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Roles and Benefits of ICT in Inclusive Education: An analysis of the benefits of ICT

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ABSTRACT

Technology has emerged with many developments. Information and communication technology (ICT) has been initiated in the education sector in Zimbabwe. This paper briefly describes the roles and benefits of ICT in inclusive education. Specification on children with disabilities and learning difficulties, many researchers have noted that ICT plays an important role for these learners by bridging the gap. With specific examples of ICTs, the paper reviewed other studies. It gave an analysis of the benefits of ICT to learners with diverse needs, thus those with disabilities and learning difficulties. The use of ICTs promotes the equal participation of all students in the educational system and consequently prepares them for everyday life outside of the school. In the educational processes, ICTs have positive effects on the inclusion of children with disabilities and learning difficulties.

Keywords: Diverse needs, ICTs, Inclusion, Learning difficulties, learners with disabilities.

1. INTRODUCTION

Over the past decades, information and communication technologies (ICTs) have been anticipated to improve education quality, knowledge deepening, and inclusive development (UNESCO, 2020). Marginalized people who have been assisted in many ways to access education, managed to improve their lifestyles. Hence, advocating for inclusive education worldwide, which has started with policies such as the Universal Declaration of Human Rights, the Convention on the Rights of Persons with disabilities (CRPD), the Education for All (EFA) Salamanca conference, among others.

Learners with disabilities use technology to access knowledge, to complete educational tasks, and to participate equally with their peers in the educational environment. ICT is capable of dealing with many types of learning difficulties and disabilities. For example, a child who has difficulty writing (dysgraphia) can write a text by dictating it and turning it into a written report with special software. A child with math problems (dyscalculia) can use a calculator to keep score, make some calculations and even play a game with a friend. A child who cannot speak (hearing impairment) may need a communication device, such as a language synthesizer, to participate in the lesson. A child who has vision problems can use software like Job Access with Speech (JAWS) to read and braille to write.

ICTs can help children with learning difficulties develop their hearing, math, organization, memory, reading, and writing skills (Alotaibi 2023). Use of ICT can help people, especially those with disabilities and learning difficulties, to make things easier and overcome some disadvantages, making them participate in society in a more equal way and have better employment opportunities. ICTs have bridged the gap in distance education by allowing students and teachers to be on different continents during the course (Mitchell et al., 2025). Everyone is included in the learning process, even those who cannot be physically present in schools, thus the advantage of E-education. That is teleconferencing where classroom could invite students around the world to gather together simultaneously for a topic discussion. Learners will have the opportunity to analyse problems and explore ideas as well as to develop concepts using technology while they are in different regions.

Nierling & Maia (2020) pointed out that technologies have helped in the adoption of health-related behaviors, through developing skills of attention, self-control, confidence and self-efficacy, and independent living. Engagement and motivation of children with learning difficulties and disabilities are also provided by using different technologies, as their motor and perceptual skills are developed (Alkhawalde & Khasawneh, 2024). Also, different applications and software help children with learning difficulties become independent and perform their daily activities (Papanastasiou, Drigas, Skianis, Lytras & Papanastasiou, 2018). It is necessary to create a supportive school environment, which will promote the development of each student.

ICTs help to create an individualized teaching program for children with learning difficulties and disabilities. Additionally, ICTs help students to communicate with each other and also with the class teacher through special devices. According to Della Volpe (2016), the use of technology in education creates a flexible curriculum that enhances the equal participation of students with learning difficulties and disabilities as they also prepare for daily life outside of school. The right to education concerns all children without exception, and it is essential for the personal development of every human being.

2. METHODOLOGY

In this paper, I followed the method of literature review of articles. Initially, the focus was on articles from the last five years. Articles from 2020 to date were used. However, other articles were considered necessary for a more complete and accurate investigation of the issue. Google Scholar was used as the main database of information with ICTs, Inclusion, learning difficulties and disabilities as the keywords. From the reviewed articles, the results of the use, roles and benefits of ICTs had to be clear and effective. The articles included in this paper have been published in the last five years, and the English language was used in these studies.

2.1 Findings and Discussions

2.1.1 Learning difficulties

Learning difficulties have always been in our classrooms, and teachers tend to call them slow learners and fail to identify their needs, thus resulting in poor results. These are neurological problems that affect basic skills such as reading, writing, and or math. They can also interfere with high-level skills like organizing, reasoning, planning, attention, and memory. There are specific learning difficulties which can be classified as dyslexia, dyscalculia, and dysgraphia.

