

p-ISSN : 2708-2091 | e-ISSN : 2708-3586

DOI(Journal): 10.31703/gsr
DOI(Volume): 10.31703/gsr/.2024(IX)
DOI(Issue): 10.31703/gsr.2024(IX.I)



www.gsrjournal.com

GSR
Global Sociological Review

GSR



GLOBAL SOCIOLOGICAL REVIEW
HEC-RECOGNIZED CATEGORY-Y

VOL. IX, ISSUE I, WINTER (MARCH-2024)



Double-blind Peer-review Research Journal
www.gsrjournal.com
© Global Sociological Review

Article title

Empowering Students with Intellectual Disability: Role of Assistive Devices

Global Sociological Review

p-ISSN: 2708-2091 e-ISSN: 2708-3586

DOI(journal): 10.31703/gsr

Volume: IX (2024)

DOI (volume): 10.31703/gsr.2024(IX)

Issue: I (Winter-March 2024)

DOI(Issue): 10.31703/gsr.2024(IX-I)

Home Page

www.gsrjournal.com

Volume: IX (2024)

<https://www.gsrjournal.com/Current-issues>

Issue: I-Winter (March-2024)

<https://www.gsrjournal.com/Current-issues/9/1/20234>

Scope

<https://www.gsrjournal.com/about-us/scope>

Submission

<https://humaglobe.com/index.php/gsr/submissions>

Google Scholar



Visit Us



Abstract

Assistive technologies may be useful in empowering students with intellectual disabilities, and teachers can use them to assist their students learn and accomplish at the highest levels possible. This study explains how teachers who work with special students with intellectual disabilities perceive the support functions of assistive technology. Twelve teachers who work with students with intellectual disabilities were interviewed by the researcher. Interview data was analyzed by using IPA. The findings of this study may be useful when evaluating support for people with intellectual disabilities, not just in education but also in vocational training, employment support, and work from home. Quick Response triggers on printed cards to activate movies that model the sequence of actions or directions for performing a task using assistive technology. Students can learn, and practice the procedures and skills taught in school and at work at their own pace and in a safe setting using this technology.

Keywords: Intellectual Disability, Assistive Devices, Special Need Education.

Authors:

Ayesha Ayub: M.Phil. Scholar: Department of Education, University of Management and Technology Lahore, Punjab, Pakistan.

Almas Shoaib: (Corresponding Author)

Assistant Professor, Department of Education, University of Management and Technology Lahore, Punjab, Pakistan.
(Email: almas.shoaib@umt.edu.pk)

Faisal Amjad: PhD Scholar, Department of Special Education, Division of Education, University of Education, Lahore, Punjab, Pakistan

Pages: 57-63

DOI: 10.31703/gsr.2024(IX-I).05

DOI link: [https://dx.doi.org/10.31703/gsr.2024\(IX-I\).05](https://dx.doi.org/10.31703/gsr.2024(IX-I).05)

