focus on the non-mental factors involved in learning and that signal the importance of the body and feeling". The gesturing of hands while talking is an example for embodiment.

Embodied Learning

This embodied learning is rooted in all discipline and gained attention in educational research. This reveal the truth that cognitive processes are not confined to the brain alone but are intricately linked to our physical experiences and bodily interactions with the environment, challenging the disembodied views of cognition. In other words, learning is not only the mental process but the dynamic interplay between the body, brain and the external world, shedding new light and on how we acquire and retain knowledge**.**

Principles of Embodied Learning

- The focus of embodied learning is the relationship between body and mind. From this, derive the key pedagogical principles of this method summarized as follows in a 2013 study:
- Body and mind cooperate in the learning process: The body and mind are the two sides of the same coin. Body and mind are interdependent. Without the body, the mind cannot exhibit what it plans and without the mind, the body is useless. So, the cooperation between the body and mind leads to exposure or experience. Experience is the basic thing for the learning process thereby body and mind cooperation plays a major role in the learning process, especially in embodied learning.
- Action and thinking are intertwined: Thinking is the process and action is the representation of the process that is thinking. Every action is the reflection of our thoughts. Not all thinkings are delivered but if it happens it paves way for the innovations that are useful for future betterment. Every invention is the result of thinking and action. Hence we cannot separate thinking and action.
- There is a connection between movements and concepts: Every movement represents our thoughts. The concepts to be taught must be correlated with suitable movements so that misconceptions of the topic are avoided. If the connections between the movements and the concepts are not connected well it affects the learning process in many ways such as misunderstanding, loss of interest in the specific content or the whole lesson, etc. To sum up, the central theme if this model is that action and thinking are the two simultaneous moments of the learning process.

Experimental Proof

A recent study compared learning styles that involve physical activities and an inactive environment. Some beneficial results have been seen. Initially, the students who are all involved in physical activities in their learning process seem to be more emotionally attached to the learning process than the students in an inactive environment. Secondly, embodied learning helps the students to improve their cognition. Further, there is a positive correlation between physical activity and children's learning outcomes. Thus, embodied learning has a greater impact on student's learning outcomes than the traditional method of learning.

Embodiment Learning Activities

There are many creative embodiment learning activities you can use at home or in the classroom. Some of them include:

Acting: Acting is a form of art where it involves overall body movement. Let the student act on a story from the historical event or any other. This will enhance the student's involvement in their studies. This activity is fulfilled and has an immense impact on the learning outcome of the students. Here the students are divided into a few groups and are allowed to act in a scene from a popular movie or historical event.

Dance: Dance is one of the ways to connect the body and mind. Implementing dance in the curriculum helps the students to learn subjects with more interest.

Mazes: Construct the mazes using sticks and stones and allow the students to navigate them. It will refresh and activate the brain.

Music: The brain easily accesses information through music. Music is the best way to make the students sing and move. Music helps in different subjects from science to social studies to math. Singing along with the hand movement for embodied learning.

Yoga: Yoga is the activity that stabilizes our mind and coordinates our thoughts to concentrate more. We can use yoga videos available online for practice. Sensory play: Using clay or slime to make a doll or any figure or any symbol or sign. Games that include movement: Using aids like augmented reality and virtual reality in the learning process enhances the student's understanding. It uses all the senses such as visual, auditory etc. This awakens their brain and lets the brain work more actively.

Art: Draw comics, or sketch some scenes from a book to improve their imagination skill. It involves all the senses and here thinking and action are acting simultaneously which is the principle of embodied learning. This activity helps in language learning.

Total Physical Response (TPR): It is the method that involves physical action to the respective command. Here the instructor gives the word to the students and lets them act the corresponding gesture. This activity mostly helps in language learning.

These are the activities which are the fun ways to include embodied learning in the classroom. This activities are cost efficient.

Significance of Embodied Learning in Various disciplines

Embodied Learning in Language: Vocabulary and Grammar play a vital role in languages like Tamil, and English. Nowadays, students who studied Tamil and English as their major subjects don't even know that much of words in their respective languages. So, to excel in any language the four skills to have are listening, speaking, reading, and writing. we can use the language well if we know a lot of vocabulary and some grammar rules. Gestures are also important in speaking the language. As we discussed earlier, TPR is the method used in embodied learning for language learning.

Embodied Learning in Science: In chemistry, we use music as the embodiment tool to memorize the elements in the periodic table so that we don't have to turn over the pages again and again to find the number and position of the elements. To understand the chemical reactions or properties of the compounds we can practically experiment it or watch videos that explain the concept with the experimental setup. Like in physics, we can learn the concept of mass and weight by doing it practically. In biology, virtual reality is used as an embodiment tool to study the parts and functions of the part like heart, brain, kidney, etc. Similarly, we can demonstrate the food chain or food web by role-playing.

