

# The Role of Digital Technologies in Education and Digital Competence of Educators

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**Abstract:** This article provides information about the role of digital technology in education system and the necessity of digital technologies in education, highlighting their major applications and the challenges in education. Besides that the paper explores how teachers make lesson plans and create instructive encounters that mix conventional learning with more current computerized innovation. Digital technology has the ability to foster a classroom environment that is student-centered, supporting individuals' social and emotional needs. Digital tools will successfully engage both students and teachers through fun and collaborative activities using educational apps and supportive resources. Step into the modern classroom where teachers embrace digital technologies to support innovative approaches. Technology has truly transformed how educators make lesson plans and craft educational experiences that blend traditional learning with newer digital technology.

**Key words:** digital technology, competence, traditional modes, advancements.

## Introduction

Our lives have been profoundly changed by technology, which has affected many areas and redefined daily life. Modern improvements make it easy to complete vital and complex duties. Education is one significant field where technology has transformed. High-quality education is a fundamental element of the Sustainable Development 2030 Agenda of the United Nations, which endeavors to guarantee inclusive and equitable education for all. The COVID-19 epidemic has further institutionalized the importance of digital technology in education, causing a paradigm shift in the system. Digital technologies have become indispensable tools in accomplishing this goal. These days, digital tools act as mentors, assessors, co-creators of information, and distributors of knowledge. With software and tools to create projects and presentations in place of traditional pen and paper, technological improvements have made life easier for students. Research interest is sparked by the lightweight, portable alternatives that digital gadgets like iPads and e-books provide to bulky notebooks and textbooks. This essay examines the need for digital technology in education, stressing both the difficulties and the main uses of these tools. Digital technologies now serve as knowledge providers, co-creators of information, mentors, and assessors. Technological advancements have made life easier for students, replacing traditional pen and paper with software and tools for creating presentations and projects. Digital devices like iPads and e-books offer lightweight and convenient alternatives to heavy notebooks and textbooks, increasing interest in research.

## Literature review

As Ismail mentions in his article, digital technology has already replaced traditional modes of education, which means educators have to enhance their digital competence.

Over the past decade, digitalization shapes the overall educational structure worldwide, with the attention received from practitioners, researchers, and policymakers for educational development. Digital technologies are bringing massive changes across education, skills, and employment. These changes mirror how technology is increasingly central to education. Digital technologies are expanding beyond innovative and less traditional techniques of teaching and learning via education collaboration.

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However, the present study will explore the research conducted on digital technologies and education. Data is selected from the Scopus database reputed journals. The final 47 studies are chosen for the review process using PRISMA statement 2015, and bibliometric analysis is done to find the occurrence of keywords. The findings of the study are strengthening the value of educational growth and development of high-tech skills. Education's Future focuses on digital technologies, and the traditional modes of education will be replaced entirely. (Ismail, F. (2021)

Göçen, G., Demirtas Tolaman, T., & Azizoglu, N. I. Writes about how to enhance writing skills through technology. He mentions that with the advances in technology, the skill of writing has taken on a new form with digital tools. Concepts like digital literacy, digital writing, electronic writing, web-based writing, online writing, and multimodal texts have become increasingly common. Hence, integrating technology into writing education in schools today has gained significance. This way, students can write digitally and produce digital texts in harmony with their lives outside of school. Teaching these skills to students is only possible to the extent of the teachers' digital writing skills, digital writing habits, self-efficacy in using technology, self-efficacy in preparing digital teaching materials, and improvement of these skills. In this context, the current research aims to investigate the effects of web-based creative writing practices on teachers' digital writing skills, digital writing habits, self-efficacy regarding digital education technology standards, and self-efficacy in developing digital teaching materials. For this purpose, we used the experimental method "one-group pretest-posttest design." The data were collected from a total of 40 teachers: 20 classroom teachers and 20 Turkish language teachers. We carried out 16 creative writing activities where the participants performed digital writing. In seven of these activities, the participants received information and observed examples of digital tools that can be used in writing education or created texts using various digital tools, like tools for creating digital stories and cartoons. For data collection, we used certain data collection tools before and after the writing activities. We concluded that web-assisted creative writing practices had positive effects on teachers' digital writing skills, digital writing habits, self-efficacy regarding digital education technology standards, and self-efficacy in developing digital teaching materials. ( Göçen, G., Demirtas Tolaman, T., & Azizoglu, N. I. (2023).

Another writer says in his article: Information and communication technologies are having a profound affect on all aspects of language use, especially in written communication. The purposes of writing, the genres of written communication, and the nature of audience and author are all changing rapidly with the diffusion of computer-mediated communication, both for first and second language writers. This chapter reviews research on the relationship of new technologies to writing and discusses the implications of this research for English language learning and teaching. Issues addressed include the participatory dynamics and linguistic features of computer-assisted classroom discussion, the impact of e-mail exchanges on students' writing process, and the relationship of writing purpose to student outcomes in multimedia authoring. The chapter also addresses areas of debate and concern, such as whether the internet fosters plagiarism, and whether new forms of computer-mediated writing serve to complement and enhance more traditional forms of writing or detract from them. Finally, future trends in technology-intensive writing, such as the increased importance and nature of electronic literacy, are also discussed, as are the implications of these trends for teaching and research. (Warschauer, M. (2007)

## Discussion

Digital technology has the ability to foster a classroom environment that is student-centered, supporting individuals' social and emotional needs. Digital tools will successfully engage both students and teachers through fun and collaborative activities using educational apps and supportive resources. Step into the modern classroom where teachers embrace digital technologies to support innovative approaches. Technology has truly transformed how educators make lesson plans and craft educational experiences that blend traditional learning with newer digital technology. Here is how tech is currently impacting education practices:

1. Inspiring creative pedagogy: Technology creates space for a learner-centered approach by using adaptive learning platforms that personalize lessons based on each student's needs.



2. Enhancing teacher-student communication: Communication tools such as online forums, video calls using Zoom, and messaging apps encourage collaboration, discussions, and quick feedback. Teachers and students are able to communicate instantly and connect on another level.

Crafting engaging learning experiences for students: Boost participation and ensure learning is interesting and fun with new learning experiences such as game-like apps and virtual reality. A wide array of advanced technology resources is available, suitable for students from elementary to high school and extending into higher education.

Supporting innovative teaching practices: Teachers now have access to instructional technologies that quickly identify learning gaps and areas in need of improvement, allowing teachers to promptly implement interventions. This data-driven approach encourages the exploration of new teaching methodologies.

Incorporating diverse learning styles into student education can present challenges, but by using innovative digital classroom tools and technology, you can offer a variety of flexible options. This approach allows students to progress at their own pace, significantly enhancing their educational journey.

**To conclude**, Digital technologies now serve as knowledge providers, co-creators of information, mentors, and assessors. Technological advancements have made life easier for students, replacing traditional pen and paper with software and tools for creating presentations and projects. Digital devices like iPads and e-books offer lightweight and convenient alternatives to heavy notebooks and textbooks, increasing interest in research. This paper explores the necessity of digital technologies in education, highlighting their major applications and the challenges in education.

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