



Enhancing English Learning for Special Needs Students through Technology

Refik Ramadani ^{a++*}

^a *Faculty of Computer Science, Public University Kadri Zeka Gjilan, Republic of Kosova.*

Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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ABSTRACT

In the realm of educational instruction, teachers encounter a diverse array of students, each with unique learning styles and potential challenges. Among these learners are those with distinct needs, requiring tailored approaches to facilitate their academic progress. These students often encounter hurdles across various educational facets, necessitating personalized strategies to enhance their learning experiences and self-expression. Thus, the focus of this study is to investigate whether the integration of technological tools such as laptops and tablets, coupled with multimedia elements, can serve as effective motivators and engagement enhancers for students with specific learning requirements.

This qualitative study adopts an observational approach, examining the impact of technology integration on students with special needs across six primary schools in municipalities of Gjilan and Prizren, Kosovo. The primary objective is to gauge the efficacy of technology-assisted instruction, particularly in the context of English language learning. Through a four-week observation period, conducted twice weekly, the study aims to discern the differential outcomes between traditional instructional methods and those supplemented by technology applications.

⁺⁺ *PhD. Candidate;*

^{*}*Corresponding author: E-mail: refik.ramadani@uni-gjilan.net;*

The study results revealed that in technology-driven English language lessons, special needs students were more motivated to get involved in the lesson, worked together, and participated actively in the classroom activities.

Keywords: Technology; special needs students; English language classroom; motivation; engagement.

1. INTRODUCTION

Each student brings unique value to the educational landscape, irrespective of their individual needs or challenges. Inclusive education remains a prominent issue for educators, particularly in our context, where students with diverse requirements share classrooms with their peers. Following the inclusive schooling movement, which advocates for the right of all children to access education in mainstream settings, teachers in Kosovo encounter various obstacles in meeting the needs of every student effectively.

As highlighted by Westwood [1], distinguishing between students facing difficulties due to learning disabilities and those encountering other challenges can be arduous for educators. Furthermore, the multifaceted nature of teaching requires teachers to navigate the intricacies of each student's personality and cater to their unique needs, a task that becomes even more demanding when teaching a second language, such as English, to students with special requirements.

Teaching English to students with special needs demands innovative techniques and methods that render the learning process comprehensible and engaging. In this regard, the integration of technology plays a pivotal role. Leveraging tools such as laptops and tablets, coupled with multimedia resources, educators strive to enhance the creativity and interactivity of their language instruction. Technology serves as a valuable resource, facilitating the understanding and acquisition of a new language among special needs students.

Favazza & Dalton [2] emphasize the capacity of technology to cater to diverse learning needs, ranging from visual and auditory impairments to attention deficits and language comprehension difficulties. This study endeavors to explore the efficacy of technology in aiding special needs students' comprehension and acquisition of English. It seeks to ascertain whether educators maintain inclusivity in their instructional

approaches, ensuring that all students feel comfortable and engaged. Additionally, the study aims to assess the effectiveness of technology-enhanced methods compared to traditional approaches prevalent in primary school settings.

2. LITERATURE REVIEW

According to the Oxford Dictionary [3], technology encompasses digital or electronically based devices, resources, or processes that enhance the abilities of both educators and learners to think, perform, and achieve success. The evolution of technology has significantly reshaped the landscape of education, extending its influence to English language instruction and beyond. Numerous scholars, researchers, and educational practitioners have demonstrated the effectiveness of technology as a learning tool, affirming its ability to expedite and streamline the learning process. For example, Smith et al. [4] found that the integration of digital devices in the classroom improves students' engagement and performance in language production tasks.

Stanley [5] highlights technology's potential as a highly engaging and interactive tool, providing authentic language materials in both written and spoken forms, thereby motivating learners to engage more actively in language production. Additionally, Johnson and Brown (2018) showed that multimedia resources, such as videos and interactive activities, facilitate vocabulary acquisition and comprehension among language learners.

Educational technology, as defined by Januszewski & Molenda [6], is the study and ethical practice aimed at facilitating learning, underscoring the primary purpose of educational technology as aiding individuals in their learning endeavors. Technology offers a myriad of tools that can enhance both teaching and learning experiences, enabling educators to better organize classes and achieve favorable outcomes. Research by Garcia et al. (2020) demonstrates that the use of educational technology tools improves students' academic

performance and promotes self-directed learning skills.

Through the integration of technology tools, educators strive to enhance the comprehensibility, creativity, and interactivity of their teaching. Anastasiades [7] suggests that Information and Communication Technology (ICT), when employed under appropriate pedagogical conditions, can be one of the most significant tools for fostering the development of essential skills—cognitive, social, and technological—enabling students and teachers to respond effectively, critically, and creatively to the evolving demands of the modern social and economic landscape.

Raihan and Lock [8] delineate some of the objectives that technology integration aims to achieve in the teaching and learning process.

Pitler, Hubbell, and Kuhn [9] presented the nine categories of technology use in the classroom, that may help teachers make their classes more interesting and more attractive.

The demand for learning English has surged in recent times, given its widespread significance

and effectiveness. Mastery of English is essential for various domains such as education, business, and travel. Engstrom [10] emphasizes that learning a foreign language not only facilitates communication but also exposes individuals to diverse cultural expressions such as literature, music, and arts.

English's pivotal role as an international language underscores its growing importance in contemporary society. However, catering to the diverse needs of English language learners requires the implementation of varied methods and strategies. Pritchard & Chamberlain [11] note that the teaching and learning of English have always posed challenges for educators and learners alike, necessitating constant adaptation to evolving methodologies.

