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TEACHER – STUDENT PERSPECTIVES ON USING TECHNOLOGY IN THE CLASSROOM: CHALLENGES AND BENEFITS

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ABSTRACT
Technology has had a profound impact on our lives, changing many facets and reshaping day-to-day existence. Modern innovations have made it simple to do difficult and important duties. Education is one important field that technology has altered. Quality education is a fundamental element of the Sustainable Development 2030 Agenda of the United Nations, which seeks to guarantee inclusive and equitable education for all. To accomplish this, digital tools have become indispensable. The COVID-19 pandemic has further solidified the use of digital resources in education, causing a paradigm shift in the system. Digital technologies are now used as mentors, assessors, co-creators of information, and knowledge producers. By substituting software and tools for traditional pens and paper for projects and presentations, technological improvements have made life easier for students. By providing portable and easy substitutes for bulky notes and textbooks, digital gadgets such as iPads and e-books are boosting interest in research. In this essay, the importance of digital technologies in education is examined, along with some of their main uses and educational difficulties.
KEYWORDS: *Teacher-Student Perspectives, Technology, Challenges, Benefits*

I. INTRODUCTION

Education has been greatly impacted by technology, as has every other sector. Technology has improved accessibility, convenience, and efficacy in knowledge transfer in education. These days, students use projectors, the internet, and other technology tools to improve their educational experiences. Learning becomes more dynamic and entertaining when students are engaged by engaging images and interactive technologies. For example, students' engagement and interaction are increased by projectors in schools and universities, and this tendency is predicted to continue as support for modern technology increases.

Students today favor integrating technology into their education as well as other facets of their lives. Despite possible disadvantages like fraud, the internet is an invaluable tool for education since it offers a wealth of lessons, resources, and support materials that improve learning. It is a priceless instrument that facilitates information access and raises academic achievement. Education is a key component of sustainable development, which encompasses social well-being. With the introduction of cutting-edge learning resources like smartphones, tablets, laptops, MOOCs, smartboards, simulations, dynamic visualizations, and virtual labs, information technology has emerged as a major force behind educational innovations. Information and communication technology (ICT) is a vital component of modern living and has a big impact on all aspects of human existence (Gnambs, 2021). According to Lin et al. (2017), ICT has also revolutionized the education sector by making instructional practices more interactive and productive. It does this by providing a variety of tools that can be utilized in both traditional and online learning environments and by helping to create a proactive classroom environment (Jogezai et al., 2021). In addition to improving teaching quality (Akram et al., 2021), technology-integrated instructional techniques help students grow as individuals, increase their motivation, and effectively learn new material (Chen et al., 2018).

Studies in the past have also shown that pedagogical attitudes have a significant impact on instructors' teaching methods (Taimalu and Luik, 2019). Technology applications that support their pedagogical approaches and preexisting views on teaching and learning methods are preferred by educators. Stated differently, the way that teachers perceive the nature of teaching and learning in a classroom is closely linked to their use of technology. According to Watson and Rockinson-Szapkiw (2021), educators' perspectives on technology use are crucial to understanding technology integration. This is supported by new teaching practices. Considering this, the goal of this study is to investigate how teachers and students view the use of technology in the classroom, with an emphasis on attitudes, perceived advantages, difficulties, and degrees of readiness to include ICT into instruction. This study intends to identify common challenges, highlight successful approaches, and offer suggestions for legislators and educational institutions to improve technology integration in classroom settings by comprehending the experiences and perspectives of both groups.

Objectives

This research aims to examine the perspectives of teachers and students on the use of technology in the classroom, focusing on the benefits, challenges, and practical applications of digital tools in the teaching-learning process. Specifically, the study aims to:

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- To examine the necessity of digital technologies in enhancing the quality and accessibility of education.
- To explore the significance of digital classrooms and the role of digital technology applications in modern teaching and learning environments.
- To identify the major challenges faced by educators and learners in the implementation and utilization of digital technologies in education.