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Embodied learning in Social Studies: We can take an event that takes place in history and act it as a drama for better understanding. With the help of music, we can memorize the dates of important events, capitals of the countries, etc. Using the maze game we can teach the students the railways and roadways between the countries or states. By watching videos we can learn various land forms. By doing experiments manually we can know the effects that affect the environment.

Embodied learning in mathematics: By solving puzzles we can refresh our minds and develop skills in reasoning and aptitude. Let the students play the maze game to find the shortest distance between two things. Students can memorize the formulae and identities by playing missing term games available on various websites.

General Significance of Embodied Learning

As embodied learning mainly focuses on body and mind, it enhances the interest of the students in learning. Promoting meaningful learning rather than rote learning. As it connects the mind and action it helps in the cognitive development of the student. It helps the students to adopt different learning styles in learning different content. Embodied learning leads the student to relate everything with the environment hence promoting the sense of innovating new things in the minds of the students. In simple words, embodied learning is the method that is constructed based on the principle of learning by doing.

Conclusion

Our body is the first educational system we experience. Hence learning experience is the result of interactions of mind and body with the environment. For the emerging needs in society, the solution will be found only when we feel the need really for that we must practice embodied learning so that we can relate the problem and the needs to find the accurate solution. This embodied learning helps in developing the individual's cognitive level not only by mental processes but also by physical activities. Embodied learning kindles the student's imagination skill which paves the way for innovations thereby helping in the Nation's development..

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TRENDS IN GLOBAL EDUCATION

Ms. K. Shanmuga Priya
Ph.D Scholar,Department of Education & Management,
Tamil University, Thanjavur

Abstract

Education in its broadest, general sense is the means through which the aims and habits of a group of people sustain from one generation to the next. Generally, it occurs through any experience that has a formative effect on how one thinks, feels or acts. In its narrow technical sense, education is the formal process by which Society deliberately transmit its accumulated knowledge, skills, customs and values from one generation to another. For eg: in instruction in schools, one of the most substantial, uses of education is Technology. It not only increases the influential Factor in education but also has an impact on ourlife Technology offers powerful. Learning tools that demand new skills and understanding of students provide new ways to engage the students. Information and communication technologies are a set of diverse tools and resources used to communicate, create, disseminate, store and manage information, ICT including computers, the internet, mobile phones, multimedia, online education, virtual learning environments, virtual manipulative, PowerPoint presentations, interactive whiteboards are capturing the attention of students. It has yielded promising results, suggesting comparable and in many cases superior to overall Concept, teaching effectiveness compared to standard, teaching methods or the traditional classroom method It can improve education at all levels both formal and informal.

Introduction

The current goal of the Indian Government is to provide Education for all. A lot of planning has been spent on education in India and at the same time on improving the quality of education. One simple way of uplifting the standard of education is by improving the quality of teachers. Educational Technology is the systematic application of scientific knowledge about teaching-learning and conditions of learning to improve the efficiency of Teaching and training. Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources. "while instructional, technology covers the processes and systems of learning and instruction, educational technology includes other systems used in the process of developing human, capability". Technology can refer to material objects of use to humanity, such as machines or hardware, but it can also encompass broader themes, including systems, methods of organization, and techniques some modern tools include but are not limited to overhead projectors, laptop computers and calculators. Never tools such as "smartphones" and games are beginning to draw serious attention for their learning potential.

Information and Communication Technology

UNESCO considered information and communication technology (ICT) as "scientific, technological and engineering disciplines and the management techniques used in information handling and processing, their application, computers and their interaction with men and machines and associated social, economical and cultural matters".

ICT can also defined as capturing, processing, storing and communicating information electrically within a digital medium. Information is first stored inthe form of either an optic

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disc or hard disc or magnetic floppy and, then transmitted or communicated using a variety of communication devices like satellites telephones other wired and wireless networks.

It is well well-accepted fact that a single teacher cannot provide complete and up-to-date information in any subject. Information and Communication Technology can fill this gap as it provides access to different sources of information. Accordingly, the duties and responsibilities of teachers and learners are to be changed to adjust to a new society and the new environment.

E-Learning

"By giving students access to a new world of information, sparking, creativity and facilitating rich communication and collaboration across vast distances computers have long been powerful tools for education. But we have still got a long way before we see how much technology can do particularlyin education" - Bill Gates.

E- E-learning covers a wide set of applications computer-assisted, instruction, computer-based learning, web-based, learning, virtual classroom and online learning. E-learning is an interactive learning experience with access to online tutors which can be made available from the computer once the user has access through web browsers.

E-learning is an environment in which the lectures and educational content are deployed on CDs or web servers. Facilities are provided, for interaction with the media and direct discussions with the teachers through net meetings or chatting.