2.2 ICTs and Dyslexia

One of the main groups of people with special educational needs who could obtain many benefits from ICT is dyslexics. Dyslexia is a learning difficulty that affects reading and related language-based processing skills. The severity can differ in each individual but can affect reading fluency, decoding, reading comprehension, recall, writing, spelling, and sometimes speech, and can exist along with other related disorders. Dyslexia is sometimes referred to as a Language-Based Learning Disability (REB 2020).

There are different types of technology used to facilitate the learning of children with dyslexia. These are text-to-speech, eye tracking, virtual learning environments, and games (Alkhawalde & Khasawneh, 2024; Faubel et al., 2022). Technology such as text-to-speech and voice recognition software are widely recommended to support students with dyslexia in accessing curricula and facilitating inclusive education (Fernández-Batanero et al., 2022). Interactive e-books allow readers to record their voices while reading. They allow the reader to listen and practice parts of the word to improve phonetic awareness, as well as the ability to memorize and recognize words.

Different computer hardware and general software were introduced (such as word processors, etc.), and their functions and specifications are suitable for dyslexic students. Some software helps learners read the text displayed on the computer, and it can also help reduce errors in reading (Fernández-Batanero et al., 2022). This gives confidence to learners and they become motivated to read for understanding and enjoyment. Aftab et al. (2022) stated that software related to word recognition and concept mapping helped students who struggle with written expression, for instance, students with dyslexia and autism spectrum disorder. Computers and tablets with games assist learners in reading and improve their spelling skills. These games can give feedback and some rewards or marks to learners on their progress

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in reading and spelling and they have simple rules. Learners will follow those rules when using the computers or tablets. Children who used these programs showed learning benefits in the written language and had better performance in their metacognitive reading skills (Kamran & Siddiqui, 2023).

Using games in learning motivates learners to want to continue playing the game, and at the same time, they are learning. Motivation is an important part of education, strongly influencing the extent to which students use effective learning strategies.

2.3 ICTs and Dysgraphia

A specific learning disability that affects a person's handwriting ability and fine motor skills. Problems may include illegible handwriting, inconsistent spacing, poor spatial planning on paper, poor spelling, and difficulty composing writing as well as thinking and writing at the same time.

Without a doubt, writing is a challenging endeavor (Roitsch et al., 2021) and can put a learner at a disadvantage, which can affect his/ her academic performance. Special education students may have difficulty learning basic writing skills and may fail to master them. They may struggle with setting a clear writing goal, translating their thoughts into coherent text, and revising the work to improve its meaning (Selvam & Gnana Piragasam, 2025). Students with dysgraphia may have problems with productivity, sentence complexity, spelling, grammar, lexical diversity, and handwriting (Harper et al., 2017). They may struggle to learn basic reading skills like phonological awareness, which may be related to writing difficulties (Mukhtarkyzy et al., 2025). This may lower academic confidence and motivation to work on challenging tasks like writing (Yenduri et al., 2023). Writing skills help primary school students learn, communicate, and demonstrate learning outcomes across academic domains. Fine motor skills include handwriting, visuo-motor, grapho-motor and hand–eye coordination (Selvam & Gnana Piragasam, 2025). Fine motor skills issues affect children's writing speed and accuracy, often measured by the number of legible letters or words they can write in a given time (Limpo & Graham, 2020). The difficulties that these students face due to poor fine and gross motor skills can be shown by poor handwriting. These students' cognitive abilities probably lie in concrete operations, so abstract thinking often requires tangible support (Chen et al., 2022). Writing skills are crucial, so students with dysgraphia who struggle with them are at risk of poor academic outcomes (Yenduri et al., 2023). According to Liman et al. (n.d.), students with dysgraphia have more writing difficulties than their peers.

The use of computers, tablets and AR can assist these learners to have legible writing that can be read by teachers and learners can successfully achieve or pass the examination. Technology can improve writing skills for people with dysgraphia by increasing visibility, reducing distractions, and connecting learning activities to real-world contexts (Selvam & Gnana Piragasam, 2025). Illegible handwriting can hinder academic success, making technology an essential tool to improve clarity and communication. Supportive writing technology provides pupils with a means of compensating for some of the limitations and difficulties they have during the writing process

Efforts have been made to introduce computer programs and portable writing aids to support individuals facing writing challenges. These initiatives include word processors, portable computers, talking word processors, spell checkers, word banks, word predictors, and speech recognition programs (Kamran & Siddiqui, 2023). Such technology can assist a wide range of people, including writers with physical disabilities, students with poor motor control, individuals with specific learning or literacy difficulties, and those struggling with organization, such as managing time and remembering tasks.

