

CHILDHOOD EDUCATION IN AN ERA OF DIGITILIZATION

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Abstract

Children today are growing up in a technology-driven society where digital literacy is crucial. Evidence suggests that integrating technology, including computer games, collaborative learning, and portable writing tools, can enhance children's cognitive, social, emotional, and problem-solving skills. The aim of digital education is to provide kids with appropriate activities that boost self-confidence, independence, and cooperative learning. Incorporating tools like digital tablets in childhood education is essential for meaningful learning. The study used historical, descriptive, and critical approaches, tracking the contributions of literary works through the Historical Method and guided by the Domestication Theory. Digitalizing education helps teachers provide better instruction, support understanding, and engage learners. However, it's important to balance technology usage as excessive screen time can be harmful. Technology breaks down classroom walls, enabling new ways of learning, communication, and collaboration.

Keywords: Digital Literacy, Childhood Education, Digitalization, Possibilities, Concerns.

INTRODUCTION

Background of the Study

In contemporary society, young children are engaging with a diverse array of technological tools and platforms, encompassing television, movies, internet access across various devices, video games, tablet and Smartphone applications, as well as associated materials such as books, toys, and physical games centered on specific characters or brands (Farrell, Kagan, & Tisdall, 2015). The pervasive integration of digital elements into daily life is evident, prompting nations worldwide to initiate programs aimed at introducing information and communication technology to children and adolescents (Sepúlveda, 2020). This digitization of education holds the potential to cultivate a cognitive resource-based mechanism within pupils, enhancing their lifelong learning capabilities and facilitating continuous skill development. The transformation brought about by digitization allows for the diverse dissemination of information, fostering a knowledge-centric society wherein learning becomes a collaborative and self-directed endeavour.

Contemporary methodologies, such as gamification and group learning, present the opportunity to shift pedagogy from a conventional academic exercise to an engaging and enjoyable pursuit.

Childhood education, encompassing the period prior to a child's entry into secondary school, entails instructional efforts within Educational Foundations institutions. Aligned with the National Policy on Education (FRN, 2013), the objectives of this educational phase encompass facilitating a seamless transition from home to classroom settings, equipping children for the challenges of this educational level, ensuring their well-being and supervision in the absence of parents, promoting collaboration and teamwork, and fostering a spirit of inquiry and creativity through engagement with toys, art, music, nature, and more.

The contemporary upbringing of children unfolds in an environment where literacy and knowledge increasingly hinge on technological facets. Encouraging indications underscore the role of educational digitalization, incorporating elements such as computer games, collaborative learning, game-based pedagogy, the utilization of portable writing tools, and similar initiatives, in the holistic development of children's cognitive, social, emotional, intellectual, and problem-solving proficiencies. The fundamental objective of integrating digital technology into education is to provide children with an array of activities appropriate for their developmental stage, nurturing self-assurance, independence, and a sense of value through cooperative and game-oriented learning experiences (Lin, 2006). Petersen's assertion (2015) further emphasizes the incorporation of instructional resources such as digital tablets to craft pertinent and effective learning encounters within early childhood education contexts.

METHODOLOGY

The study was qualitative. Historical, descriptive, and critical approaches were employed. The contributions of various literary works on the idea of childhood education and digitilisation were tracked using the historical method. The study was guided by the Domestication Theory.

LITERATURE REVIEW

Conceptual Analysis of Childhood Education

The National Policy on Education (FRN, 2012) defines childhood education, also referred to as pre-primary education often known as pre-primary education, as instruction provided in educational settings for children as they get ready to enter primary and secondary school. This phase includes kindergarten, nursery, and "ota akara," as they are known in certain regions of Nigeria. Noteworthy European educators like Friedrich Froebel, Johann Heinrich Pestalozzi, J. J. Rousseau, and John Amos Comenius (1590-1690) played pivotal roles in establishing early childhood education. They championed children's rights to early education, a stance supported by scholars such as Maduewesi (1992) and Fafunwa (1967), who emphasize the significance of quality early childhood education in unlocking pupils' potential. The essence of early childhood education lies in addressing a child's holistic developmental needs. This comprehensive approach acknowledges that a child's educational and life outcomes are shaped not only by classroom experiences but also by diverse enriching opportunities outside it. Childhood education is a cornerstone and a gateway to subsequent levels of education, including secondary education. Its impact on a child's educational trajectory is paramount (Ogara, P.I., 2020).