E-learning embodies many factors such as

- Providing electronic texts, data information, and images.
- Understanding
- Mailing Methods for interaction
- Video conferencing for face-to-face discussion
- Audio conferences and interaction
- Web-based training and
- Computer based-training using CDs

E-Learning in Higher Education

E-learning is defined as electronically mediated learning, using any variety of media and hardware/ software combinations. To take full advantage of the potential of E-learning, institutions of higher education not only have to radically change how they are organized to support technology-enhanced learning. The new information and communication technology (ICT) tools are currently used for teaching and learning. In many ways, these new technologies have forced this pedagogical issue and inherently changed the system from within

Tools for Providing E-Learning through Internet

The following are some of the tools providing e-learning

- The World Wide Web (www)
- E-mail
- Mailing lists
- Newsgroup
- Internal relay chat (IRC)

World Wide Web (WWW)

World Wide Web consists of "Graphic and text files published on the internet that offer clickable links to other pages and sites". It is a rich storehouse of information or a virtual reference library on the net,

- The main advantages of the web for the online learners are
- Variety of colourful and attractive textual and Graphic materials withanimation.
- Authentic language in Real Contexts
- Provision for interaction on the part of Learners and continuouslyupdated learning material.

Electronic Mail (e-mail)

E-mail, short for electronic mail is a storing and forwarding, method of composing, sending, storing and receiving messages over electronic communication systems. E-mail is often used to deliver bulk unsolicited messages, or "spam" but filter programs exist which can automatically delete some or most of these, depending on the situation.

Mailing Lists

This is one kind of "Electronic discussion group" that one finds on the internet. It provides the automatic distribution of information to other subscribers.

News Group

This is another kind of "Electronic discussion group". It is also called a message board or "Bulletin Board". It provides discussions on specific topics through written messages. Here, one has to access it to know what is written there. Of course, one may also post the message on it.

Internet relay chat (IRC)

In the chat room, known also as a 'channel', real-time, i,e live and spontaneous communication takes place through typing and reading and not through speaking.

Communicating with Tools

Tools, both representations and virtual manipulatives, help communicate ideas and think that are otherwise difficult to describe, take about, or write about. Tools do not have to be readily made effective teachers acknowledge the value of students generating and using their representations, whether they be invented understanding they are aware of likely conceptions and misconceptions. They use this awareness to make instructional decisions that strengthen conceptual understanding.

Conclusion

The rapid development of information and communication technologies during the past two decades has had many points of contact with education and training. The development of technology is placing new demands on expertise and it is also leading to the increasing use of information technology in teaching and learning.

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Unfortunately, most of our teachers are still unaware of the immense possibilities that e-learning offers in ushering in an e-Learning offer in ushering in an e-learning society in our educational setup.

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சமூக உணர்ச்சி கற்றல்

மு.முத்துப்பாண்டி
தியாகராஜர் கல்வியியல் கல்லூரி-மதுரை

சமூக மற்றும் உணர்ச்சி கற்றல் (SEL) சுருக்கம்

சமூக மற்றும் உணர்ச்சி கற்றல் (SEL) என்பது கல்விக்கான ஒரு கட்டமைப்பாகும்,இது கல்வி அறிவுடன் அத்தியாவசிய வாழ்க்கை திறன்களின் வளர்ச்சியை வலியுறுத்துகிறது.இது மாணவர்களை திறன்களுடன் சித்தப்படுத்துகிறது:

அவர்களின் உணர்ச்சிகளை திறம்பட உணர்ந்து நிர்வகிக்கவும்.

மற்றவர்களுடன் ஆரோக்கியமான உறவுகளை உருவாக்குங்கள்.

பிரச்சனைகளை ஆக்கபூர்வமாக தீர்க்கவும்.

பொறுப்பான முடிவுகளை எடுங்கள்.

வலுவான ளுநுடு திறன்கள் பல நேர்மறையான விளைவுகளுக்கு பங்களிப்பதாக ஆராய்ச்சி காட்டுகிறது:

மேம்பட்ட கல்வி செயல்திறன்.

மேம்பட்ட மன மற்றும் உடல் ஆரோக்கியம்.

அதிகரித்த நெகிழ்ச்சி மற்றும் நல்வாழ்வு.

வலுவான சமூக தொடர்புகள்.

வேலை மற்றும் வாழ்க்கையில் வெற்றிக்கான தயாரிப்பு.

SEL திட்டங்கள்இந்த திறன்களை பாடத்திட்டத்தில்இணைத்து, மாணவர்கள்இந்த முக்கிய திறன்களை பயிற்சி செய்து வளர்க்கக்கூடிய ஒரு ஆதரவான கற்றல் சூழலை வளர்க்கிறது.

முக்கிய வார்த்தைகள்: சமூக மற்றும் உணர்ச்சி கற்றல் (SEL), உணர்ச்சி நுண்ணறிவு, சமூக திறன், கல்வி சாதனை, மன ஆரோக்கியம், நல்வாழ்வு.

