

CHALLENGES AND OPPORTUNITIES OF DIGITAL LEARNING IN TEACHERS EDUCATION IN NIGERIA

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Abstract

The concept of digital learning is a product of technological advancements which encompass the use of technology in education. A review of challenges and opportunities of digital learning in teacher education in Nigeria have been adequately discussed in this paper. The paper x-ray the impact of technology in teacher's education. Digital learning helps in evaluating and measuring a students' knowledge with aid for technological efficiency. There are, also opportunities to integrate technology as a tool for facilitating distance learning through the use of emails, video conference, teleconferencing, skipping and other synchronous and asynchronous communications. This paper seek to address the fact that digital learning limits physical interactions, impacting students who are reluctant to receive education. This means that digital learning in teachers' education poses poor internet connectivity, absence of human interaction. Lack of opportunities of collaboration, learning, supervision of teachers, decline of hands on-learning and poor assessment of examination. This study discussed personalized education because, digital learning provides a chance for personalized learning in teachers' education, covers the fact that technology often reduce oversight of students, which could be detrimental for education. This does not take away the fact that the quick succession of online learning has been a saviour.

Introduction

The concept of 'Digital learning' is a product of technological advancements which encompass the use of technology in education (Haleem, Javaid, Qadri & Suman, 2022). Technology improvements impacted the education sector greatly due to the development of collaboration and discussion tools that aid learners and tutors to help one another to communicate each other. Digital learning in teachers' education help in evaluations and measuring a student's knowledge with the aid of technological tools. By so doing. the assessment becomes easier and more efficient. Replacing pen and paper, which almost seems redundant now. by conducting online exams seems to be the more viable option for schools and colleges now. Digital learning in teachers education enhances teachers learning in different forms. Teachers integrate the technology as a presentation tool: by using PowerPoint, animations, video, simulations etc. Technology can also be integrated as a learning platform using Moodle, Blackboard, Rcampus and other virtual learning environments. There are also opportunities to integrate technology as a tool for facilitating distance learning through the use of emails, video conferencing,

teleconferencing, Skyping and other synchronous and asynchronous communications. In recent development of educational technology, most of the technology used in education are moving beyond the normal classroom teaching and learning to virtual learning (Kafyulilo, 2015). In this respect, digital learning in teachers' education in Nigeria has inherent challenges and opportunities. This paper will take a cursory look at these challenges and opportunities.

Opportunities of Digital learning in Teachers Education

Easy Access to Learning Materials: One of the great opportunities of digital learning is that it gives learners full-time access to resources with ease. Haleem et al, (2022) present that technology companies are providing digital solutions to educational institutions and predict that advancements will ensure the availability of online learning resources in regional languages. In this case, digital learning gives learners flexibility over where and when they study. As a result, it enables students to control their studying period. Digital learning technologies can ensure that educational materials are available for learners at all times. In this respect, digital learning has the opportunity to ensure students access resources quickly. Additional reading materials provided through digital learning platforms allow learners to maximize their studying since they will have adequate materials for their challenging subjects and areas. Therefore, digital learning has the opportunity to ensure that students acquire extra information for their study easily

Personalized Education: Besides, digital learning provides a chance for personalized learning in teachers' education, considering individuals have particular studying methods and techniques suiting them. Technological enterprises are revolutionizing classrooms through innovations that personalize learning to impact teaching practices (Van Schoors et al. 2023, p. 315). Digital learning technology inventions are geared towards personalizing studying to enhance performance. Hence, digital learning is helping tutors and students to understand effective approaches suitable for them. Digital personalized learning is expanding because it can leverage learners' performances and motivation while supporting tutors interacting with extensive heterogeneous class groups (Van Schoors et al. 2023, p.3 15). Therefore, digital learning has made learning and teaching more effective by promoting customization. In this respect, students have to adopt efficient learning approaches and paces. As a result, digital learning technology's capability of personalizing education will guarantee more understanding of classroom content among students.

Increasing speed and availability of internet access can reduce many of the geographic constraints that disadvantage poor students. Schools serving higher-resourced families are often able to recruit better teachers and administrators—perhaps the most important school resources—even without additional funding. Unlike teachers, however, technologies have no preferences for the schools in which they work. The resources available on the internet, for example, are equally available to all schools with the same internet access and internet access costs the same for all schools in the same area, regardless of the student population served. Students can now access online videos that provide instruction on a wide variety of topics at various skill levels, and participate in real-time video conferences with teachers or tutors located in a state (or even a continent) away.

Similarly, the evolution of touch-screen technology has enabled very young children to engage in technology-aided instruction. Prior to tablets, it was difficult for pre-school,

kindergarten and even early primary grade students to work with educational software because it required use of a mouse or keyboard. Now there are a hundreds of applications that can effectively expose children to early literacy and numeracy skills (Haleem et al., 2022).

More so, advances in artificial intelligence technology now allow teachers to differentiate instruction, providing extra support and developmentally-appropriate material to students whose knowledge and skill is far below or above grade level norms. The latest “intelligent” tutoring systems are able to not only assess a student’s current weaknesses, but also diagnose why students are making specific errors. These technologies could enable teachers to better reach students who are further from the average within their classroom, potentially benefiting students with weaker academic preparation.

