Chapter 3
The Role of Assistive Technology in Teaching Children With ASD in UAE

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ABSTRACT

Assistive technology can be defined as any device or equipment that assists in teaching new skills, augments existing skills, or reduces the impact of disability on daily functioning. Assistive technology is the technology used by people with disabilities to achieve functions that can be difficult or impossible without it. Some examples of using assistive technologies to assist children with disabilities include using robot therapists in intervention and the use of laminated picture cards for communication purposes.

THE ROLE OF ASSISTIVE TECHNOLOGIES IN EDUCATION

Assistive technology can be defined as a device or equipment that assists in teaching new skills, augments existing skills, or reduces the impact of disability on daily functioning (Lancioni & Singh, 2014). Assistive technology is the technology used by people with disabilities to achieve functions that can be difficult or impossible

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without it (General Rules for the Provision of Special Education Programs and Services, Public & Private Schools, 2012). Some assistive technologies to assist children with disabilities include using robot therapists in intervention and exchanging laminated picture cards for communication purposes (Lang et al., 2014).

Technological development has a significant impact on different life aspects like education. According to Lancioni & Singh (2014), assistive technology may enhance the life quality for users as it increases their independence. Moreover, it offers various solutions to provide students with disabilities with the necessary support that meets their needs (Erdem, 2017). This can be achieved by assisting children with special needs in learning, building self-confidence, being independent, and achieving a high quality of life (Erdem, 2017).

International and national agreements call to eradicates the bias and discrimination toward people with special needs like the disability policy "in the Department of Higher Education and Training (DHET); and the Promotion of Equality and Prevention of Unfair Discrimination Act 4 of 2000 (PEPUDA) (Republic of South Africa 2000)" (Cleophas, 2019, p.1). Therefore, South Africa strives to achieve social justice and eradicate bias among all learners despite their ability differences through inclusion in educational settings.

According to Cleophas (2019), assistive technologies can enhance education in different ways. For example, it can facilitate access to information and internet learning materials. At the same time, the increasing use of assistive technologies facilitates inclusion in educational settings (Cleophas, 2019). It plays a fundamental role in fostering learners' access to information and learning material. For example, the screen-reading software allows the user to access reading material. It has been argued that technology's availability resulted in more accessible access to information (Duplaga, 2017) therefore, assistive technology can be considered an inclusive tool that allows multiple users to access information online. It makes the unreachable information more reachable.

Many technologies can support students with disabilities to read, write, walk, sit, see and hear, and foster communication skills and participation in activities. Cleophas (2019) provided an example that is; screen readers such as Openbook, Magic, Job Access with Speech (JAWS)1 or Non-Visual Desktop Access (NVDA)2 and ZoomText (the latter enlarges texts). Another assistive software is Read and Write, reader pens such as the C-pen, Dictaphones, and WYNN, that help students who struggle in reading and writing. The disability units may provide students with disabilities with these assistive technologies in computer labs. It can also be more convenient for students with disabilities to have this software on their devices to access anytime. Many communication gaps can be addressed through online platforms as educational meetings, webinars, and even classes can be held globally (Cleophas, 2019). Burgstahler (2015) stated that both information communications technologies

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