Article link: <http://www.gsrjournal.com/article/A-b-c>

Full-text Link: <https://gsrjournal.com/fulltext/>

Pdf link: <https://www.gsrjournal.com/jadmin/Aurher/31rv1olA2.pdf>

Citing Article

05	Empowering Students with Intellectual Disability: Role of Assistive Devices						
	Author	Ayesha Ayub Almas Shoaib Faisal Amjad		DOI	10.31703/gsr.2024(IX-I).05		
Pages	57-63	Year	2024	Volume	IX	Issue	I
Referencing & Citing Styles	APA	Ayub, A., Shoaib, A., & Amjad, F. (2024). Empowering Students with Intellectual Disability: Role of Assistive Devices. <i>Global Sociological Review</i> , IX(1), 57-63. https://doi.org/10.31703/gsr.2024(IX-I).05					
	CHICAGO	Ayub, Ayesha, Almas Shoaib, and Faisal Amjad. 2024. "Empowering Students with Intellectual Disability: Role of Assistive Devices." <i>Global Sociological Review</i> IX (1):57-63. doi: 10.31703/gsr.2024(IX-I).05.					
	HARVARD	AYUB, A., SHOAIB, A. & AMJAD, F. 2024. Empowering Students with Intellectual Disability: Role of Assistive Devices. <i>Global Sociological Review</i> , IX, 57-63.					
	MHRA	Ayub, Ayesha, Almas Shoaib, and Faisal Amjad. 2024. 'Empowering Students with Intellectual Disability: Role of Assistive Devices', <i>Global Sociological Review</i> , IX: 57-63.					
	MLA	Ayub, Ayesha, Almas Shoaib, and Faisal Amjad. "Empowering Students with Intellectual Disability: Role of Assistive Devices." <i>Global Sociological Review</i> IX.I (2024): 57-63. Print.					
	OXFORD	Ayub, Ayesha, Shoaib, Almas, and Amjad, Faisal (2024), 'Empowering Students with Intellectual Disability: Role of Assistive Devices', <i>Global Sociological Review</i> , IX (1), 57-63.					
	TURABIAN	Ayub, Ayesha, Almas Shoaib, and Faisal Amjad. "Empowering Students with Intellectual Disability: Role of Assistive Devices." <i>Global Sociological Review</i> IX, no. I (2024): 57-63. https://dx.doi.org/10.31703/gsr.2024(IX-I).05 .					



Cite Us

**Title****Empowering Students with Intellectual Disability: Role of Assistive Devices****Authors:**

Ayesha Ayub: M.Phil. Scholar, Department of Education, University of Management and Technology Lahore, Punjab, Pakistan.

Almas Shoaib: (Corresponding Author) Assistant Professor, Department of Education, University of Management and Technology Lahore, Punjab, Pakistan. (Email: almas.shoaib@umt.edu.pk)

Faisal Amjad: PhD Scholar, Department of Special Education, Division of Education, University of Education, Lahore, Punjab, Pakistan

Abstract

Assistive technologies may be useful in empowering students with intellectual disabilities, and teachers can use them to assist their students learn and accomplish at the highest levels possible. This study explains how teachers who work with special students with intellectual disabilities perceive the support functions of assistive technology. Twelve teachers who work with students with intellectual disabilities were interviewed by the researcher. Interview data was analyzed by using IPA. The findings of this study may be useful when evaluating support for people with intellectual disabilities, not just in education but also in vocational training, employment support, and work from home. Quick Response triggers on printed cards to activate movies that model the sequence of actions or directions for performing a task using assistive technology. Students can learn, and practice the procedures and skills taught in school and at work at their own pace and in a safe setting using this technology.

Keywords:

[Intellectual Disability](#),
[Assistive Devices](#),
[Special Need Education](#)

Contents

- [Introduction](#)
- [Literature Review](#)
- [Methodology](#)
- [Analysis and Findings](#)
- [Conclusion](#)
- [Recommendation](#)
- [References](#)

Introduction

Individuals with intellectual disabilities may be able to do increasingly demanding and responsible activities in the workplace, such as managing complicated

computer-controlled machinery, thanks to innovative assistive technology that gives them more autonomy in their roles. They could free up specialist workers and boost the organization's efficiency in this way. This assistive 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" (Hersh & Johnson, 2008).

Assistive equipment is assistive adaptive and rehabilitative devices intended to support or expand human function or skills for people with varied intellectual disabilities. As a result, these technologies might range from electronic communication systems and software to something as simple as a telephone handle (Wilson et al., 2009). Examples of electronic assistance devices include voice recognition software, visual organizers that help students order their writing, and text-to-speech software that translates printed text into voice (Lamond & Cunningham, 2019). They are made specifically or made available to the general public in order to avoid, compensate for, relieve, or negate impairment, disability, or handicap, and to increase an individual's autonomy and quality of life (Lersilp, et al., 2018). As a result, the definition of assistive devices utilized in this study remains broad: any technology item that enables people with intellectual disabilities to learn and engage in the same way that their peers without special needs do. The data will reveal the exact assistive technology that will be useful for this study. Special needs, like assistive devices, are a broad term that encompasses a variety of disabilities or impairments that affect children and young people. Visual, hearing, physical, and intellectual challenges, as well as autism and language and communication difficulties, can all cause special requirements. By offering assistance, such as adjusting the exercises and course material to a student's particular needs in a constrained setting, assistive technologies help students perform better. In order to learn more effectively, students can use assistive technologies (Constantinescu, 2015).