And these technologies scale easily so that innovations (or even good curriculum) can reach more students. Much like a well-written textbook, a well-designed educational software application or online lesson can reach students not just in a single classroom or school, but across the state or country.

While technologies such as virtual instruction and intelligent tutoring offer great promise, unless the challenges that are associated with implementing them are fully understood and addressed their failure is almost surely guaranteed. To date, there is little evidence that digital learning can be implemented at scale in a way that improves outcomes for disadvantaged students.

Hundreds of thousands of students attend full-time online schools, but a study released last year found that students of online charter schools had significantly weaker academic performance in math and reading, compared with demographically similar students in conventional public schools. Computer-aided instruction has been studied extensively over the past twenty-five years and the findings have not been encouraging. Consistently, programs that are implemented widely and evaluated with rigorous methods have yielded little to no benefit for students on average.

Challenges of Digital Learning in Teachers Education

Limited Physical Tutor-Student Contact: digital learning inhibits direct interactions between learners and tutors, which might contribute to reduced motivation and understanding. Online teaching has several challenges, including restricted interaction changes affecting student-teacher relationships (Vagos & Carvalhais, 2022). In this case, digital learning impact students’ oversight since learners study in different environments and have contradicting understanding capability. In this respect, digital learning contributes to disengagement in studies affecting students, especially those performing poorly. It encourages students to study independently, which demotivates students who are reluctant in education to engage in learning. Interpersonal interactions are significant in teaching particular skills and concepts. Besides, direct interactions ensure learners have adequate discussion opportunities in challenging areas. Therefore, digital learning hinders physical contact between teachers and learners, affecting students’ perception of education.

However, these technologies often reduce oversight of students, which could be particularly detrimental for children who are less motivated or who receive less structured educational supports at home. It is also possible that these technologies will be less able to engage reluctant learners in the way a dynamic and charismatic teacher can (Vagos, & Carvalhais, 2022).

Moreover, approaches that forgo direct interpersonal interaction completely are unlikely to be able to teach certain skills. Learning is an inherently social activity. While an intelligent tutor might be able to help a student master specific math concepts, it may not be able to teach students to critically analyze a work of literature or debate the ethics of new legislation.

The experience of Rocketship, a well-known charter school network, illustrates this concern. Developed in the Bay Area of California in 2006, Rocketship's instructional model revolves around a blended learning approach in which students spend a considerable amount of each day engaged with computer-aided learning technologies. The network received early praise for its innovative approach to learning and, most importantly, for the high achievement scores posted by its mostly poor, nonwhite student population. In 2012, however, researchers and educators raised concerns about graduates from Rocketship elementary schools, noting that they had good basic skills but were struggling with the critical analysis required in middle school.

More broadly, it is important to realize that technologies can be either substitutes for or complements to resources already in the school. To the extent that they are substitutes, they are inherently equalizing forces. For example, well-designed and structured online content might provide critical support to a novice teacher who is too overwhelmed to produce the same coherent and engaging materials that some more experienced teachers can create.

However, in many cases it may be more appropriate to think of technologies as complements e.g., when they require skilled teachers or students with strong prior skills to be implemented well. In these cases, technologies must be accompanied with additional resources in order for them to benefit traditionally underserved populations.

Perhaps most importantly, systems that blend computer-aided and face-to-face instruction are notoriously difficult to implement well. In recent studies of the popular Cognitive Tutor math programs, teachers reported trouble implementing the program's instructional practices that revolve around collaborative work, making strong connections between computer-based activities and classroom instruction, and maintaining the expected learning pace with many students who lacked prior math and reading skills (Vagos, & Carvalhais, 2022).

Finally, even with the best implementation, digital learning is likely to benefit students differently depending on their personal circumstances and those of their school. For instance, non-native English speakers might benefit from online instruction that allows them to pause and look up unfamiliar words. Likewise, we might expect an online course to be more advantageous for students attending a brick-and-mortar school with very low-quality teachers. In recent years, the worlds of online learning and computer-aided instruction have converged to some extent, morphing into what is often referred to as blended- or personalized-learning models.

Conclusion

Although digital learning inhibits physical contact, it provides a chance to personalize education and easily access study materials. Digital learning technologies ensure learners have an extensive database for accessing education resources easily and at any time. Besides, digital learning promotes personalization, allowing students and teachers to utilize their effective approaches. Several educators, teachers as well as students have spoken out in favour of digital

education despite its challenges. Digital learning in education has become the preferred mode of education. Nevertheless, digital learning limits physical interactions, impacting students who are reluctant to receive education. Nevertheless, it would be imperceptive to believe that digital learning in teachers' education poses poor internet connectivity, absence of human connection, lack of opportunities of collaborating learning, supervision of teachers, decline of hands-on-learning and poor assessment of examinations are some of the trials and tribulations online education platforms face. This does not take away the fact that the quick succession of online learning has been a saviour.

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