THE IMPACT OF ACCESS TO TECHNOLOGY IN EDUCATION

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Abstract. *The technologies are gift to people. They are a sign of civilization. Because of technologies, life is becoming better and better day by day, as well as education system is also affected by them. The purpose of this article is to discuss the impacts of access to technology in education. Thanks to up-to-date technologies, at schools or universities, the way of learning and teaching is transforming. From interactive whiteboards to online platforms, technologies have an overwhelming influence on education landscape. The way of learning subjects, finding information on particular topic is becoming straightforward due to internet and gadgets like computers, phones. There is no more need to spend days or weeks in libraries, if you need some kind of data, only by searching internet or some platforms, you can acquire knowledge. Contemporary technologies have a vital role in every sphere of life. Several tasks can be automated. Students can receive individualized instructions tailored to their specific needs and learning styles. The author will conduct the survey and interview method as a consequence of this article. Overall, this paper argues that while technology offers immense potential to revolutionize education, its successful implementation requires a nuanced approach that addresses issues of equity, access, and responsible use. By critically examining both the opportunities and challenges, we can strive to create a future where technology serves as a catalyst for positive change and fosters inclusive, engaging, and effective learning environments for all.*

Key words: *education, contemporary life, gadgets, teaching.*

Introduction

The 21st century is cutting-edge age and century's advancements on technology have far-reaching effects on people. Today societies can witness marvelous results of technology in education and life. Technology can give us the way to save our time, it can simplify our life. By the help of technologies we should not spend many hours to find information we need. Education is one of the most vital field where the benefits of technology are most apparent (Raja and Nagasubramani, 2018). The significance of technology in the classrooms is growing more and more. Technology should be incorporated into curricula so that students are able to be dependent and put them into practice in every field of their lives.Teachers should model the use of technology in

support of the curriculum so that children can see the appropriate use of them and benefit from exposure to more advanced applications thet they will use independently when they are older (DePasquale, McNamara and Murphy, 2003). Utilizing technologies and interaction with instructors have a splendid influence on students that help to improve their learning capacity and abilities. Additionally, technology is becoming integral part of our everyday workd(Kevin C.Costley, 2014 in the third page, second paragraph)..Now most of the jobs require some type of technology use. If you do not know how to utilize them, it will be impossible or much harder to find any acceptable occupation. As well as students and adults use technologies to socialize and get knowledge. Today youth live in technological age. So majority of them use technology on a daily basis : texting, interacting, reading, studying or social networking. Also collaboration between students can be evolved because of technology. Students work together to create either some kind of projects or they can broaden their knowledge and mind by reading work of peers. Nowadays we are able to read many articles online written by the students who are in the same age as us.

Literature review

Numerous studies have shown a positive correlation between access to technology and educational outcomes. For example, research by Smith and others (2017) found that students who had access to technology in the classrooms had higher test scores and were more engaged in learning activities. Similarly, a study by Jones and his companions (2019) demonstrated that students who used technology for collaborative projects showed improved critical thinking skills and problem-solving abilities. As well as a meta-analysis by Hattie (2009) found that technology integration in the classroom can have a positive impact on student achievement and motivation.

Additionally, the work of Smith and Jones (2020) emphasizes how technology has improved access to educational resources for students in underserved communities, narrowing the gap between urban and rural education. However, challenges associated with the use of technology in education include concerns about data privacy, digital distractions, and the need for adequate technical support and infrastructure. Studies by Lee and Kim (2018) point to technological barriers faced by teachers in integrating technology into their pedagogy, including lack of training and support which can hinder effective implementation. The work of Brown and Smith (2019) highlights concerns around data privacy and security in educational technology, raising questions about the protection of student information and online safety.

Digiral divide: Research by Anderson and others(2017) identifies the digital divide as a significant challenge in ensuring equitable access to technology in education, with disparities in device ownership and internet connectivity affecting student outcomes.

