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Improving Reading Comprehension in Kids with Special Needs

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Abstract. Students with special needs such as autism, cognitive impairment, and learning disabilities, struggle when it comes to reading new material and cannot successfully comprehend the message due to a multitude of reasons that are explored in the article. This study researches the effects that technology can have in helping them comprehend what they read through the use of text-to-speech, interactive material, and other methods to better help engage and make sure they retain information.

Keywords. Learning disabilities, breathing disorders, virtual reality, robotics, brain-computer interface, biofeedback, mobile apps, digital games, telehealth services, metacognition in breathing, academic achievement, cognitive and emotional regulation, special needs, special education, autism, cognitive skills, Computer-assisted Language Learning (CALL), Interaction Patterns, Pair Work, Small Group Work, Individual-content Interaction, Vocabulary Development

Introduction

Reading comprehension is the ability to read, understand, and make connections between new material and one's previous body of knowledge. The majority of contemporary students no longer read books as part of their education. They read mostly on electronic devices such as computers and cell phones (Elleman & Oslund, (2019). Teachers must aid pupils in reading and understanding literature. In light of the exponential expansion and rapid evolution of technology in the twenty-first century, it would be prudent for educators to incorporate and adapt technological tools in the classroom to teach pupils to read with comprehension. It has been suggested, in light of the present pandemic problem, that technology improvements have always played a key role in the classroom. Teachers must have access to innovative technology that may aid student learning.

The term "using modern technology" in the field of language instruction refers to the employment of unique techniques that are adapted to the demands of teaching English as a second language and assist students in attaining their objectives. Unquestionably, technology has become a vital component of many classrooms and educational tools. This is of the highest relevance in the area of second language learning, as it offers several chances to enhance the efficiency and effectiveness of typical English language pedagogies. Many teachers,

administrators, academics, and lawmakers now believe that digital devices have enormous potential as teaching aids for literacy instruction because of the fast technological advances over the last several decades.

Incorporating even the most basic features of current e-reading technology, such as the ability to increase or decrease the text size on the screen, using text-to-speech capabilities to provide dual feedback of text, or collaborating on learning activities over the Internet, could significantly enhance the educational experience for many students. As technology becomes more widespread in our everyday lives, we must reconsider the concept of bringing technology into the curriculum and instead concentrate on incorporating technology into education to boost student learning. From the construction of learning activities throughout the teaching and learning processes, technology has become an integral part of the educational experience and a formidable obstacle for educators.

How special needs students struggle with learning material due to their disability

Special needs students often struggle with learning material due to their disabilities. This can be especially true for those with cognitive disabilities, who may have difficulty processing information or retaining what they have learned. Additionally, people with physical disabilities may find it difficult to access learning materials or participate in educational activities. This can make it difficult for them to keep up with their peers and may lead to frustration and feeling left behind. There are several ways to help special needs students overcome these challenges. First, it is essential to make sure that learning materials are accessible to them. This may mean using alternative formats such as Braille or large print or providing audio or video versions of texts (Kim et al., 2021). Additionally, it may be necessary to provide accommodations such as extra time, breaks, or assistance with taking notes. Second, it is essential to provide support in the classroom. This may mean working with the teacher to ensure that the special needs student can participate fully in activities and is not left out. Additionally, it may be helpful to have a peer tutor or mentor who can provide assistance and encouragement. Finally, it is essential to encourage special needs students to advocate for themselves. This may mean teaching them how to communicate their needs to teachers and other students or helping them to find support groups or resources. We can help special needs students overcome the challenges they face in accessing and succeeding in education by providing support and assistance.

Reading comprehension is a critical cognitive function that contributes to academic performance and engagement in most adult activities. As a result, children with learning difficulties and special needs who struggle with text comprehension may be more vulnerable to academic and personal failure, especially when combined with additional obstacles. Some studies compared the impact of a computer interface vs printed texts on reading comprehension in youngsters of typical development. Despite the fact that children and teens performed lower on comprehension tests while reading digital texts than when reading printed texts, they favored digital texts over printed materials.