II. METHODOLOGY

This study used data mining techniques to examine correlations, patterns, and trends in educational datasets and current literature about classroom management and mentoring in teacher development programs. To methodically extract valuable insights from unstructured and semi-structured data sources, the research employed multiple data processing steps, such as data classification, integration, transformation, discretization, and pattern evaluation. These methods made it possible to uncover hidden connections and new themes that connect mentorship practices like professional modeling, instructional coaching, and emotional support to better classroom management results. In this educational environment, data mining which is extensively utilized in a variety of industries, including marketing, healthcare, and finance was employed to uncover relationships that might not be apparent through conventional qualitative or quantitative analysis alone. Using these techniques, the study sought to offer evidence-based suggestions for creating and putting into practice mentorship frameworks that are more successful. The ultimate objective was to improve classroom productivity, raise teacher competency, and support the overall performance of teacher development programs.

III. RESULTS

PRESENTATION OF DATA, INTERPRETATION, AND ANALYSIS

An examination of recent research on the use of technology in classrooms, particularly from the viewpoints of educators and learners, is provided in the section that follows. The perceived advantages, difficulties, and situational elements influencing the use of technology in teaching and learning are highlighted in this section. To understand how digital technologies affect instructional practices, learner engagement, and overall educational outcomes, the study synthesizes recent and pertinent material from a variety of educational contexts using data mining techniques. Examining how instructors' and students' attitudes and experiences affect how well or poorly technology is used in classroom settings is the aim.

Variable 1. Teacher Perspectives on the Use of Technology in the Classroom

Continent	Reason	Source
Africa	In many areas of the economy, including education, technology is essential. The Covid-19 pandemic's nationwide lockdown has highlighted the value of technology in education, as some schools have been able to continue teaching and learning remotely while others have had to wait for traditional classroom instruction to resume. Only until technology is embraced and accepted by its users will its benefits become apparent. The success or failure of technology in education is largely determined by educators. We investigated teachers' opinions regarding the usage of technology in South African public schools using an interpretivist methodology.	Chomunorwa et al. (2022) – Study on educator perspectives on technology use in disadvantaged South African schools.
Asia	In areas like improving teacher-student interaction and supporting students' learning, technology-oriented initiatives were used and considered significant. With aspects like cross-disciplinary collaboration, creativity, active learning, and teaching facilitation, nontechnology-oriented innovations are important because they can improve students' capacity for independent learning, creativity, and self-reflection. Both the academic and extracurricular activities of students as well as the job of teachers were addressed by the advances.	Wong, Billy. (2019). Teaching innovations in Asian higher education: perspectives of educators. Asian Association of Open Universities Journal. 13. 10.1108/AAOUJ-12-2018-0032.
Australia	The need to prepare students for a technologically advanced world, the acknowledged advantages of ICT for education, and programs like "Bring Your Own Device (BYOD)" and the Digital Education Revolution (2008–2013) have all contributed to the notable increase in the use of ICT in schools in recent years. The study also examines teachers' opinions on classroom technology use and how these opinions differ depending on teacher and school factors using data from the Longitudinal Study of Australian Children (2006–2014).	Vassallo, Suzanne & Warren, Diana. (2018). Use of technology in the classroom.

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Europe	The primary individuals who either incorporate or exclude ICT from the classroom are teachers. Teachers are more likely to use ICT in the classroom if they feel comfortable using it, and vice versa. The availability of knowledge and information, the flexibility of time and location, and the ability to collaborate either independently or in tandem are the three primary pillars of ICT pedagogy.	Lindfors, E. (2007). ICT in teaching – European teachers' views. University of Lapland.
America	Even though many schools have the newest educational technology, numerous studies have shown that barely half of their students' reports are using technology more than once a week, and more than half of teachers who have computers only use them for administrative tasks. Many faculty members are unable to use these new devices in the classroom because they lack the technological skills necessary to do so, which leaves many of them unutilized.	Mundy, Marie-Anne & Kupczynski, Lori & Kee, Rick. (2012). Teacher's Perceptions of Technology Use in the Schools. SAGE Open. 2. 10.1177/2158244012440813.