Technology is developing quickly in today's culture, and this has given its users a plethora of new opportunities. One group that has benefited from the technological revolution is students with disabilities. Assistive technology, in particular, can open many

doors for students with disabilities, enabling them to take part in activities that were previously unavailable or restricted to them. These students rely on their professors to give them access to accessible content by giving them the assistive technology tools and services they require (Tony, 2019).

The Individuals with Disabilities Education Act of 1990 (IDEA), which made sure that students with disabilities received a free and adequate public education in the least restrictive setting possible, was the most significant piece of legislation. Using assistive technology tools and services, students with impairments were able to participate in general education lessons. Children with disabilities were impacted by the Individuals with Disabilities Education Act of 2004 since it mandated that the IEP team evaluate whether the kid needs assistive technology devices and services.

The educational opportunities for students are improved by assistive technology tools and services, which also give disabled students a range of possibilities. When planning, teaching, and providing learning opportunities for students, teachers must be aware of the advantages that assistive technology offers students in terms of learning, socializing, and self-management. They must also leverage these advantages. Researching assistive technology tools and services that will help students with disabilities advance their social, intellectual, and self-management skills should be the responsibility of teachers (Edyburn, 2017).

These tools that encourage active engagement in the classroom are continually changing and evolving (Lahm and Sizemore, 2001). This project seeks to conduct qualitative research on assistive technology deployment trends and models in the educational process. Assistive technologies and implementation approaches for providing assistive technology help for students with special educational needs. Educational technology advancements continue to improve teachers' ability to boost learning methodologies, and many of these technological tools have been used in special education instruction for more than two decades.

Literature Review

For this inquiry, the literature in a number of related fields was evaluated. It was especially interesting to hear about the products and services offered by assistive technology companies as well as their advantages and disadvantages. A thorough assessment of the literature was assembled using a number of databases. An overview of the many assistive technology options used in nearby classrooms is provided in the first section of this literature review. The ability to improve student learning is the second benefit of utilizing assistive technology in the classroom. The third component of the literature review examines whether or not children are included in the planning process, and the fourth section examines the obstacles that these children face when getting assistive technology.

Any item, piece of equipment, or product system that is used to augment, maintain, or improve the functional capacities of people with disabilities, whether purchased commercially off the shelf, adapted, or customized, is referred to as assistive technology (IDEA, 1990). Any activity that the kid has to do, such as conversing, moving around the school, seeing, hearing, reading, or writing, could be related to functional competency (Bleak and Abernathy, 2022).

The difference between instructional and assistive technology, which is frequently blended, has become less distinct over the past ten years as technology has become smaller, cheaper, more powerful, and easier to use. One way to think about it is that instructional technology is more concentrated on the classroom, whereas assistive technology is more tailored to each individual student. However, with the widespread use of computers in all facets of education for all pupils, the distinction is disappearing. The target audience is what separates assistive technology from instructional technology. Access to assistive technology makes it less beneficial and more instructional after all students have it (Edyburn, 2017).

Simply said, assistive technology is a tool that gives you more independence when performing activities. Reducing dependency on parents, siblings, friends, and teachers, can assist a student in making the

transition into adulthood by boosting self-esteem and lowering anxiety. It's crucial to think of assistive technology as a scaffold that gives disabled students access to material, helps them understand it, and then allows them to share that understanding with others (Alasmari, 2021). The literature review looked at all the advantages that assistive technology for students with disabilities has to offer. For children with disabilities, technology is playing a bigger role in both regular and special education. With the use of assistive technology, which can boost abilities and make up for impairments, students can view themselves and their gifts in new ways.

