

# Chapter 1

## Assistive Technology Integration: Promoting Inclusion and Achieving Sustainable Development Goals

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### ABSTRACT

*The quality of life of children with special education needs can not only be facilitated but also contribute to their overall well-being when technology is available and accessible to them. Given the goals of the study, this chapter emphasizes the importance of accessibility and availability of assistive technology for all developing and underdeveloped countries. This chapter examines how assistive technology can support children with special education needs and how assistive technology relates to achieving sustainable development goals. Findings show that assistive technology interventions support all types of physical and intellectual disabilities. However, in developing and underdeveloped countries, there are significant barriers to technology integration, including availability and accessibility of devices. This systematic literature review has provided important guidelines for future researchers and possible ways in which educational institutions need to think about incorporating assistive technologies into the teaching and learning process of students with disabilities.*

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## **INTRODUCTION**

The massive transformation in the world of education is an outcome of the technological revolution. It is imperative to make technology accessible and available during the era of technological evolution for teaching and learning to be effective. The quality of life of children with special educational needs can be made not just easier but can contribute to their overall well-being if technology is available and accessible to them (Genc et al., 2021). According to Fernandez-Batanero et al. (2022) the traditional approach to impart teaching and learning, using the same outdated tools, is reducing the quality of educational programs and they are falling far behind what the market expects today. Thus, an updated version of educational programs in alignment with conventional tools and devices for both children with and without disabilities is the call of the day. To give assurance that children with special educational needs are equipped to meet the pedagogical challenges of the modern world these tools are proven to be effective. These tools enable children with special needs to cope with challenges associated with teaching and learning with fewer complications (Krasniqi et al., 2022).

In the field of education, students with disabilities come across a number of hurdles that impede their teaching-learning process and accomplishment of goals in developed (Ferguson, 2014) as well as developing and underdeveloped countries (Mantey, 2017; Majoko, 2013). In order to contribute to society, students with disabilities should have access to the same opportunities as their peers. It has been demonstrated that assistive devices have contributed greatly to improving the quality of life of children with disabilities (Krasniqi et al., 2022) for instance, certain soft wares for supporting visually impaired children (Ahmad, 2015). In spite of children with special needs' differences from normal children that affect education, less attention has been paid to how students with disabilities use technology in their everyday lives (OK, 2018). In light of these findings, it has been concluded that prevailing research on children with disabilities is scarcely developed (Ahmad, 2014), while generic research frequently ignores children with disabilities. This may be a challenge in terms of ensuring equal opportunities to access and benefit from assistive technologies. However, many of the global initiatives over the past decade have been motivated by the desire to safeguard equality and equity.

In this regard, the right use of the right technology is required. Familiarizing and introducing the right assistive technology for students with disabilities can play a pivotal role in saving time and effort. Paying no attention to the presence of devices and tools that can enhance the educational outcomes of students with disabilities also precludes students from having opportunities to achieve maximum performance targets. In light of the study's objectives, the chapter emphasizes the importance of accessibility and availability of assistive products for all developing and underdeveloped countries. A systematic literature review is conducted to explore how assistive technology can support children with special educational needs and how assistive technology is related to achieving sustainable development goals. For this chapter, the authors chose to conduct a systematic review due to its resource-intensive nature, which can improve the rigor and breadth of literature reviews, viewed as a means of finding robust and sensible answers to focused research questions, despite its numerous practical challenges (Mallett et al., 2012). Further, the systematic literature review emphasizes the importance of ensuring that assistive technology is available and accessible for sustainable development.

The Global Goals, also called Sustainable Development Goals (SDGs), were adopted by the United Nations in 2015 as a universal call to action for ending poverty by 2030, protecting the planet, and ensuring peace and prosperity for all (Desa, 2016). It is important to note that the SDGs are integrated. It is considered that actions in one area will affect outcomes in other areas, and that development must

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