2.4 ICTs and Dyscalculia

A specific learning disability that affects a person's ability to understand numbers and learn math facts. Individuals with this type of LD may also have poor comprehension of math symbols, may struggle with memorizing and organizing numbers, have difficulty telling time, or have trouble with counting (Selvam & Gnana Piragasam, 2025).

In Math, there are interactive application that aims to improve the math skills of children with dyscalculia. Specifically, it provides exercises for recognizing numbers, sequences, mathematical symbols, and mathematical functions (Selvam & Gnana Piragasam, 2025; Vaccarella, n.d.). Also, electronic math worksheets help children with arithmetic problems to organize basic math sets using a computer. The usage of technology maximizes autonomy, independence and self-regulation in the performance or completion of these learners on academic work (Faubel et al.,

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2022). Learners with dyscalculia will be able to work on their own with little assistance and can complete the given assignment.

Use of technology motivate learners as they can play games while learning. The utilization of gamification has garnered considerable attention within diverse educational contexts, serving as a mechanism to augment student engagement and motivation (Alkhawalde & Khasawneh, 2024). Also their engagement and concentration is added with the use of technology.

2.5 Disabilities

2.5.1 ICTs and Intellectual disability

ID is a lifelong developmental disorder that prevents people from properly understanding what they see, hear, and generally feel. As a result, they face serious problems on a personal, social, academic, and professional level. ID disorder is characterized by difficulties in socializing and communicating and several obsessive behaviors (Kamran & Bano, 2024). Students with ID benefit from the use of ICTs, as they learn to manage the stress for inclusion into society, develop their reading and social skills, and improve their communication.

Technology for people with intellectual disabilities may also help them participate in social activities more equally. Technologies, equipment, devices, apparatus, services, systems, processes, and environmental modifications used by people with disabilities to get around social and infrastructure barriers that prevent them from being independent, fully participating in society, and going about their daily lives safely and easily (Ayub et al., 2024). It gives them autonomy and opportunities to do tasks on their own with limited assistance.

A study conducted by Khasawneh (2024) on the use of ICT on learners with ID shows that ICTs help learners with ID to be motivated and engaged in the learning process while boosting their self-efficacy and confidence. ICT promotes behavioral learning and everyday life skills such as time management, organization, and other skills aimed at promoting social acceptance, where children with ID often lag. A research study involving children with ID found that children with limited attention skills worked with the robot throughout the intervention without the need for a break. Also, technology helps to alleviate frustration, encourages a feeling of being socially accepted by peers, improves the motivation level and enhances the productivity level of students within and outside the class (Alghazo & Al-Otaibi, 2016; Fernández-Batanero et al., 2022; Khasawneh, 2024)

At the same time, computers will allow the person to monitor themselves during the interaction and possibly reduce their excessive movement. Also, computers in the classroom can present material in different ways. Computer programs help in the design and mapping of the mind, which improves the organization and flow of writing that are necessary for students with ADHD (McNicholl et al., 2024). According to research, the use of a laptop by students with ID helps in the organization of their daily program. The device compensates for their organizational and memory difficulties as students emphasize their work and their notes (Khasawneh, 2024). Research consistently shows that technology use significantly benefits students with IDs by increasing both task performance and independence, leading to increased academic engagement, achievement, and motivation (McNicholl et al., 2024). It provides better access to education and employment opportunities (Kamran & Siddiqui, 2023) and promotes social and academic participation, empowering individuals to engage more fully in their communities and making inclusive education a reality for students with disabilities (Fernández-Batanero et al., 2022; McNicholl et al., 2024).

In addition, the presentation, reception, transmission and comprehension of information concepts through the stimulation of multiple sensory channels makes learning an enjoyable, fun and interesting process (Faubel et al., 2022). Learners will learn to present neat work with the help of technology and they will also enjoy the learning process as they will be using, manipulating and play with technology.

2.6 ICTs and learners with visual impairment

Students with VI must participate and have access to the general curriculum, and technology is one accommodation that educators can use to help students with disabilities access the general education curriculum, allowing them to be included in the general education classroom (Olajumoke & Opeyemi, 2024).