Students gain from assistive technology tools and services by having more possibilities for social interaction and communication, as well as more opportunities to engage in activities that provide information meaning and a feeling of community. The curiosity and interest of peers might be piqued through assistive technology. When a friend of theirs who has a disability can use complex assistive technology, students are intrigued. When children with disabilities can demonstrate or educate their friends about assistive technology, it boosts their self-worth and self-esteem (Hasselbring and Glaser, 2000). Researching assistive technology tools and services that can aid disabled students with academics, social interaction, and self-management should be a top goal for teachers. In order to overcome their learning difficulties, students with disabilities can employ assistive technology products and services in a variety of ways. Teachers must look for ways to enhance these academic, social, or self-management benefits if they are to effectively fulfil the requirements of their students with disabilities. When planning, teaching, and providing learning opportunities for students, teachers must take into account the advantages that assistive technology offers students in terms of learning, socialization, and self-management. (Murry, 2018).

Teachers need to be aware of the difficulties in successfully implementing assistive technology for students with impairments. Children with special needs may feel empowered by technology that can help them overcome obstacles and get more equitable access to successful learning opportunities because

assistive technology empowers students with disabilities to try new things. They may have difficulties with equipment accessibility, time management, financial expense, financial resources, teacher expertise, and teacher training are just a few of the factors to consider (Wahome, 2021). According to Copley and Ziviani (2004), the following issues affect the accessibility and utilization of assistive technology: Lack of funding and/or high device prices, a lack of product information, a lack of reviews or evaluations, an absence of products, a device that is too difficult for a person to operate, a product that requires too much maintenance, and a lack of instruction on how to use the device are all factors that should be considered.

Methodology

The study employed a qualitative methodology with a phenomenological research method to investigate how assistive technology is used in the field of special education. The special education teachers (12) who are teaching children with intellectual disabilities were selected for this study. These teachers are from Lahore and work in the public or private sector. A self-developed interview technique with five open-ended questions serves as the data-gathering method. Interpretative phenomenological analysis was used to analyze the current status of teachers' lived experiences.

Analysis and Findings

Assistive Devices

The following devices were explored from teachers' interviews: LCD, Mobile and iPad. It may help the child to be able to listen and see the words while reading and writing with phonics. Pencil grippers are used for children who have low fine motor skills. These devices help to grip the pencil easily and start writing at the initial stage. Hard-of-hearing students used hearing aids in the classroom. Model letters, toys, blocks and numeral devices are used for the concrete concept. Workbooks, worksheets, chart paper and white paper these devices are most commonly used in every classroom to meet the objectives of daily lessons.

Challenges

The difficulties that participants in this process had when deciding on, implementing, and using assistive technology were numerous. This study has important implications for overcoming the challenge of insufficient teacher understanding of assistive technology services, and it must be done so in order to effectively use assistive technology. Lack of resources is the biggest challenge for assistive devices implementation. It is because sometimes it's not easy to provide the related Assistive devices which is the need of the hour for the student due to the low budget of the school.

Several teachers described the lack of resources and updated assistive devices.

"He said that I prepare customized hands-on activities for the students, whatever material is required in the process of the making, and the school can't provide it all the time. Then I buy it on my own, so lack of resources and updated Assistive devices is the biggest hurdle. Following is the list of challenges, Lack of knowledge, poor governance, including laws, regulations, and national initiatives, lack of items, lack of services the absence of access, financial obstacles and a lack of human resources (Teachers 4)

However, one of the biggest obstacles to the introduction of assistive technology in schools is a lack of training for school staff. The learning of students could be impacted by providing instructors with training on various technologies and methods for incorporating such technologies into the curriculum. Lack of time and ignorance of training options are two common reasons given by teachers who do not fully utilize technology. The assertion that instructors lack the training to provide the essential and efficient assistive technology equipment and services to satisfy the needs of their pupils with intellectual impairments is reflected in the teacher's remark. The most common obstacle to using assistive devices is their high price and the lack of funding to cover these costs. Two sub-themes within the financial issues cited by special teachers were found as expense and lack of finances.

Students with impairments may see a difference in their lives as a result of assistive technology. The regulations governing the gadgets and how they

affect the classroom must also be understood by teachers. They must also be able to identify the advantages and utilize that information to select devices that are appropriate for each student. If teachers are not up to the task, the utilization and effectiveness of assistive technology for children with disabilities will be significantly limited.

Many teachers were pleased by their iPad, especially by the academic advantages it offered to their students and how simple it was to use.