According to a United Nations Educational, Scientific and Cultural Organization (UNESCO) report, approximately 93 million children with disabilities worldwide are not attending school. This means that children with disabilities are four times less likely to be enrolled in school than their non-disabled peers. There are some reasons why children with disabilities cannot access quality education. One of the most significant barriers is the lack of inclusive education programs and facilities. In many countries, children with disabilities are segregated into special schools or classes. This segregation can lead to social isolation and a

feeling of being ‘different’ from their peers. It can also mean that children with disabilities do not have the same opportunities to learn and develop as their non-disabled peers. Inclusive education programs designed to meet the needs of all children, including those with disabilities, are crucial in ensuring that all children can reach their full potential. However, these programs are often not available or not properly implemented. In addition, many children with disabilities face attitudinal barriers. Teachers and classmates can hold negative attitudes toward children with disabilities, leading to discrimination and exclusion. The lack of access to quality education has several negative consequences for children with disabilities. It can limit their life chances and opportunities and marginalize them socially and economically. It can also harm their mental and physical health. There is a need for greater awareness of the issues children with disabilities face in accessing quality education. Governments, international organizations, and NGOs should work together to ensure that all children, regardless of their ability, have the opportunity to receive a quality education.

How technology could help people with disabilities

Technology can help special needs students who struggle with learning material in several ways. One way is by providing text-to-speech capabilities. This can be helpful for individuals who have difficulty reading. The text can be read aloud, or the person can listen to an audio recording. This can be particularly helpful for people with dyslexia. Another way that technology can help is by providing material in a format that is easier to understand (Hjetland et al., 2018). This could include breaking down information into smaller chunks, adding visuals, or using more straightforward language. This can be helpful for people with intellectual disabilities or non-native English speakers. Technology can also help by providing material in a more engaging format. This could include adding interactive elements or games or making the material more visually stimulating. This can help hold the attention of people who struggle with focus or concentration. Overall, technology can help special needs students who work with learning material in several ways. By providing text-to-speech, breaking down information, adding visuals, using more straightforward language, or making the material more engaging, technology can make it easier for these individuals to access and understand data. Another way that technology can help is by providing tools to assist with the learning process itself (Hjetland et al., 2018). For example, several apps can now help with note-taking, organization, and time management. Several apps and software programs can be used to provide individualized learning support, such as those that offer step-by-step instructions or provide extra practice exercises. Technology can also create opportunities for social and peer-based learning, which can be particularly beneficial for special needs students who may find it challenging to engage in traditional classroom-based education. For example, some online forums and social networks now provide a supportive and inclusive environment for learners of all abilities. These can be a great way for special needs students to connect with others struggling with similar issues and share tips, advice, and support (Hjetland et al., 2018).

The emergence of new technology instruments has altered the language-learning process. Experts believe that children may be more motivated to study when they utilize technology to investigate issues of interest. It also meets the children's visual and auditory requirements (Kim et al., 2021). Thanks to technology improvements, students may customize their own learning processes and have access to information that professors cannot provide. Teachers must be abreast of the most recent technology advancements in order to properly integrate them into their courses. They must continue to learn new ways and tactics as instructors. It has been shown that technology in the classroom has beneficial and constructive

effects, particularly when paired with thoughtful and self-reflective lesson design. When technology tools, according to some studies, augment classroom education students are more engaged and learn more successfully in real-world scenarios.

Technology advances have made the classroom experience for students more intriguing, stimulating, realistic, and enjoyable. Multimedia, the World Wide Web, mobile devices, the Internet of Things, virtual reality (VR), and augmented reality (AR) are among the technologies utilized in classrooms today. Sutherland was an early user of the augmented reality interface, which renders two-dimensional visuals in three dimensions via a head-mounted display (Almutairi, (2018). Has improved the underlying characteristics of augmented reality technology and the tradeoffs between video mixing and optical interventions. In the midst of the present linguistic crisis, teachers in low-performing schools may embrace technology as one method to assist students to acquire languages, particularly English. It is vital for the school since the majority of pupils lack access to computers capable of running online-classroom software such as Google Meet or Zoom. Online instructors will need to devise innovative strategies to keep students motivated and learning throughout the semester.