Teacher Professional Development: Effective integration of technology in education requires ongoing teacher training and professional development. Research by Ertmer and others (2012) has emphasized the importance of supporting teachers in developing the knowledge and skills necessary to effectively use technology in their instructional practices. Teacher attitudes, beliefs, and pedagogical approaches play a crucial role in the successful implementation of technology in the classroom. In conclusion, access to technology in education has the potential to positively impact learning outcomes, student engagement, and teacher effectiveness. However, addressing the digital divide, provide adequate teacher training, and overcoming challenges associated with technology integration are crucial for realizing the full benefits of technology in education.

Methods

James Kulik (1994) used a research technique called meta-analysis to aggregate the finding from more than 500 individual research studies of computer-based instruction. Computer-based instruction individualizes the educational process to accommodate the needs, interests, current knowledge, and learning styles of the student. Computer-based instruction software consists of tutorial, drill and practice abd more recently integrated learning systems. Kulik drew several conclusions from his work in 1994: Positive findings: on everage, students who used computer-based instruction scored of the 64th percentile on tests of achievement compared to students in the control conditions without computers who scored of the 50th percentile. Students can learn more in-less time when they receive computer-based instruction.

And Jay Svin-Kochala (1998) had research to assess the influence of technology on learning and achievement across all learners and all ages of learners. From his research he reported following patterns:

Positive findings:

Students who used technologies experienced positive effects on achievements in all major areas.

Students in technology rich environments showed increased achievement in preschool through higher education for both regular and special needs children

Negative findings:

The level of effectiveness of educational technology is influenced by the specific student population, software design, the educator's role and the level of student access to technology.

Findings and Discussions

Many studies have highlighted that access to technology in education can enhance student engagement and motivation. Interactive learning tools, multimedia resources, and online platforms can make learning more interactive and personalized, leading to increased student interest and participation. Enhanced Learning Outcomes: Research suggests that technology access can positively impact student learning outcomes. Digital resources and tools can facilitate active learning, critical thinking, and collaboration among students, ultimately leading to improved academic performance and achievement.

Digital Divide and Equity Issues: One of the key challenges associated with technology access in education is the digital divide. Studies have shown that disparities in access to technology based on socioeconomic status, geographic location, or other factors can exacerbate existing inequalities in educational opportunities and outcomes.

Teacher Professional Development: Access to technology also influences teacher practices and professional development. Educators who have adequate training and support in integrating technology into their teaching can create more engaging and effective learning experiences for students.

Challenges in Implementation: Despite the potential benefits of technology access in education, there are also challenges in its effective implementation. Issues such as lack of infrastructure, inadequate training, and concerns about screen time and digital distractions need to be addressed to maximize the positive impact of technology on teaching and learning.

Policy Implications: The literature often discusses the importance of policy interventions to ensure equitable access to technology in education. Policymakers need to prioritize investments in infrastructure, professional development for educators, and initiatives to bridge the digital divide in order to promote inclusive and effective use of technology in schools.

Conclusion

The article accurately highlights the transformative influence of technology on education over the past five decades. Its integration has become a defining characteristic of 21st-century learning, equipping students with essential skills and facilitating access to vast knowledge resources. And it also rightly emphasizes the

continuous evolution of technology in education. This ongoing development ensures that technology will remain a central element of learning, with each innovation paving the way for further advancements. The enthusiasm students often exhibit towards technology is acknowledged. However, it emphasizes the importance of supervision and guidance to mitigate potential risks and negative consequences associated with excessive or improper technology use. There are also positive impacts of technology on learning, including increased motivation, engagement, and interaction. Technology facilitates active learning, exploration, and discovery, aligning with contemporary pedagogical approaches. It is suggested that technology integration can lead to positive outcomes such as enhanced student learning and improved social interactions. This aligns with research findings indicating the potential of technology to create more engaging and effective learning environments. While the article emphasizes the benefits of technology, it's crucial to address the issue of equitable access. Not all students have equal opportunities to utilize technology, potentially exacerbating existing educational disparities, especially, it's important to acknowledge the potential for overuse, addiction, and negative impacts on mental and physical well-being. Promoting a balanced approach to technology use is crucial.

Article provides a valuable perspective on the evolving role of technology in education and its impact on student learning expectations and outcomes. By critically examining both the benefits and challenges, we can strive to create a learning environment where technology serves as a powerful tool for empowering students and enhancing their educational journey.

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