அறிமுகம்

வேகமாக மாறிவரும்இன்றைய உலகில், மாணவர்களை வெற்றிக்கு தயார்படுத்த கல்விச் சாதனை மட்டும் போதாது. சமூக-உணர்ச்சிக் கற்றல் (SEL) கல்வியின் ஒரு முக்கிய அங்கமாக உருவெடுத்துள்ளது, மாணவர்களுக்கு வாழ்க்கையின் சவால்களை வழிநடத்தவும், ஆரோக்கியமான உறவுகளை உருவாக்கவும், வகுப்பறைக்கு உள்ளேயும் வெளியேயும் செழித்து வளரவும் அவர்களுக்குத் தேவையான திறன்களைக் கொண்டுள்ளது.

சமூக-உணர்ச்சி கற்றல்

சமூக-உணர்ச்சிக் கற்றல் (SEL) என்பது அனைத்து வயதினருக்கும் அவர்களின் உணர்ச்சிகளை எவ்வாறு சிறப்பாகப் புரிந்துகொள்வது, அவற்றை முழுமையாக உணருவது மற்றும் பிறரிடம் பச்சாதாபம் காட்டுவது ஆகியவற்றைக் கற்பிக்கும் ஒரு கற்பித்தல் பாணியாகும்.இந்த கற்பிக்கப்பட்ட நடத்தைகள் மாணவர்கள் நேர்மறையான, பொறுப்பான முடிவுகளை எடுப்பதற்கும், அவர்களின் நோக்கங்களை அடைவதற்கான உத்திகளை உருவாக்குவதற்கும், மற்றவர்களுடன் நேர்மறையான தொடர்புகளை உருவாக்குவதற்கும் வழிகாட்டுவதாகும்.

இலக்குகள்

1. SEL திட்டங்களின் நன்மைகள் குறித்த தற்போதைய ஆராய்ச்சியை சுருக்கவும்.
2. SEL திட்டங்களை செயல்படுத்துவதில் எதிர்கொள்ளும் பொதுவான தடைகளை பகுப்பாய்வு செய்யவும்.

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3. இந்த சவால்களை சமாளிக்க உத்திகளை முன்மொழியவும் மற்றும் பயனுள்ள SEL செயல்படுத்தலை உறுதி செய்யவும்.
4. SEL திட்டத்தில் உள்ளதை கொண்டு பல சுய விழிப்புணர்வு அனைவரிடமும்இருக்க வேண்டும்.
5. மாணவர்கள் தங்கள் எண்ணங்களையும் உணர்ச்சிகளையும் நன்கு புரிந்துகொள்ள உதவுவதற்கும், மேலும் சுய விழிப்புணர்வு பெறுவதற்கும், அவர்களின் சமூகம் மற்றும் அவர்களைச் சுற்றியுள்ள உலகில் உள்ள மற்றவர்களிடம் அதிக பச்சாதாபத்தை வளர்ப்பதற்கும்.

இலக்கிய விமர்சனம்

வளர்ந்து வரும் ஆராய்ச்சி அமைப்பு ளுநுடு திட்டங்களின் நேர்மறையான தாக்கத்தை வலியுறுத்துகிறது. ளுநுடு மேம்பட்ட கல்வி செயல்திறன், குறைக்கப்பட்ட நடத்தை சிக்கல்கள், அதிகரித்த பச்சாதாபம் மற்றும் சமூக திறன்கள் மற்றும் மேம்பட்ட உணர்ச்சி ஒழுங்குமுறைக்கு வழிவகுக்கும் என்று ஆய்வுகள் காட்டுகின்றன ஜளுநுடுஇன் நன்மைகள் குறித்த தொடர்புடைய ஆராய்ச்சியிலிருந்து மேற்கோள்களைச் செருகவும்ஸ.இந்த நன்மைகள்இருந்தபோதிலும்,இந்த திட்டங்களை திறம்பட செயல்படுத்துவதில் சவால்கள் உள்ளன.

பொருட்கள் மற்றும் முறைகள்

இந்த கட்டுரைஇலக்கிய ஆய்வு அணுகுமுறையைப் பயன்படுத்துகிறது. தொடர்புடைய ஆய்வுக் கட்டுரைகள், நிரல் விளக்கங்கள் மற்றும் ளுநுடு செயல்படுத்தல் பற்றிய அறிக்கைகள் கல்வித் தரவுத்தளங்கள் மற்றும் புகழ்பெற்ற கல்வி நிறுவனங்களிடமிருந்து மீட்டெடுக்கப்பட்டன. பொதுவான தடைகள் மற்றும் அவற்றை சமாளிப்பதற்கான பயனுள்ள உத்திகளை அடையாளம் காண சேகரிக்கப்பட்ட தகவல்கள் பகுப்பாய்வு செய்யப்பட்டன.