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With the provision of better education opportunities, proper and suitable resources and adequate support, students with VI will fulfill their potential and achieve academic excellence (Olajumoke & Opeyemi, 2024; Suleiman et al., 2024) with technologies to bridge the gap created through problems associated with vision. Students with Visual Impairment are now able to have intellectual access and independent learning through the use of technology (Kamran & Bano, 2024; Olajumoke & Opeyemi, 2024).

The use of technology, such as Braille, has made these learners access information and education independently. With Braille, learners with VI can visualize text by feeling every word of it, and learning how these words are written (Olajumoke & Opeyemi, 2024). Braille gives them access to material on an equal level to their peers, which simultaneously influences their educational achievement and establishes a platform for them to be on a competitive level with others. (Khochen, 2014).

Advances in technology and ICT have given learners with VI a great advantage that they may participate as the same as their sighted peers do. Braille printers/embossers, which are just like standard printers, print or produce Braille copies of document text, refreshable Braille displays that translate and display information appearing on a computer screen into tactile Braille, etc. (Suleiman et al., 2024). Assistive software such as screen reading software, which uses to speech engine to read on-screen information e.g. JAWS, screen magnification software that increases the size of a computer screen to help them learn independently and give them confidence. With all these learners with VI can now operate a computer independently e.g., Zoom text and web access software, Braille Translation Software that converts text to Braille Duxbury (Sutar, 2021). Other technologies include navigation devices that enhance mobility like a walk smart cane (that uses smartphone integration via Bluetooth for obstacle detection, 3D high-tech smart glasses (that use feature recognition to provide audio information), one-on-one aide, highlighted lecture notes, IC recorder, white cane, closed-circuit television, handheld magnifier, video magnifier, abacus, adaptive calculator, adaptive measurement tools, digital voice recorder, magnification software, optical character recognition (Suleiman et al., 2024).

2.7 ICTs and learners with Hearing impairment

Hearing impairment refers to a partial or complete inability to perceive or distinguish sounds, often caused by abnormalities in the anatomy, physiology, or function of the ear (Dube, 2024). Hearing Impairment is an inability to hear well or not hear at all.

In recent years, ICTs have taken a leading role in society and, consequently, technologies for people with hearing impairment have achieved significant progress ((Rodríguez-Correa et al., 2023). In addition, the advent of the Information Age has made the web and other forms of digital accessibility relevant to multiple everyday processes (Botelho, 2021). These changes favor the establishment of increasingly broader social interactions using mobile devices and computers, which maximize the linguistic and discursive dynamism of language in a digital universe (Rodríguez-Correa et al., 2023). In the educational context, ICTs have been used to support learning processes, prepare teaching material, develop e-learning and web-based environments, create mobile applications, and add value to the education of people with special needs, as is the case with the Deaf community(Yenduri et al., 2023). Furthermore, technologies are fundamental to learners with Hearing impairment communication processes in work, educational, and social spheres (Kamran & Bano, 2024).

A study was conducted in the context of Pakistan, where technology was incorporated, and this involved the use of audio files for the hearing-impaired students. The students study independently and fulfilled their academic needs effectively (Siddiqua et al. 2022). With the use of software, learners managed to finish given tasks and were motivated and enjoyed learning independently with little assistance. Similarly, Kamran & Bano (202) discussed that electronic text and tape books resolved reading issues for learners with hearing impairment . Children with certain special educational needs struggle to attain four basic language skills. They find it difficult to read, or write, and these skills are hampered. To decrease the difficulties of children with special needs, software is available (Najam et al. 2022).

People with hearing impairment require a variety of accessible teaching strategies based on visual elements and not only on the written word (Rodríguez-Correa et al., 2023). This will help them access information as they have to visualize.

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Table 1. List of peer-reviewed research papers selected for systematic literature review

