Chapter 14
Probing the Post-Pandemic Landscape:
Use of Technology and Assistive Technology for Students With Disabilities

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ABSTRACT

This chapter examines the evolution of technology and assistive technology (AT) across pre-pandemic, pandemic-era, and post-pandemic periods for students with disabilities, who comprise approximately 15% of the student body in the United States. Technology and AT aim to enhance the learning experiences and capabilities of students with disabilities. Pre-pandemic, use of AT and remote learning for students with disabilities was limited, necessitating research calls for additional training and utilization. Mandated remote learning during the pandemic exposed students and teachers to new technology and accessibility, albeit with complicated challenges. Post-pandemic advancements, driven by extended reality and artificial intelligence, promise enhanced accessibility and transformative potential in education, potentially extending enhanced benefits to students with disabilities. This chapter discusses newer technological capabilities, future prospects of technology

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and AT, and future opportunities for their utilization for students with disabilities.

INTRODUCTION

This chapter navigates the reader through a journey exploring the use of remote learning, technology, and assistive technology for students with disabilities over pre-COVID-19, mid-COVID-19, and post-COVID-19 pandemic periods. Students with disabilities represent approximately 15% of the student body in the United States and estimates suggest 10% of children worldwide have disabilities (National Center for Education Statistics (NCES), 2023; United Nations Children's Fund, 2021). Students with disabilities receive instruction in a variety of settings including inclusive classrooms, self-contained classrooms, and special schools . Technologies and assistive technologies are commonly used to increase and improve the capabilities of students with disabilities across instructional settings.

Teachers use educational technology to assist all students in meeting academic goals. However, a disparity in digital access exists for students with disabilities (Kaczorowski et al., 2023). For many students with disabilities, technology itself is not accessible or integrated into instruction without the use of assistive technology. Assistive technology (AT) can be any equipment, device, or software used to increase, maintain, or improve the capabilities or functioning of individuals with disabilities. With advances in technology, some previously separate or stand-alone AT software and hardware devices have been integrated as accessibility features within software and hardware that are available to everyone. Other AT still requires separate software or devices.

Prior to the COVID-19 pandemic, systematic, evidence-based research on the effectiveness of AT was scarce. At that time, research suggested that AT use was limited (Mulcahy et al., 2023), and teachers needed to be trained on both technology and AT in order to use them effectively to improve instruction and assessment of students.

With the infusion of new forms of technology purchased and used by schools when they switched to mandated remote learning during the height of the COVID-19 pandemic, new means of technology were needed or became available to promote accessibility, and additional training was required for teachers, parents, and students. The use of innovative technology brought new challenges during remote instruction for students with disabilities and those delivering and assisting with instruction.

Recent advances in technology did not just expand capabilities for remote instruction, but provided innovative applications for face-to-face classroom instruction. In recent years, strides have been made in accessibility of augmented reality and virtual reality Additionally, newer technologies based on AI that became available post-

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