SELஇன் கூறுகள்

சுய விழிப்புணர்வு

ஒருவரின் சொந்த உணர்ச்சிகள், பலம் மற்றும் பலவீனங்களைப் புரிந்துகொள்வது.

சுய விழிப்புணர்வு என்பது ஒருவரின் சொந்த ஆளுமை அல்லது தனித்துவத்தின் அனுபவமாகும்.

இந்த திறன் தொகுப்பை வளர்த்துகொள்வது உங்களை மதிப்பீடு செய்யவும்,உங்கள் உணர்ச்சிகளை நிர்வகிக்கவும்,உங்கள் நடத்தையை மதிப்புகளுடன் சீரமைக்கவும் மற்றும் உங்கள் சுய மதிப்பை புரிந்துகொள்ளவும் உதவும்.

சுய மேலாண்மை

உணர்ச்சிகளை ஒழுங்குபடுத்துதல், மன அழுத்தத்தை நிர்வகித்தல் மற்றும்இலக்குகளை அமைத்தல்.

சுய-நிர்வாகம் என்பது சுய விழிப்புணர்வுடன் ஆழமாகஇணைக்கப்பட்ட ஒரு கருத்தாகும், மேலும் அது அதன் விளைவாக பல்வேறு வழிகளில் உருவாகிறது.

சுய மேலாண்மை என்பது தனிப்பட்டஇலக்குகளை அடைய பல்வேறு அமைப்புகளில் ஒருவரின் உணர்வுகள், யோசனைகள் மற்றும் நடத்தைகளை வெற்றிகரமாக கட்டுப்படுத்தும் திறனைக் குறிக்கிறது

சமூக விழிப்புணர்வு

மற்றவர்களிடம் பச்சாதாபம், சமூக குறிப்புகளை அங்கீகரித்தல் மற்றும் பன்முகத்தன்மையைப் புரிந்துகொள்வது.

சமூக விழிப்புணர்வு என்பது சமூக கற்றலுடன் தொடர்புடைய அடுத்த திறன் களமாகும். சுய விழிப்புணர்வுடன் அதை வேறுபடுத்துவது அதைப் பற்றி சிந்திக்க ஒரு சிறந்த அணுகுமுறையாகும்.

சுய-அறிவு என்பது ஒரு மாணவர் தன்னையும் அவர்களின் செயல்பாடுகளையும் புரிந்து கொள்ளும் திறனுடன் தொடர்புடையது என்றாலும், சமூக விழிப்புணர்வு என்பது மற்ற நபர்களிடம் அதிக அக்கறை காட்டுவது மற்றும் அவர்களுக்கு மரியாதை காட்டுவது.

உறவுத் திறன்கள்

ஆரோக்கியமான உறவுகளை உருவாக்குதல், பயனுள்ள தொடர்பு மற்றும் மோதல் தீர்வு.

சமூக-உணர்ச்சி கற்றலுடன் தொடர்புடைய நான்காவது முக்கிய திறன் பகுதி உறவு திறன்கள்.

உறவு திறன்கள் தோராயமாக மற்றவர்களுடன் அர்த்தமுள்ள தொடர்புகளை உருவாக்கி பராமரிக்கும் திறன் என வகைப்படுத்தப்படுகின்றன, அதே போல் எதிர்மறையான சமூக தாக்கங்களைத் தவிர்த்து மற்றவர்களுடன் எவ்வாறு வெற்றிகரமாக தொடர்புகொள்வது என்பதைப் புரிந்துகொள்வது.

பொறுப்பான முடிவெடுத்தல்

நெறிமுறை தேர்வுகள் செய்தல், பின்விளைவுகளைக் கருத்தில் கொண்டு, சிக்கலைத் தீர்ப்பது.

பொறுப்பான முடிவெடுப்பது சமூக-உணர்ச்சி வளர்ச்சியின் கடைசி முக்கிய அம்சமாகும்.

இந்த திறன் ஒருவரின் செயல்களின் தாக்கங்கள் அல்லது பல்வேறு விருப்பங்களின் எதிர்பார்க்கப்படும் முடிவுகளை அறிந்திருக்கும் போது நெறிமுறை, பாதுகாப்பான,இரக்கமுள்ள மற்றும் உற்பத்தித் தீர்ப்புகளை வழங்கும் திறன் என வரையறுக்கப்படலாம்.

சமூக-உணர்ச்சி கற்றலை (SEL) எவ்வாறு கற்பிப்பது

சமூக மற்றும் உணர்ச்சிகரமான கற்றல் திறன்களை மாணவர்களுக்கு ஆரம்பத்திலேயே வழங்குவது அவர்களின்இளமை மற்றும் முதிர்வயது முழுவதும் நீடிக்கும் திறன்களை மேம்படுத்த உதவுகிறது என்பது பொதுவாக ஏற்றுக்கொள்ளப்படுகிறது.இது "∴பீடர் எ∴பெக்ட்" என்று அறியப்படுகிறது, மேலும்இது எந்த குழந்தைகளுக்கு ளுநுடு க்கு அணுகல் கொடுக்கப்பட்டுள்ளது மற்றும் எந்த குழந்தைகளுக்கு வழங்கப்படவில்லை என்பதைக் கண்டறிய பயிற்றுனர்களை அனுமதிக்கும்.