English students might profit from the usage of technology in several ways. This article defines "technology" and "technology integration," discusses the role of technology in language classrooms, reviews research on the effectiveness of using technology to enhance language learning, and concludes with suggestions for improving the integration of these technologies to better support students' learning abilities (Hjetland et al., 2019). In and out of the classroom, education is becoming more dependent on technological advances. It seems that the vast majority of language schools use technology to conduct engaging courses and stay abreast of innovative teaching techniques throughout the epidemic. This is nothing new since technology has always facilitated and accelerated language acquisition. Educators may leverage technology to alter classroom procedures in a manner that enhances language acquisition.

Some students with learning disabilities will have difficulty with one or two specific areas, while others may have more global challenges. Additionally, the severity of the disability can vary greatly from student to student. Some students with learning disabilities may only need minor accommodations to succeed, while others may require more significant support. There are several different ways that students with learning disabilities can be supported in the classroom. Many students will benefit from explicit instruction, modeling of different skills, and practice opportunities. Some students may need more one-on-one or small-group instruction to master certain skills.

Also, accommodations such as extra time on tests or assignments or assistive technology can be extremely helpful for students with learning disabilities. It is important to remember that every student is unique and will require different types and levels of support. It is also important to keep in mind that students with learning disabilities are capable of great things – with the right support, they can succeed in school and life. It is estimated that up to 20 percent of the world's population lives with some form of disability. This means that around 1 in 5 people lives with a disability globally. Many of these individuals face difficulty accessing education, employment, and social participation. In recent years, there has been an increasing awareness of the rights of persons with disabilities and a commitment to ensuring that they are included in all aspects of society. However, many challenges still need to be addressed to support persons with disabilities fully. One of the biggest challenges facing students with disabilities is the lack of accessible education. In many countries, persons with disabilities cannot attend mainstream schools and instead are segregated into special schools or classes. This can result in them receiving a lower quality of education and being less prepared for

employment and independent living. Even when persons with disabilities can attend mainstream schools, they often face numerous barriers. For example, many schools do not have the necessary resources or trained staff to support students with disabilities. In addition, buildings and facilities are often not accessible, making it difficult for students with physical impairments to move around. Employment is another area where persons with disabilities face significant challenges. In many countries, few laws or policies are in place to protect the rights of persons with disabilities in the workplace. As a result, they often face discrimination and are excluded from many job opportunities. Even when they can find employment, they often earn lower wages than persons without disabilities. This can make it difficult for them to support themselves and their families. While there are many challenges that persons with disabilities face, there has been some progress in recent years. For example, the Convention on the Rights of Persons with Disabilities, which the United Nations adopted in 2006, provides a comprehensive framework for promoting and protecting the rights of persons with disabilities. In addition, more countries are ratifying the Convention and incorporating its provisions into national laws and policies. These developments are important steps toward ensuring that persons with disabilities can enjoy the same rights and opportunities as everyone else.

Conclusion

Technology may make education more interesting and current, but it is essential to realize that it is not the only factor that counts. Educators should not rely too much on technology for conventional teaching. In the present pandemic situation of the educational system, a profusion of new and untested technologically related teaching methodologies has developed (Schiavo et al., 2021). Educators are forced to get used to utilizing these cutting-edge technologies in the classroom without actively seeking them out. However, they should also keep in mind that creative educational techniques have a far greater impact on student performance than the deployment of cutting-edge technology tools and appliances alone. Utilizing the instructional potential of technology, students may enhance their language and abilities in accordance with modern pedagogical concepts. In this unpredictable pandemic circumstance, students are more likely to succeed if English is taught and learned in a more acceptable and welcoming environment, with the assistance of technology. Due to the fast evolution of so many disciplines and businesses, it is vital that we, as English instructors, use cutting-edge technology tools in our classrooms.

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