The table compares the opinions of educators on five continents regarding the use of technology in the classroom. The COVID-19 pandemic highlighted the digital divide in Africa, especially in South Africa, and emphasized the value of integrating technology into the classroom. The study by Chomunorwa et al. (2022) emphasizes how teachers' attitudes and acceptance play a major role in how well technology integration goes. According to Wong (2019), pedagogical innovation in Asia extends beyond digital technologies, as both technology- and nontechnology-oriented innovations improve educational experiences by encouraging self-directed learning, creativity, and multidisciplinary cooperation.

ICT is now more common in schools in Australia thanks to government programs like BYOD and the Digital Education Revolution. Vassallo and Warren (2018) investigated how institutional and individual factors affect teachers' attitudes toward classroom technology using longitudinal data. Similar teacher-centric perspectives are found in Europe, where Lindfors (2007) highlighted that teachers' comfort and confidence are key factors in determining how well ICT is used in the classroom. Finally, Mundy et al. (2012) discovered that although current educational technology is widely available in America, its use is still restricted because of a lack of training, with many teachers only using the devices for administrative duties. One of the most important factors affecting the successful use of technology in education across all regions is teacher attitudes and preparedness.

Variable 2. Student Perspectives on the Use of Technology in the Classroom

Continent	Reason	Source
Africa	After the results were analyzed, it was found that the students' attitudes regarding these instruments were largely positive. Students claimed that these resources enhanced their language proficiency and helped them learn the language. With an 84% utilization rate, the cell phone was the most common tool among students. In addition to the benefits already described, certain disadvantages have also been found through empirical research. According to recent research, there have been numerous detrimental effects linked to the use of information and communication technology (ICT) technologies in educational settings. These include the possibility of student distraction, their heightened sense of loneliness, and the escalation of already-existing inequalities between students from different socioeconomic backgrounds.	Kucuk, Turgay. (2023). Students' Perceptions of The Use of ICT Tools in Language Preparatory School. Arab World English Journal. 14. 197-212. 10.24093/awej/vol14no4.12.
Asia	Students' perceptions of technology's ease of use are positively correlated with their utilization of it. The study's findings indicate that respondents' use of technology is at a satisfactory level. The findings also imply that to support students' learning in higher education institutions, governments should encourage technological innovation that considers the technology's usability and convenience of use (via training and the provision of mobile-friendly applications).	Ubaidillah, Nur & Baharuddin, Nur & Kasil, Nurizwani & Ismail, Farhana. (2020). Students' Perception of the Use of Technology in Education. Environment-Behaviour Proceedings Journal. 5. 117-122. 10.21834/ebpj.v5i15.2374.
Australia	In Australian schools, information and communication technologies (ICT) are increasingly widely used, albeit there are differences in how, where, when, and how much they are used. Students can use their own laptop computers, or there may be machines spread out across the school or in a computer lab. IT can be taught as a stand-alone subject,	Ainley, John & Banks, D. & Fleming, M.. (2002). The influence of IT: Perspectives from five Australian schools. J. Comp. Assisted Learning.

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	or it can be applied in every subject area. How ICT is used in the classroom is crucial to giving students the skills they need to participate in a "knowledge society."	18. 395-404. 10.1046/j.0266-4909.2002.00251.x.
Europe	English as a foreign language (EFL) learners are aware of the benefits of using technology in the classroom, but the biggest barriers to technology integration are the lack of ICT infrastructure in schools and the professional skills and knowledge of EFL teachers regarding incorporating technology into their everyday teaching practices. In addition to stakeholders, the study highlights implications for ELT practitioners, scholars, and ICT policy makers.	Singh, Renu. (2019). Students' perspectives on technology integration in ELT. Journal of NELTA. 24. 95-106. 10.3126/nelta.v24i1-2.27682.
America	For better engagement and learning, students favor more conventional instructional technology. However, faculty members favor using the course-learning tools that their publishers or universities provide. In addition to this possible mismatch between student and teacher preferences, the study reveals that there are significant differences in usage and preferences across disciplines, with students and instructors in business and economics having stronger preferences for technology than those in the fine arts and life sciences.	Buzzard, Christopher & Crittenden, Victoria & Crittenden, William & McCarty, Paulette. (2011). The Use of Digital Technologies in the Classroom: A Teaching and Learning Perspective. Journal of Marketing Education - J Market Educ. 33. 131-139. 10.1177/0273475311410845.