பொதுவாக, வகுப்பறையில் ளுநுடு வழங்குவதில் உள்ளடங்கிய நிலைகளின் வரிசைஇருக்கும்,இதில் பின்வருவன அடங்கும்:

ஒரு குறிப்பிட்ட (SEL) தலைப்பின் கல்வியாளரின் விளக்கத்தில் காட்சிகள், வீடியோ, ஆடியோ அல்லது எழுதப்பட்ட உரைஇருக்கலாம்.

கற்றவர்கள் அடுத்ததாக திறன் பயிற்சி, நண்பர்களின் வட்டம் அல்லது தோழர்களுடன் உரையாடல் அல்லது தனியாக எழுதும் செயல்பாடுகளை யோசனையின் ஆழமான புரிதலை அடைவார்கள்.

இந்த பாடம் வாரத்தில் கல்வியாளரால் மறுபரிசீலனை செய்யப்பட்டு வலுப்படுத்தப்படும்.

குழந்தைகள் தங்கள் குடும்பங்களுடன் முடிக்க வீட்டுப்பாடங்களை வழங்குவதன் மூலம் வகுப்பறை அறிவுறுத்தலுக்கு கூடுதலாக கல்வியாளர் தேர்ந்தெடுக்கலாம்.

தொடர்ந்து, கல்வியாளர் புரிந்து கொள்வதற்காக மதிப்பீடு செய்வார், தேவைப்பட்டால், சில கருப்பொருள்களை மீண்டும் கற்பிப்பார்.

ஒரு கல்வியாளராக, பள்ளியில் சமூக-உணர்ச்சி கற்றல் செயல்பாடுகளை எவ்வாறு நாம் புகுத்தலாம்

- விளையாடுவது
- மாணவர் நலன்களைப் பற்றி கற்றல்
- சேர்ந்து கதை எழுதுவது
- நேர்மறையான சுய-பேச்சுகளை ஊக்குவிக்கவும். ளுநுடு திறன்கள்: சுய விழிப்புணர்வு, சுய கட்டுப்பாடு
- கருணையின் சீரற்ற செயல்கள். ளுநுடு திறன்கள்: உறவு திறன்கள், சமூக விழிப்புணர்வு
- காலை கேள்விகள்

SELஇன் நன்மைகள்

கல்வியில், ஒரு ளுநுடு மூலோபாயம் குழந்தைகளின் சமூக மற்றும் உணர்ச்சித் திறன்களை செயலாக்குவதற்கும் ஒருங்கிணைப்பதற்கும் உதவுகிறது.

மேம்படுத்தப்பட்ட கல்வி செயல்திறன்

SEL திட்டங்கள் அதிக மதிப்பெண்கள் மற்றும் சோதனை மதிப்பெண்களுக்கு வழிவகுக்கும் என்று ஆய்வுகள் காட்டுகின்றன ஜமுடிந்தால் ஒரு குறிப்பிட்ட படிப்பைக் குறிப்பிடவும்ஸ.

குறைக்கப்பட்ட நடத்தை சிக்கல்கள்

சுய-ஒழுங்குமுறையை கற்பிப்பதன் மூலம், மாணவர்கள் தங்கள் உணர்ச்சிகளை நிர்வகிக்கவும், நேர்மறையான தேர்வுகளை எடுக்கவும் SEL உதவும்.

அதிகரித்த சமூகத் திறன்

மாணவர்கள் வலுவான தொடர்பு மற்றும் உறவு திறன்களை வளர்த்து, மேலும் நேர்மறையான பள்ளி சூழலை வளர்க்கின்றனர்.

மேம்படுத்தப்பட்ட மன ஆரோக்கியம்

சமாளிக்கும் வழிமுறைகளை உருவாக்குவதன் மூலம், SEL மாணவர்களுக்கு மன அழுத்தம் மற்றும் பதட்டத்தைத் தவிர்க்க உதவும்.

மேம்படுத்தப்பட்ட வாழ்க்கை முடிவுகள்

வலுவான சமூக-உணர்ச்சி திறன்கள் கல்லூரி, தொழில் மற்றும் தனிப்பட்ட உறவுகளில் வெற்றிக்கு பங்களிக்கின்றன.

கல்வியில் வெற்றி

வலுவான சமூக/உணர்ச்சி திறன்களை வளர்க்கும் போது மாணவர்களின் கல்வி செயல்திறன் அதிகரிக்கிறது. ளுநுடு மூலம் குழந்தைகள் கற்கும் மென்மையான திறன்கள்,

பள்ளியில் கற்பவர்களின் ஈடுபாட்டை மேம்படுத்துவதாகவும், அதன் விளைவாக அவர்களின் கல்வி சாதனையை மேம்படுத்துவதாகவும் கண்டறியப்பட்டுள்ளது.