Study	Author (year)	Findings	Analysis
1	(McNicholl et al. (2021)	ICT seems to have enhanced the functional skills of individuals with disabilities.	Thematic analysis
2	(2021)	Experts have established the potential benefits of using iPads and computers as assistive technology (AT) to support students with disabilities. Utilizing iPads and computers as AT enhances the functional skills of individuals with disabilities.	
3	Krasniqi et al. (2022)	The findings suggest that the effect of technologies has significant potential to become a very effective approach. This will enable an independent life for people suffering from ID.	Thematic analysis
4	Siddiqua et al. (2022)	The findings reveal the influence of technology on both educational successes for children with disabilities as well as non-academic improvements. These included an increase in independence, more time for social activities, and the capability to develop strategies for homework success	Thematic analysis
5	Fernández-Batanero et al. (2022)	Findings of this study include that the use of assistive technologies is effective in increasing the inclusion and accessibility of students with disabilities.	Thematic analysis
6	Rodríguez-Correa et al. (2023)	For students having specific learning difficulties, educational software can help with skill building by offering multisensory experiences, positive reinforcement, individualized instruction, boost confidence and self- efficacy.	Thematic analysis
7	Suleiman et al. (2024)	Results showed that there would be sustained growth in this field; where ICTs for persons with visual impairments are expected to grow at a swift pace and impact on their lives.	Thematic analysis
8	Olajumoke & Opeyemi (2024)	Technologies can be used to support the education of students with different impairments, such as physical, visual and hearing impairment or learning disability. Application of these technologies generally results in positive outcomes	Thematic analysis
9	(Selvam & Gnana Piragasam, (2025)	AT helps students with special needs to develop independent thinking skills, maintain self-confidence, increase independence, and develop problem-solving skills.	Thematic analysis
10	(Mukhtarkyzy et al., 2025)	The study showed that the use of technology by people with intellectual disabilities has behavioral and social benefits.	Thematic analysis

3. CONCLUSION

I concluded that the use of ICTs offers many advantages. ICTs can become an alternative and reliable tool for inclusive education, as they support access to information and knowledge, the learning process, and the student-teacher interaction. Children with learning difficulties and disabilities benefit from their interaction with(Mukhtarkyzy et al., 2025) ICTs. Initially, the time of the intervention is a very important process that enables learners to know how to use ICT at an early stage and they become used to it. In addition, ICTs offer a more predictable and attractive environment to the children who feel more secure and actively involved in the intervention process. Also, ICTs activate their various senses with the help of pictures, graphs, videos, and develop learning strategies that motivate and

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build one's self-esteem and confidence. However, it is important that the intervention is individualized and emphasis is placed on the needs and abilities of each child. Technologies must be user-friendly, environmentally friendly, low-cost, and easy to find and use.

The literature suggests that ICTs help all students better understand, assimilate, and consolidate cognitive materials such as mathematics and language. Regarding students with special needs, in many cases, ICTs are the only solution for their access to knowledge, information, and learning, as they contribute to the equal participation of people with learning difficulties and disabilities in social activities and offer them better career opportunities.

REFERENCES

Alghazo, A. M., & Al-Otaibi, B. E. (2016). Using Technology to Promote Academic Success for Students with Learning Disabilities. *Journal of Studies in Education*, *6*(3), 62. https://doi.org/10.5296/jse.v6i3.9638

Alkhawalde, M. A., & Khasawneh, M. A. S. (2024). Designing gamified assistive apps: A novel approach to motivating and supporting students with learning disabilities. *International Journal of Data and Network Science*, *8*(1), 53–60. https://doi.org/10.5267/j.ijdns.2023.10.018

Ayub, A., Shoaib, A., & Amjad, F. (2024). Empowering Students with Intellectual Disability: Role of Assistive Devices. *Global Sociological Review*, *IX*(I), 57–63. https://doi.org/10.31703/gsr.2024(IX-I).05

Dube, L. (2024). *Dropping out of learners with hearing impairment from inclusive classes in urban schools in Bulawayo*.

Faubel, J. M. E., Fernández-Sogorb, A., Martinez-Roig, R., & Álvarez-Herrero, J.-F. (2022). *Transformando la educación a través del conocimiento*. 13. https://www.researchgate.net/publication/367332938

Fernández-Batanero, J. M., Montenegro-Rueda, M., Fernández-Cerero, J., & García-Martínez, I. (2022). Assistive technology for the inclusion of students with disabilities: A systematic review. *Educational Technology Research and Development*, *70*(5), 1911–1930. https://doi.org/10.1007/s11423-022-10127-7

Harper, K. A., Kurtzworth-Keen, K., & Marable, M. A. (2017). Assistive technology for students with learning disabilities: A glimpse of the livescribe pen and its impact on homework completion. *Education and Information Technologies*, *22*(5), 2471–2483. https://doi.org/10.1007/s10639-016-9555-0

Kamran, M., & Bano, N. (2024). Employing Assistive Technology (AT) for Children with Special Educational Needs: A Case Study from Pakistan. *The Pakistan Development Review*, 203–220. https://doi.org/10.30541/v63i2pp.203-220