Digitalization in education

Digitalization in education involves utilizing technology to enhance the management, supervision, and evaluation of early childhood care and education. By converting traditional teaching methods into digital formats, such as documents and multimedia, students can achieve educational goals more effectively (Falasteen, 2018). This process includes creating digital representations of geographical features and electronic charts from paper documents (Cloonan & Sanett, 2005). Collaborative and game-based learning are also employed by teachers to improve childhood education (Bejinaru, 2019).

The integration of technology in classrooms has significantly grown, with both teachers and pupils expected to use it to support learning. Developing digital competencies has become essential for success in today's professional landscape (Gluckman, 2018). Younger generations acquire crucial "working skills" and "living skills" through various digital media, enhancing their knowledge and abilities. To make the most of this, educators should effectively employ online media to make learning engaging and accessible. However, challenges like differing attitudes and preferences among learners and teachers exist, stemming from the need to blend analytical thinking skills with interactive learning via platforms like social media videos and traditional media like movies. Encouraging inspiration and diverse learning becomes pivotal for motivating the younger generation (Oseimi, 2015).

Digitalization in childhood education

Childhood education and digitalization are deeply intertwined, as modern technologies like the internet and computers, have become ubiquitous in young children's lives. Children today are immersed in a digital age, where technology is an integral part of their daily routines. Digital learning resources are increasingly important in classrooms to meet the demands of 21st-century students and enhance teaching practices. Using digital tools in education can foster curiosity, engagement, and better understanding, which are priorities for effective teaching.

Technology-driven education has numerous benefits. Digital tools can spark curiosity, engagement, and better comprehension among students. They offer innovative ways to encourage responsibility, relationships, and respect in classrooms. Collaboration is a crucial aspect of children's learning through digital technologies, allowing them to develop new literacy skills, problem-solving abilities, and engage in meaningful dialogues with peers and family members.

Digital resources such as books, apps, and games can enrich children's literacy skills and stimulate their interest in reading. Interactive digital books and literacy-oriented apps can motivate children to read and create their own stories, enhancing communication skills and confidence. Digital gaming also supports learning, empowering children to create and evaluate content while fostering engagement. However, digitalization also presents challenges. IoT (Internet of Things) devices can offer personalized play and learning experiences, but concerns about data privacy and parental guidance persist. It's important to guide children's technology use, focusing on quality media and balanced activities. Parents often lack confidence in managing their children's digital engagement, leading to anxiety and misconceptions about screen time.

Teachers play a pivotal role in integrating digital technologies into education. However, they need to understand the potential pedagogical benefits of different tools and applications. Professional development programs that encourage independent thinking and reflective practice are effective in helping teachers integrate digital literacy into their instruction. It's crucial to recognize children's agency and competence in navigating technology. A negative view of technology's impact on childhood is outdated. Children can be empowered by technology when provided with appropriate opportunities. Libraries, museums, and informal learning spaces offer platforms for children's multimedia creativity and information-seeking.

In conclusion, digitalization has a profound impact on childhood education. It offers opportunities for enhanced learning, creativity, and collaboration. However, proper guidance, responsible usage, and continuous professional development for educators are crucial to ensure the positive integration of digital technologies into young children's education.

Theory on childhood education and digitilization

The Domestication Theory is a framework used to analyze how different forms of media, including technology, become integrated into society. Selwyn (2012) supports this theory as a valuable tool for understanding the complexity of educational technology by emphasizing social contexts over the technologies themselves. The term "domestication" draws a parallel to the process of taming wild animals, not to eliminate their challenges but to make them meaningful and important (Berker et al. 2006; Silverstone, 2006). The theory consists of four phases that researchers have labeled differently, but they share the same essence. In this discussion, we use the labels introduced by Holmgaard Christensen (2019): (1) Appropriation: This is the initial phase where people begin using the new technology, like how a tablet is introduced in schools. (2) Objectification: During this phase, the technology is recognized as something useful. For instance, tablets are acknowledged as tools for learning. (3) Incorporation: This stage involves making the technology a natural part of daily life. Here, the tablet becomes a routine like an everyday activity like eating breakfast. (4) Conversion: The final phase, as differentiated by Holmgaard Christensen (2019), goes beyond mere incorporation. It's when the technology takes on a deeper meaning and contributes to individuals' sense of identity and their relationship with the world around them. Unlike other perspectives, such as Sørensen et al. (2000), Holmgaard Christensen distinguishes between incorporation and conversion. Incorporation represents technology as a routine part of life, while conversion goes further by attributing deeper significance to the technology, influencing identity and connections with the environment.

