



Digital Literacy: Integrating a New Pedagogical Approach with the Traditional Models of Child Education

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Abstract: *This research paper explores the integration of digital literacy into traditional models of child education, presenting a novel pedagogical approach to enhance learning outcomes. In an era dominated by digital technologies, it is imperative to adapt educational methodologies to enable students to use and implement essential digital skills alongside traditional academic knowledge. By incorporating digital literacy into child education, educators can create more dynamic, interactive, and personalized learning environments that cater to diverse student needs and learning styles. Teachers, professors are training undergraduate students to do a lot of digital projects by incorporating various ICT tools in a SMART Classroom environment. Children, under the age group of 1-5 are getting digitally literate even before getting formally literate. This research aims to discuss the adaptation of traditional models of education to digitalisation, and the impacts of this new integration on infants and children of middle school. It also seeks to find out how interactive digital tools like mobile phones, laptops, tablets and programs like cartoons, games have been in order to increase a child's and a student's level of understanding. It will also elaborate and elucidate the threats of this over exposure of young learners to the digital world and to Artificial Intelligence, whether digital literacy is overpowering their formal education and natural knowledge acquisition process.*

Keywords: Digital Literacy, Child Education, Pedagogy, technology, language acquisition, skill development

Introduction:

Digital literacy refers to an individual's inclination, mindset, and proficiency in employing digital technology and communication resources to acquire, organize, incorporate, scrutinize, and assess information, foster innovation, and engage in effective communication with others for meaningful participation in society.

Today's social, political, and economic context is fundamentally structured by digital technology, particularly the Web 2.0 tools that over the past 20 years have profoundly changed how we work, socialize, and think (Castells, 2013).

In the age of technology, students exhibit a keen interest in incorporating computers into their educational endeavours. To meet this growing demand, educators must enhance their proficiency in digital literacy, enabling them to effectively utilize digital media and Artificial Intelligence for integrating traditional modes of teaching with new age endeavours. This entails developing skills such as navigating digital platforms, sourcing information online, navigating hypertext resources, assessing information credibility, and creating online-based educational content. Digital technology, closely intertwined with information and communication technology, has revolutionized various facets of everyday life, including the field of education. The teaching-learning dynamic in India has undergone a significant transformation due to digital literacy, reshaping traditional educational models. Enhanced digital literacy among both educators and learners has ushered in a noticeable shift towards more individualized, dynamic, and interactive learning environments.

Primarily, proficiency in digital literacy empowers educators to effectively utilize a diverse array of digital tools and resources to craft engaging and dynamic instructional materials. This flexibility allows for the customization of learning experiences tailored to accommodate diverse student needs and preferences. Moreover, educators can establish collaborative learning environments where students can engage in meaningful discourse, interact with peers, and access a wealth of online knowledge, all without geographical constraints. Digital literacy plays a crucial role in enabling such collaborative learning settings. Digital literacy aids students in honing their critical thinking and information evaluation skills, equipping them with the ability to navigate the vast expanse of the internet and discern reliable sources effectively.

Maximizing Teaching-Learning Potential through Diverse Digital Tools:

“Digitalization can simply be explained as the transformation of the skills needed by the world’s working population and the young in order to successfully engage in a globalised modern economy” (Webb, McQuaid & Webster, 2021). In today’s rapidly evolving educational landscape, the integration of diverse digital tools has become imperative for maximizing teaching and learning potential. These tools offer educators innovative ways to engage students, personalize learning experiences, and foster collaboration in the classroom.

One key aspect of utilizing diverse digital tools in teaching and learning is the ability to cater to different learning styles and preferences. With the plethora of tools available, educators can create varied instructional materials, including videos, interactive presentations, simulations, and online quizzes, to accommodate diverse student needs. For instance, learners with hearing disability may benefit from multimedia presentations as it stimulates the visual sensory system, while kinaesthetic learners may prefer interactive simulations.

Furthermore, digital tools enable educators to facilitate active and interactive learning experiences. Platforms such as virtual reality (VR) and augmented reality (AR) can immerse students in virtual environments, providing hands-on experiences that enhance comprehension and retention of complex concepts. Additionally, collaborative tools like Google Workspace and Microsoft Teams allow students to work together in real-time, promoting teamwork and communication skills. Moreover, digital tools offer opportunities for personalized learning, allowing educators to tailor instruction to individual student needs and interests. Adaptive learning platforms use algorithms to analyze student performance and provide personalized recommendations for remediation or enrichment activities. This individualized approach helps students progress at their own pace, ensuring mastery of content while minimizing frustration or boredom.

Incorporating diverse digital tools also promotes creativity and innovation in the classroom. Students can use multimedia creation tools such as Adobe Spark and Canva to design presentations, videos, and infographics, fostering creativity and self-expression. Additionally, coding platforms like Scratch and Tynker introduce students to computer programming in a fun and interactive way, sparking interest in STEM fields and cultivating problem-solving skills. Another skill which is required for attaining comprehensive digital literacy is curation. Curation is the sense through which one implements visual contents and manage and maintain it.

A popular type of digital communication is the act of curating. The capacity to curate at a sophisticated level, both in terms of content and visual appeal, is quickly becoming a necessity for educators who engage in online teaching and learning (Thompson, 2015).

Digital tools facilitate communication and collaboration beyond the classroom walls. Online discussion forums, video conferencing tools, and social media platforms enable students to connect with peers globally, fostering cultural awareness and global citizenship.