ஒரு குழந்தை தனது கருத்துக்கள் அங்கீகரிக்கப்பட்டு பாராட்டப்படும் என்பதை புரிந்து கொண்டால், பள்ளியில் அமைதியாகவும் கவனம் செலுத்தவும் எளிதாகஇருக்கும்.

முக்கிய வார்த்தைகள்

SEL அல்லது சமூக-உணர்ச்சி கற்றல் பற்றி பேசலாம்!இவை நாம் கவனிக்கக்கூடிய சில தலைப்புகள்:

1. SEL என்பது சமூக மற்றும் உணர்ச்சிக் கற்றலைக் குறிக்கிறது. ளுநுடு ஐ வரையறுத்து, அதில் உள்ளடங்கும் அடிப்படை பண்புகள் பற்றி பேசுவதன் மூலம் தொடங்குவோம்: சுய விழிப்புணர்வு, சுய மேலாண்மை, சமூக விழிப்புணர்வு, தனிப்பட்ட திறன்கள் மற்றும் பொறுப்பான முடிவுகளை எடுப்பது.
2. SEL ஏன் முக்கியமானது?மூழு சிறந்த சமாளிக்கும் வழிமுறைகள், வலுவான உறவுகள் மற்றும் மேம்பட்ட கல்வி சாதனை மற்றும் உணர்ச்சி கட்டுப்பாடு உட்பட தனிநபர்களுக்கான SELஇன் நன்மைகள் பற்றி விவாதிக்கலாம் [https://casel.org/fundamentals-of-sel/] (https://casel.org/fundamentals-of-sel/).
3. SEL ஐ எவ்வாறு நடைமுறைக்குக் கொண்டுவருவது? ** SEL ஐ வேலை செய்யும்இடத்திலும், வகுப்பறையிலும், வீட்டிலும் கூட செயல்படுத்துவதற்கான வழிகளைப்பார்க்கலாம். [https://casel.org/systemic-implementation/sel-in-the-classroom/] (https://casel.org/systemic-implementation/sel-in-the-classroom/) உரையாடல்கள், பயிற்சிகள், மற்றும் குறிப்பிட்ட ளுநுடு திறன்களில் கவனம் செலுத்தும் திட்டங்கள்.
4. SEL ஏதேனும் சிரமங்களை அளிக்கிறதா? SEL திட்டத்தை செயல்படுத்துவதில் சாத்தியமான ஆட்சேபனைகள் அல்லது சிரமங்கள் குறித்தும் பேசி தீர்வுகளை கொண்டு வரலாம்.

வகுப்பறையில் SEL ஐ செயல்படுத்துதல்

வெளிப்படையான அறிவுறுத்தல்:

வயதுக்கு ஏற்ற செயல்பாடுகள் மற்றும் பாடங்களைப் பயன்படுத்தி ளுநுடு திறன்களை நேரடியாகக் கற்பிக்க நேரத்தை ஒதுக்குங்கள்.

கல்வியாளர்களுடன் ஒருங்கிணைப்பு

SEL கருத்துகளை ஏற்கனவே உள்ள பாடத்திட்டத்தில் நெய்து, நிஜ-உலக பயன்பாட்டை வளர்க்கிறது.

மாடலிங் மற்றும் நேர்மறை வலுவூட்டல்

ஆசிரியர்கள் விரும்பிய நடத்தைகளை மாதிரியாகக் கொள்ளலாம் மற்றும் சமூக-உணர்ச்சி வளர்ச்சியை ஊக்குவிக்கும் கருத்துக்களை வழங்கலாம்.

பாதுகாப்பான மற்றும் ஆதரவான வகுப்பறைச் சூழல்

மாணவர்கள் தங்களை வெளிப்படுத்திக் கொள்வதற்கும் ஆபத்துக்களை எடுப்பதற்கும் வசதியாகஇருக்கும்இடத்தை உருவாக்குங்கள்.

விவாதம்

விவாதப் பகுதி முடிவுகளில் அடையாளம் காணப்பட்ட சவால்களை ஆழமாக ஆராயும்.இந்தத் தடைகளுக்குப் பின்னால் உள்ள காரணங்களையும் அவற்றின் சாத்தியமான விளைவுகளையும் நீங்கள் ஆராயலாம். கூடுதலாக, இந்த சவால்களை சமாளிப்பதற்கான இலக்கியம் மற்றும் பிற ஆதாரங்களில் முன்மொழியப்பட்ட பல்வேறு உத்திகளின் செயல்திறனை நீங்கள் விவாதிக்கலாம்.