Kamran, M., & Siddiqui, S. (2023). Assistive Technology Integration: Promoting Inclusion and Achieving Sustainable Development Goals. In P. Escudeiro, N. Escudeiro, & O. Bernardes (Eds.), *Advances in Educational Technologies and Instructional Design* (pp. 1–25). IGI Global. https://doi.org/10.4018/978-1-6684-6868-5.ch001

Khasawneh, M. A. S. (2024). Evaluating the Efficacy of Tablet-Based Assistive Technology in Saudi Special Education Settings. *International Journal of Learning, Teaching and Educational Research*, *23*(6), 547–561. https://doi.org/10.26803/ijlter.23.6.25

Liman, A. N., Adebisi, R. O., Jerry, J. E., & Adewale, H. G. (n.d.). Efficacy of Assistive Technology on the Educational Programme of Children with Learning Disabilities in Inclusive Classrooms of Plateau State Nigeria. . . *Pp*.

McNicholl, A., Casey, H., Desmond, D., & Gallagher, P. (2021). The impact of assistive technology uses for students with disabilities in higher education: A systematic review. *Disability and Rehabilitation: Assistive Technology*, *16*(2), 130–143. https://doi.org/10.1080/17483107.2019.1642395

McNicholl, A., Desmond, D., & Gallagher, P. (2024). Feeling valued: The interplay of assistive technology and identity. *Disability and Rehabilitation: Assistive Technology*, *19*(7), 2580–2591. https://doi.org/10.1080/17483107.2023.2294987

DOI: 10.47505/IJRSS.2025.7.4

Mitchell, J., O'Loghlen, J., Bray, E., McLennan, V., McLeod, B., Brough, R., Hogan, C., Geraghty, T., & Ownsworth, T. (2025). Assistive technology at work: A metasynthesis of the perspectives of people with spinal cord injury/damage. *Disability and Rehabilitation: Assistive Technology*, 1–20. https://doi.org/10.1080/17483107.2025.2475151

Morris, B., Warren, A., Bradwell, H., & Noonan, M. (2023). Barriers and facilitators to the adoption and use of assistive technology for adults with an intellectual disability who live in supported accommodation: A mixed methods systematic review protocol. *JBI Evidence Synthesis*. https://doi.org/10.11124/JBIES-22-00313

Mukhtarkyzy, K., Smagulova, L., Tokzhigitova, A., Serikbayeva, N., Sayakov, O., Turkmenbayev, A., & Assilbayeva, R. (2025). A systematic review of the utility of assistive technologies for SEND students in schools. *Frontiers in Education*, *10*, 1523797. https://doi.org/10.3389/feduc.2025.1523797

Nierling, L., & Maia, M. (2020). Assistive Technologies: Social Barriers and Socio-Technical Pathways. *Societies*, *10*(2), 41. https://doi.org/10.3390/soc10020041

Olajumoke, A., & Opeyemi, R. (2024). *EXPLORINGTHE USE OF LIBRARY ASSISTIVE TECHNOLOGY FOR LEARNING BY VISUALLY IMPAIRED STUDENTS OF AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA*. *24*.

Rodríguez-Correa, P. A., Valencia-Arias, A., Patiño-Toro, O. N., Oblitas Díaz, Y., & Teodori De La Puente, R. (2023). Benefits and development of assistive technologies for Deaf people's communication: A systematic review. *Frontiers in Education*, *8*, 1121597. https://doi.org/10.3389/feduc.2023.1121597

Selvam, B., & Gnana Piragasam, G. A. (2025). Augmented reality's potential for addressing writing challenges in students with learning disabilities. *British Journal of Special Education*, 1467-8578.70005. https://doi.org/10.1111/1467-8578.70005

Suleiman, A. I., Shaame, A. A., & Juma, S. K. (2024). Exploring The Impact of Assistive Technology on Academic Achievement for Visually Impaired Students in Zanzibar's Primary Schools. *Journal of Advances in Education and Philosophy*, *8*(11), 689–702. https://doi.org/10.36348/jaep.2024.v08i11.006

Vaccarella, P. (n.d.). *Barriers and Facilitators of Assistive Technology Use Among Adolescent Students with Learning Disabilities: A Mixed Method Exploration.*

Yenduri, G., Kaluri, R., Rajput, D. S., Lakshmanna, K., Gadekallu, T. R., Mahmud, M., & Brown, D. J. (2023). From Assistive Technologies to Metaverse—Technologies in Inclusive Higher Education for Students with Specific Learning Difficulties: A Review. *IEEE Access*, *11*, 64907–64927. https://doi.org/10.1109/ACCESS.2023.3289496

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