Impacts and Limitations: Investigating the Downsides of Utilizing Digital Tools in Teaching and Learning

In today’s age, children have a greater exposure to various digital technologies from a very early age. Children within the age group of 6 months to 3 years are deeply engaged in visual sensory effects of various cartoons, games and online videos, which inevitably alters the dynamics of their play. The significance of play in children’s development is universally recognized, it becomes essential to grasp the nature of children’s play in the context of technology. Relying heavily on digital tools increases screen time among students. Unregulated exposure to tv screens has been linked to various negative consequences, including eye strain, disrupted sleep patterns, and lack of physical activity. Moreover, prolonged exposure to screens may contribute to attention and concentration issues, ultimately hindering students’ ability to focus and retain information. Families require assistance in navigating parenting in an era dominated by digital advancements, while early childhood educators also must learn how to incorporate digital technologies effectively into their professional practices.

Digital tools can exacerbate existing socio-economic disparities among students. Not all students are equally exposed to and equipped with technology and high-speed internet at home, leading to discrepancies in their ability to fully participate in digital

learning experiences. This ‘digital divide’ can widen the gap between privileged and marginalized students, perpetuating inequities in educational outcomes. Apart from this, students with special abilities can also feel cornered and alienated due to this over-reliance on technology. Since all the technological aids cannot cater to the specialised needs of the specially-abled children which creates barrier to the notion of ‘inclusivity’ in the education system.

Another limitation of digital tools in education is the potential for technology-related distractions. With the abundance of online resources and multimedia content available, students may become overwhelmed or side-tracked, diverting their attention away from the intended learning objectives. Moreover, the constant notifications from messaging apps and social media platforms can disrupt classroom dynamics and detract from meaningful interactions between teachers and students. Over reliance on ICTs like various online classrooms, applications are destroying the age-old essence of classroom teaching, creating psychological alienation in the student’s mind. They are getting distanced from their classmates and teachers due to lack of physical interaction and hands on exposures.

Moreover, one can never vouch on the quality and reliability of digital content. Not all online resources undergo rigorous evaluation or adhere to academic standards, raising questions about the accuracy and credibility of information accessed through digital tools. Educators must navigate through vast amounts of digital content to curate materials that are relevant, accurate, and appropriate for their students, which can be time-consuming and challenging.

Integrating Tradition and Modernity: The Future of Education System:

The rapid pace of technological advancements poses a challenge for educators in keeping up with the latest tools and platforms. Continuous professional development is essential to ensure that educators get trained to effectively implement digital tools into their instructional practices. Integrating the traditional model of classroom teaching-learning with advancements in technology is essential to create a dynamic and effective educational environment. As, “The very notion of ‘integration’ incorporates the idea of unity between forms of knowledge and the respective disciplines” (Pring, 1973, p. 135), it is high time that educators all over the world blend traditional face-to-face teaching methods with online resources and technology. This approach allows students to access materials and engage in activities both in the classroom and remotely. For instance, teachers can assign online readings, quizzes, or interactive simulations to complement in-class discussions and lectures. Implementation of Interactive whiteboards and smartboards replacing traditional chalkboards is also very essential here. These tools allow teachers to deliver multimedia-rich presentations, annotate content, and engage students through interactive activities. They also enable real-time collaboration and feedback, enhancing student participation and understanding. The new digital era has seen a sea-change in the field of education,

In most of the institutes and schools the TPACK model was introduced. TPACK stands for Technological Pedagogical Content Knowledge Framework. This framework focuses on PK that is Pedagogical Knowledge, CK that is Content Knowledge and TK that is Technical Knowledge. (Bhattacharjee & Das 2022)

A recent invention in the domain of integrated teaching-learning systems is the Flipped Classroom Model. It is a method of flipping the traditional classroom model by assigning lectures, videos, or readings for students to review later, and use class time for discussions, activities, and problem-solving. Technology facilitates the dissemination of pre-recorded lectures and educational videos, providing more time for physical classes so that the learners get more interactive and personalized learning experiences. It is also necessary to utilise online learning platforms and educational apps to supplement classroom instruction. These platforms offer a wide range of resources, including instructional videos, practice exercises, and assessment tools, allowing students to learn at their own pace and providing teachers with valuable data for personalized instruction. Virtual Reality (VR) and Augmented Reality (AR): Integrate VR and AR technologies to create immersive learning experiences. These technologies can simulate real-world environments, historical events, or scientific concepts, providing students with real-life learning simulations that would otherwise be difficult or impossible to access in a traditional classroom setting. While using these apps, the teachers need to be cautious that the students use it for complementing the traditional model of learning rather relying on it completely. The educators must incorporate collaborative tools such as Google Workspace, Microsoft Teams, or digital whiteboarding apps to facilitate group work and peer collaboration. These tools enable students to collaborate on projects, share ideas, and provide feedback in real-time, fostering a sense of community and teamwork within the classroom.

Conclusion:

While digital tools offer numerous benefits in teaching and learning, it is imperative to recognize and address their potential impacts and limitations. While integrating various advancements in technology with the traditional model of classroom teaching-learning, educators can create a more engaging, interactive, and personalized learning environment that meets the diverse needs

of today's students, it can also distance students from peers, the real-life classroom scenario and miss out the essence of teacher-student relationship. By acknowledging these challenges, educators can make informed decisions about the integration of technology in educational settings, striving to maximize its benefits while mitigating potential drawbacks. Additionally, policymakers and stakeholders must work collaboratively to bridge the digital divide and ensure equitable access to technology for all students, thereby fostering an inclusive and empowering learning environment.

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