"I believe that it aids in practising some of the abilities I have taught. For instance, yesterday I had to complete a progress monitoring task. Today I would like to use my iPad to work on a rhyming exercise like a poem, music, phonics, or story-telling activity while I am monitoring the progress of one student. I could then assess the outcomes and see where I needed to improve. In this manner, students are truly practising a certain concept that I taught rather than just doing some pointless worksheets or wasting time. I don't want them to be playing a game there, really. They must be performing with special talents there, in my opinion. (Teachers 3)

Benefits:

Overall it is positively effective for children with intellectual disability whenever it is adapted for their specific needs according to the task or curriculum. I think that the effectiveness of the use of assistive devices. Teachers may know where it needs to be added and where it should not. If you do not need Assistive devices to be part of your teaching while working with children, there is no need to use them without any benefit.

Some teachers said that it has a positive impact on student learning.

"She said that Positive change in student learning. Students work competently and complete their tasks with the help of these devices very easily. Schools can create more inclusive classrooms and empower students with disabilities to participate in the social activities". (Teacher 2).

Another teacher describes the student to live a healthy, productive and independent life.

According to him, assistive technology enables students to engage in daily life and education while also leading healthy, successful, independent, and dignified lives. The demand for official health and support services is decreased by assistive technology. Without these tools, students cannot finish their assignments, which is particularly ineffective for students at the mildest academic levels. (Teacher 3)

Teaching strategies and planning process of IEP:

Teachers can readily differentiate thanks to technology. There are numerous systems that enable teachers to change the degree of difficulty of reading assignments, for instance. With the use of technology, teachers can make minor adjustments to assignments, such as adding more resources or help, without having to buy a lot of extra supplies for a small number of pupils. It is simpler for students to work on various activities utilizing technology when it is impossible for every student to do the same task. The other students won't notice when a few classmates are working on something else if every student has an iPad in their hands. Students who require remediation may find it less embarrassing as a result.

An inspiring experience for pupils with exceptional needs, according to other teachers.

"Students are assisted in their participation by technology. Today's educational system aims to place special needs students in the least restrictive setting possible. This entails giving them access to the same events and curriculum as their peers who aren't impaired. For students with particular needs, this can be an empowering experience. Teachers are now figuring out methods to let children with special needs demonstrate their knowledge and talents rather than keeping them in separate classrooms, and technology is making this possible (T 3).

A common understanding among teachers may govern the classroom where student know their routine for the day.

"Teacher may organize a class in a way that she can set different corners in the class using Assistive devices like visual schedules corner for letting students know their routine of the day, a corner for some iPad games or education games, corner of different seating

accessories like bean bags, differently designed chairs, any tent with lights" (T 2).

When a teacher instructs a class, "You have 10 minutes left to work on this test," students could grow apprehensive. Using speech-to-text software, a tool that makes the idea of time simpler to understand and monitor by giving a clear indication of the time left. Writing projects might be difficult for students who have print difficulties like dyslexia. However, if your school makes use of Google Docs, both your pupils who are disabled and those who do not have access to voice typing, a crucial free feature that can be accessed under the Tools tab. The use of group activities, project-making, activity-based learning, and activity-based teaching should be substituted for traditional teaching techniques. IEP (Individualized Educational Plan) for students with disabilities is developed by a multidisciplinary team in accordance with policy. Parents and the child should be involved in this assessment team, which may include a teacher, psychologist, doctor, social worker, speech therapist, and physiotherapist. However, due to a lack of qualified employees at our centre, only teachers are able to create IEPs that take into account the strengths and weaknesses of students with intellectual disabilities. Speech therapists and psychologists occasionally work with parents in this process. According to the student's needs, the teacher plans the activities and assistive technology for them in their IEP.