In the context of Early Childhood Education, the frequent use of digital tools doesn't automatically imply a deeper meaning for children or teachers. This terminology enables an analysis of how such technology is integrated and whether it holds more profound implications. This theory and its phases provide insights into the dynamics between technology and its users, particularly in educational settings.

Benefits of digitalization of childhood education

Digital learning tools include a wide variety of applications, websites, and learning platforms that facilitate learning by connecting pupils, teachers, and sometimes even parents. Digital Learning Tools can assist teachers and pupils with teaching, learning, and communication.

While Digital learning tools may be hard to define, think of them as online programs, applications, or technology that can enhance a learner's ability to access information and understanding. It is important to remember that there are a plethora of digital learning tools and that they are always expanding. Digital learning tools are mostly accessed via the internet but can be used at home or in a school setting. They can help pupils more deeply understand the content their teacher is sharing. With an increase in technology available in classrooms, more teachers and pupils are using digital learning tools than ever before.

Digitalization of children's education enhances a teacher's instruction and supports learners in grappling with key concepts, knowledge, and understanding of the content. Many of these tools can simplify lesson creation and management, improve engagement and discussion for pupils, and allow clear communication from the instructor to both the pupils and the caregivers. It can increase pupils' time learning and can be very effective. Today's teachers must familiarize themselves with digital learning tools to be proficient in the classroom. There is no doubt that children's use of technology is a hot-button issue. Parents tend to have a more conservative approach. But as online media continues to evolve, educators are the ones particularly interested in how technology and digital tools impact children's learning. YouTube is one of the most popular places for kids to engage in digital media. Since its inception in 2005, it's been used by millions of people around the world. Kids use it for just about anything, including entertainment, education, and even professional development. Like any digital media, the use of YouTube can be a gray area in the classroom. But educators are skilled at balancing their resources while creating limitations on their usage.

With technology and interactive media, learning becomes a multisensory and interactive experience. They promote learning and development when used intentionally and within the framework of developmentally- appropriate practice to support learning goals and expand educational opportunities for all children. Teachers have been creative in developing strategies to bridge gaps between the school curriculum and their pupils, such as using YouTube to help pupils who struggle with academics. As this research by Mullen & Wedwick explains, teachers make good use of YouTube videos, digital storytelling, blogs, and other online resources to create a rich learning environment. By creating diverse strategies for the needs of each pupil, they complement classroom content. Not only that, but through the use of online videos, children are able to learn songs, write songs of their own, and use the songs as mnemonics while growing their literacy skills. Other benefits include the following:

Interacting with technology promotes fine motor skills through tasks like pressing buttons, dragging items, and manipulating objects, enhancing precision and dexterity.

Coordination and reaction time improve as children track and manipulate objects on screens, bolstering hand-eye coordination and multitasking abilities.

Technology aids cognitive development and language acquisition, utilizing eBooks and software for letter recognition, vocabulary expansion, and language learning.

Digital literacy equips children with essential skills for a rapidly changing world, fostering innovation and adaptability.

Engaging with technology enhances information processing, as animated and narrated content aids in effective learning and connection-making.

Problem-solving opportunities in technology build resilience, encouraging persistence and goal-setting.

Technology-driven activities foster collaboration, strengthening social skills and relationship-building with peers, parents, and teachers.

Digital media broadens cultural awareness, enabling exploration of diverse places and cultures.