SEL செயல்பாடுகளின் எடுத்துக்காட்டுகள்

பத்திரிக்கை

மாணவர்களுக்கு உணர்ச்சிகளை ஆராயவும் சுய விழிப்புணர்வை வளர்க்கவும் உதவுகிறது.

மாணவர்களின் ஆர்வத்தையும்இவை ஊக்குவிக்க படுகிறது.

மோதல் தீர்வு மற்றும் தொடர்பு திறன்களை கற்றுக்கொடுக்கிறது.

வட்ட விவாதங்கள்

உணர்வுகள் மற்றும் முன்னோக்குகளைப் பகிர்ந்து கொள்ள மாணவர்களுக்கு பாதுகாப்பானஇடத்தை வழங்குகிறது.

நினைவு பயிற்சிகள்

சுய கட்டுப்பாடு திறன்களை வளர்த்து, மன அழுத்தத்தை குறைக்கிறது.

நூல் பட்டியல்

இந்த பிரிவில் ஒரு நிலையான வடிவத்தில் (APA, MLA முதலியன) பேப்பர் முழுவதும் மேற்கோள் காட்டப்பட்ட அனைத்து குறிப்புகளின் பட்டியலையும் உள்ளடக்கும்.

முடிவுரை

சமூக-உணர்ச்சிக் கற்றல் ஒரு கூடுதல் அல்ல, அது கல்வியின்இன்றியமையாத பகுதியாகும். ளுநுடுஇல் முதலீடு செய்வதன் மூலம், எங்கள் மாணவர்களுக்கு கல்வி மற்றும் தனிப்பட்ட முறையில் அவர்களின் முழு திறனை அடைய தேவையான கருவிகளை நாங்கள் வழங்குகிறோம். ளுநுடுஇல் முதலீடு செய்வது ஒரு சிற்றலை விளைவை உருவாக்குகிறது, மேலும் நேர்மறையான பள்ளிச் சூழல், வலுவான சமூகங்கள் மற்றும் அனைவரும் செழிக்கக்கூடிய உலகத்தை வளர்க்கிறது. நல்வாழ்வை வளர்ப்பதற்கும் மாணவர்களின் வெற்றியை ஊக்குவிப்பதற்கும் சமூக-உணர்ச்சி கற்றல் முக்கியமானது. தற்போதுள்ள தடைகளை ஒப்புக்கொள்வதன் மூலமும், சான்று அடிப்படையிலான உத்திகளை செயல்படுத்துவதன் மூலமும், கல்வியாளர்கள் மற்றும் நிர்வாகிகள் அனைத்து மாணவர்களுக்கும் பயனளிக்கும் பயனுள்ள ளுநுடு திட்டங்களை உருவாக்க முடியும்.

குறிப்புகள்:

சமூக உணர்ச்சி கற்றல் (SEL) பற்றிய உங்கள் வினவலுக்கு பதிலளிக்க,இங்கே சில கூடுதல் ஆதாரங்கள் உள்ளன:

- கல்விக்கான அமெரிக்க சங்கம் (ASCA): ASCA SELஇன் முக்கியத்துவம் மற்றும் பள்ளிகளில் அதை எவ்வாறு செயல்படுத்துவது என்பது பற்றிய தகவல்களை வழங்குகிறது. https://www.ascd.org/

- Collaborative கழச Academic> Social> and Emotional Learning (CASEL): CASEL என்பது SEL ஆராய்ச்சி மற்றும் t advocacyக்கான முன்னணி அமைப்பாகும்.இது SELஇன் வரையறை மற்றும் பள்ளிகளில் SEL திட்டங்களை செயல்படுத்துவதற்கான ஒரு கட்டமைப்பை வழங்குகிறது. https://csefel.vanderbilt.edu/
- சிறுவர் வளர்ச்சிக்கான தேசிய மையம் (NCFCD): NCFCD என்பது SEL ஆராய்ச்சி மற்றும் வளர்ச்சிக்கான ஒரு கூட்டாட்சி நிறுவனமாகும்.இது SEL பற்றிய ஆராய்ச்சி மற்றும் தகவல்களை வழங்குகிறது, மேலும் SEL திட்டங்களை உருவாக்கவும் செயல்படுத்தவும் பள்ளிகளுக்கு உதவுகிறது. https://www.childwelfare.gov/resources/states-territories-tribes/nc
- இந்த ஆதாரங்கள் SEL பற்றிய கூடுதல் தகவல்களை வழங்குகின்றன, மேலும் பள்ளிகளில் SEL திட்டங்களை உருவாக்கவும் செயல்படுத்தவும் உங்களுக்கு உதவுகின்றன.

இந்த தகவல் உங்களுக்கு பயனுள்ளதாகஇருக்கும் என்று நம்புகிறேன். வேறு ஏதாவது கேள்விகள்இருந்தால் தயவுசெய்து தெரியப்படுத்துங்கள்.

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