Conclusion

The conclusion of this study is that there are no high-tech assistive devices used in our daily classrooms for all students with intellectual disability. Most researchers collect the data from the government sector. The teacher faced financial barriers due to the shortage of a low budget. Low-tech devices are used in our classes such as; whiteboard and chart paper. In Schools, disciplinary team members include only

special education teachers, parents, students, psychologists and therapists. They developed the IEP according to the student's strengths and weaknesses. Teachers designed low-tech assistive devices with their own budget and officials such as; chart papers, flashcards, pencil grippers, mobile phones, iPads, and worksheets these are not fully but a little bit beneficial for students. To consider, implement, and use assistive services and technology to fulfil the requirements of their students with intellectual disabilities, teachers lack the necessary knowledge. They need more training to overcome these barriers. Most of the respondents said students and parents are not involved in developing IEP but the student and parents are equal team members of IEP without the cooperation of parents, teachers are not preparing a successful IEP. When students take the initiative during the IEP conference, parents feel more at ease asking questions of their children and the meeting becomes more of a team effort.

Recommendation

- The government is required to take steps to overcome budget-related financial issues and encourage different strategies to use high-tech assistive devices in the classroom.
- In-service teachers training programme be conducted.
- Only twelve School teachers are included in our study. Therefore, a future study that involves more than twelve teachers from the public and private sectors may be done.
- Similarly, a future study can look at the differences in using assistive technology in the classroom in public and private schools.
- The infrastructure of the school needs to be promoted.

References

- Alasmari, O. A. (2021). *Barriers to Reducing the Assistive Technology Use for Students with Autism as Perceived by Special Education Teachers in Saudi Arabia*. Digital Commons @ the University of South Florida. <https://digitalcommons.usf.edu/etd/8718/>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Bleak, K. W., & Abernathy, T. (2022). Individuals with disabilities education act (IDEA). *Individuals with Disabilities Education Act (IDEA)*.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Constantinescu, C. (2015). Assistive Technology Use Among Secondary Special Education Teachers in a Private School for Students with Specific Learning Disabilities: Types, Levels of Use and Reported Barriers.
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Copley, J., & Ziviani, J. (2004). Barriers to the use of assistive technology for children with multiple disabilities. *Occupational Therapy International*, 11(4), 229–243. <https://doi.org/10.1002/oti.213>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Edyburn, D. L. (2017). Assistive Technology and Students with Mild Disabilities. *Focus on Exceptional Children*, 32(9). <https://doi.org/10.17161/foec.v32i9.6776>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Hasselbring, T. S., & Glaser, C. H. W. (2000). Use of Computer Technology to Help Students with Special Needs. *Future of Children/ the Future of Children*, 10(2), 102. <https://doi.org/10.2307/1602691>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Hersh, M., & Johnson, M. (2008). Assistive technology for visually impaired and blind people. In *Springer eBooks*. <https://doi.org/10.1007/978-1-84628-867-8>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lahm, E. A., & Sizemore, L. (2001). Factors that Influence Assistive Technology Decision Making. *Journal of Special Education Technology*, 17(1), 15–26. <https://doi.org/10.1177/016264340201700102>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lamond, B., & Cunningham, T. (2019). Understanding teacher perceptions of assistive technology. *Journal of Special Education Technology*, 35(2), 97–108. <https://doi.org/10.1177/0162643419841550>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lersilp, S., Putthinoi, S., & Lersilp, T. (2018). Facilitators and Barriers of Assistive Technology and Learning Environment for Children with Special Needs. *Occupational Therapy International*, 2018, 1–9. <https://doi.org/10.1155/2018/3705946>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Murry, F. R. (2018). Using assistive technology to generate social skills use for students with emotional behaviour disorders. *Rural Special Education Quarterly*, 37(4), 235–244. <https://doi.org/10.1177/8756870518801367>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Tony, M. P. (2019). *The effectiveness of assistive technology to support children with specific learning disabilities: Teacher perspectives*. (Unpublished Master thesis, Jonkoping University).
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Kunka, A. J., & Wahome, N. (2021). *The Role of Assistive Technology in the Education of Children with Special Needs: Teacher's Perspectives*. DIVA. <https://urn.kb.se/resolve?urn=urn%3Anbn%3Ase%3Aliu%3Adiva-183126>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Wilson, D. J., Mitchell, J. M., Kemp, B. J., Adkins, R. H., & Mann, W. C. (2009). Effects of assistive technology on functional decline in people aging with a disability. *Assistive Technology*, 21(4), 208–217. <https://doi.org/10.1080/10400430903246068>
[Google Scholar](#) [Worldcat](#) [Fulltext](#)