Challenges associated with digitalization of childhood education

The digitization of childhood education presents both exciting possibilities and concerns. While new media can offer engaging learning experiences and connectivity through technology, there's a growing worry about negative effects. Children's extensive screen time might lead to isolated interactions and inadequate human dialogue, potentially fostering unhealthy habits. Despite the advantages, there's a range of risks in the digital age. Child sexual abuse and exploitation have escalated due to digital technologies. Offenders exploit unprotected social media and gaming platforms, sometimes using encrypted tools and false identities to evade detection. Youngsters can also fall victim to cyber bullying, which can have lasting consequences since harmful online content is hard to remove.

Excessive technology use raises concerns about physical activity and mental health. While moderate use can benefit mental wellbeing and social relationships, excessive screen time can have detrimental effects. Children's increased online social circle can enhance their connections but also contribute to sedentary behaviour. However, more comprehensive research is needed in this domain.

Examining the content encountered online is crucial. Some websites promote harmful behaviours like self-harm, suicide, and underage gambling. In the UK, a survey revealed that 3% of 11-16-year-olds engaged in online gambling, and 7% used their parents' accounts without permission. Despite these issues, the popularity of digital technologies continues to rise, revealing a digital knowledge gap between generations.

Tackling the challenges associated with childhood education in a digital era

In the current digital era, it's imperative to address the challenges related to childhood education in a proactive manner. Some children are unfortunately missing out on the advantages of connectivity due to limited online access. To counter this, it's highly recommended to implement market strategies that foster competition among service providers. Additionally, offering tax incentives and other benefits to technology companies can effectively reduce the cost barriers associated with access.

Recognizing the responsibility of digital companies, it's essential for them to safeguard young users from potential harm. An exemplary initiative that showcases a collaborative approach is the WePROTECT Global Alliance to End Child Sexual Exploitation Online. This alliance, involving technology companies, international organizations, and countries, exemplifies the effectiveness of a multi-stakeholder approach to combat a threat that transcends borders. It's crucial to note that children and adolescents stand to gain the most from digital technologies, while also being the most vulnerable. Therefore, they should be at the forefront of both national and global digital policies. This approach serves a dual purpose: protecting them from online harm and harnessing technology to help them realize their full potential, as highlighted in a report by The Lancet Child & Adolescent Health in 2020.

When introducing technology to early childhood education, the focus should be on interactive, hands-on, and engaging experiences. Incorporating technology to encourage dramatic play, such as utilizing a green screen with the free Veescape app, or using live apps to document outdoor discoveries, can greatly enhance learning experiences. For children below the age of five, technology and media should primarily serve as tools to support their learning journey. Emphasizing educational content is crucial during this stage.

In terms of screen time recommendations, children under the age of five should ideally be limited to a maximum of one hour per day. While it's important to establish and discuss technology and media guidelines, it's equally important to ensure that children continue to engage in physical activities and outdoor play. This balance between technology use and physical engagement contributes to their holistic growth and development. In conclusion, by adopting the recommended approaches mentioned above, we can effectively address the challenges associated with childhood education in the digitalization era. This ensures that children have access to beneficial technology while maintaining a balanced and enriching overall learning experience.

CONCLUSION

Today, the digitization of childhood education has ushered in unprecedented forms of communication and collaboration. The confines of classroom walls have dissolved, as technology paves the way for novel modes of learning, communication, and collaborative work. Furthermore, the roles of both educators and learners have been redefined by the advent of technology. Research indicates that technology usage among young children enhances their multitasking abilities, enabling them to effectively manage concurrent activities. While multitasking inherently divides focus, pupils can acquire skills such as simultaneous note-taking while listening or engaging in other tasks that foster future success.

Digital tools empower pupils to convey information in a comprehensible manner, offering a more accurate reflection of their abilities and progress. To ensure the delivery of high-quality technological education in primary schools, it is imperative that technology-related activities within the classroom setting are administered judiciously. Both educators and parents must exercise vigilance to guide children in the conscious and beneficial utilization of technology from an early age. In this context, the study delves into the growing digital transformation of primary school education through the lens of active teaching practitioners. Drawing from the study's findings, a compelling recommendation emerges: primary school instructors should enhance their technological prowess and incorporate technology-infused subjects or competencies into their curricula. On the matter of physical infrastructure, a prudent suggestion is to bolster the technical capabilities of primary schools and establish an ample number of technology-enabled classrooms.

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