A range of student viewpoints on the use of technology in education across continents are displayed in the table, underscoring both the advantages and disadvantages of this approach. In general, students in Africa believe that technology, especially mobile phones, can improve language acquisition. Nevertheless, worries about possible negative effects including distraction, heightened feelings of loneliness, and the growing divide between pupils from various socioeconomic backgrounds continue despite these favorable sentiments. Technology is also well received by students in Asia, particularly when it is accessible and user-friendly. The data suggests that ease of use directly influences how often students engage with educational technology, indicating that thoughtful design and user training can significantly improve outcomes.

Depending on where and how it is used, technology utilization in Australian schools varies greatly. Diverse experiences might result from students coming into contact with ICT in specialized labs, in other topics, or on their own devices. By meaningfully integrating ICT, the emphasis appears to be on educating pupils for a digital society. Although students in Europe understand the advantages of using technology in the classroom, obstacles including inadequate infrastructure and a lack of prepared teachers make it difficult to use effectively. In contrast, there is a discernible discrepancy between what faculty members usually use and what students prefer in America. Teachers frequently rely on platforms offered by publishers or institutions, whereas students frequently go toward well-known or conventional digital tools. This leads to a mismatch in expectations and experiences. In every region, accessibility, teacher proficiency, and student needs alignment have a significant impact on how effective educational technology is.

IV. DISCUSSION

Findings

The idea that incorporating the newest technical tools is essential to innovative teaching is countered by the possibility that teaching innovations are not always linked to the use of technology. This study highlights that innovation in education should be considered from a wider perspective than merely the use of new technologies. The cultural background, collaborative and active learning, and course designs that support students in making the connection between theory and practice are other important aspects. Furthermore, factors like enhanced academic achievement, cognitive growth, and student involvement are essential in defining educational innovation.

All things considered, the overall findings demonstrate that teachers and students on all continents have generally favorable opinions of technology in the classroom and acknowledge its capacity to boost engagement, advance learning, and develop skills. When technology is easily available, user-friendly, and pertinent to their learning needs, students perceive it to be beneficial. They do, however, also face difficulties including interruptions, unequal access, and sporadic inconsistencies between their choices and those of their teachers.

CONCLUSION

Teachers believe that their confidence, training, and the tools available to them are key factors in the successful integration of technology. ICT is more likely to be used successfully in the classroom by teachers who are well-supported and at ease with it. A lack of infrastructure and professional development, however, sometimes prevents them from utilizing digital tools to their full potential in the classroom. Instructors often stress that innovation in education encompasses more than just technology; it also involves considerate course design, active learning, teamwork, and student participation. According to both student and teacher

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viewpoints, technology is a useful tool, but its efficacy depends on appropriate access, support, and pedagogical balance.

The opinions of both teachers and students attest to the fact that technology contributes to good education in a complementary but not exclusive way. Teachers stress the necessity for professional training, confidence, and infrastructure to successfully deploy technology, while students value it when it is available and simple to use. Multimedia presentations, video conferencing platforms, interactive whiteboards, and cellphones are some examples of tools that can promote skill-based and interactive learning. To prevent abuse, educators must use these resources responsibly and provide the right direction. Technology-based tools are useful and essential in today's classroom, but they must be carefully incorporated into a larger framework of creative, student-centered teaching methods.

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