Chapter 13
Leveraging Instructional Technology to Promote Post-Pandemic Learning and Student Engagement Among Children With Special Needs

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ABSTRACT

The study is guided by the following objectives: Teachers' perceptions of use of ICT and digital competencies in enhancing online learning in public primary schools in Kenya; the relationship between cognitive, behavioral, and emotional engagement on learners' instructional engagement; and the challenges facing teachers in their use of technology in teaching and learning in public and private primary schools in Kenya. The study employs an explanatory sequential mixed–methods approach. The final sample was 70 (n=70). Data was collected using questionnaires and interview schedules. The study revealed a positive perception of teachers towards education technology. The study recommends that educators and policy makers address the digital divide by ensuring equitable access to technology and internet connectivity for all students especially those with special needs, and concludes that technology has emerged as a big enabler. It recommends that further research is needed to investigate the long-term implications of online learning on academic achievement of learners with special needs.

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INTRODUCTION

The technological advances made over the years have impacted every field of life including education. Over the years, developing countries Kenya included have experienced tremendous growth in access to information and communication technology (ICT). This growth in access to ICT has brought about massive changes in many sectors within the society including education. Communication technology in education plays a key role in supporting teachers to integrate new tools and technology in the daily classroom activities. Schools have integrated technology in the teaching –learning process. This enhances learning experience. Online learning, also known as e-eLearning, refers to the adoption of information and communication technology to facilitate communication processes for learning and teaching activities, (Al-Masud et al ., 2023). Several studies have highlighted the benefit of eLearning for students in different settings, (Abdel Fattah, AL Alawi, Dahleez, &El Saleh, 2023; Smith & Hardaker, 2000; Dragomir & Dumitru,2023). ELearning presents students with multiple resources such as online video media, audio and presentation materials to support students' learning needs, (Buuhassna et al.,2020). ELearning also provides students with opportunities to perform more online interactions for (a) promoting student centered learning (b) encouraging wider student participation, and (c) producing in depth discussion, (Smith & Hardaker,2000).

Through technology teachers have a unique opportunity to engage their learners in unique, creative, innovative and equitable ways. Technology promotes learning as it enhances access to information and facilitates collaboration, enhances communication and promotes engagement and motivation as students get equipped with essential skills. Through technology learners get to be included in the classroom in more ways than one. Learners with special needs are able to benefit from technology that supports them read and write, spell and do mathematical computation. Advancement of educational technology greatly influences the world of education, especially in supporting the learning process, (Hamidi et al, 2011). The use of technology to support learning has become synonymous with 21st century learning. Technology development gives rise to various learning models that are more varied and innovative. The development of information technology in the education sector has penetrated learning and management in the classroom. The role of technology in education entails making it easier for students and teachers to engage in the learning process, (Eady et al, 2013). It has been observed that, the role of other technologies revealed by technological advances in the learning process can allow teachers and students to use internet and other technologies. Digital technology is a good way of supporting learning activities. The use of technology is a valuable way of supporting children with special needs especially as a medium of learning. The study is guided by the following objectives; Teachers' perceptions of use of ICT