In classrooms characterized by diverse skill levels, educators must employ effective strategies to ensure that each student grasps the material. Mason [12] emphasizes the need for supportive and efficient tools to facilitate language learning, particularly for learners with special needs. Technology tools offer a more engaging and interactive learning experience compared to traditional methods, especially for students with specific requirements.

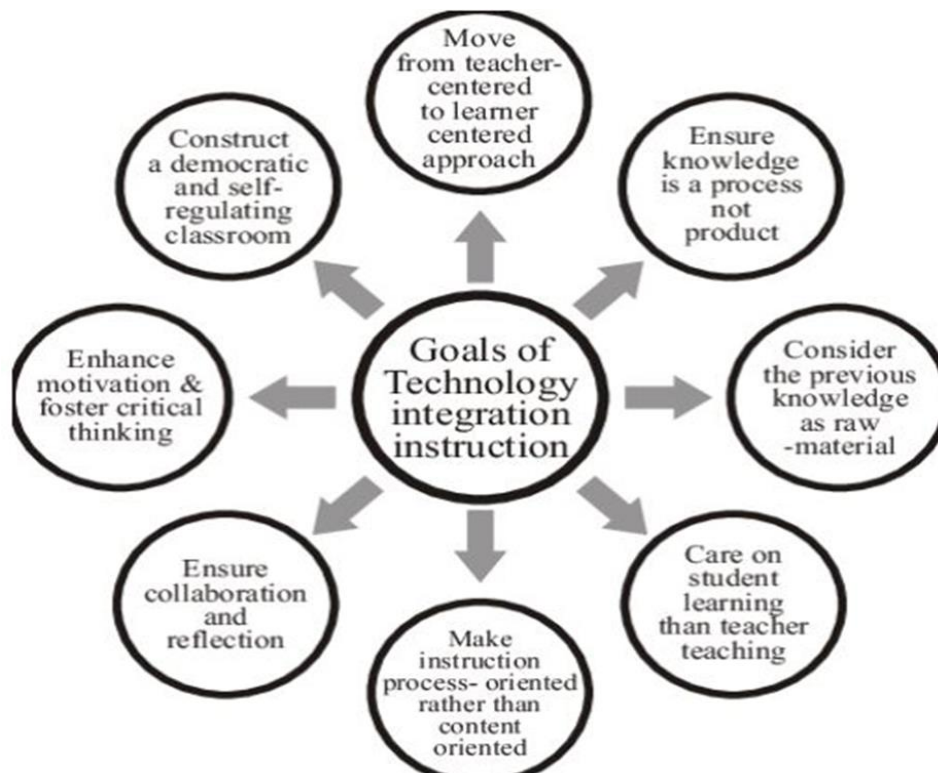


Fig. 1. Goals of technology integration [8]

Table 1. The nine categories of technology use in the classroom [9]

Category	Definition	Examples
Word Processing Applications	Applications that create documents in which the text can be displayed in linear or visual modes.	Google docs, Microsoft Word, Wardle
Organizing and Brainstorming Software	Software that helps users to organize thinking, connect and categorize ideas, and show processes	Web Inspiration, Smart Tools
Data collection and Analysis Tools	Tools that allow users to gather and analyze data	Survey Monkey, Microsoft Excel, Clicker, Poll Everywhere
Communication and Collaboration Software	Software that replaces or enhances traditional forms of communication with video, audio, text, or any combination of the three; allows users to share and discuss ideas, pictures, web links etc.; and enables parties to work together even when geographically separated	Skype, Face Time, Type with .me, Face book, Twitter
Instructional Media (learner as consumer)	Technologies that provide or facilitate the creation of videos or recording that are intended for use in learning	Brain POP, Discovery Education Streaming and Khan Academy
Multimedia Creation (learner as producer)	Technologies that allow users to combine audio, video, music, pictures, drawings or any combination into a final product	PowerPoint, Keynote, Photoshop, photo, movie, Voice Thread.
Instructional Interactives	Technologies that are manipulated by the learner to enhance understanding of a skill or concept, including games, manipulative, and software that assesses the learner and differentiates the activity or curriculum based on the learner's needs	Start Chat
Database and Reference Resources	Resources that provide users with information and data	Wikipedia, Thesaurus etc
Kinesthetic Technology	Technologies that interact with the user's geographical or physical location and movements.	Nintendo Wii, X box, GPS devices.

Mazurek & Winzer [13] define special education as personalized education tailored to accommodate the unique learning needs of students who deviate from the norm in various domains of functioning. Given the challenges these students face, it is imperative to adopt diverse methods to facilitate their learning process. Classroom teachers play a crucial role in fostering acceptance and accommodating the needs of students with disabilities [14].

In the United States, educators often prefer the term "exceptional children" to describe students with special needs, signifying the extent of differences that necessitate additional support and modifications to educational practices [1]. Drexler [15] advocates for the use of technology in teaching, citing its effectiveness in catering to the diverse needs of students requiring alternative instructional methods.

Inclusion entails the full integration of children with diverse abilities into all aspects of schooling, necessitating genuine adaptation and celebration of differences within regular schools and classrooms [16].

A more inclusive environment can be promoted by schools. With the rapid arrival of new technologies, students included in the category of exceptional have a greater learning advantage [17]. Technology can create a very different learning experience for special needs students. When it comes to learn a foreign language, technology is the perfect supplement to enhance special needs students' engagement and motivation which are critical factors influencing student learning outcomes. According to Rizk & Hillier [18] technology tools contribute to greater student engagement. They allow special needs students to engage, focus and be attentive to their work. Chen., Gallagher-Mackay., Kidder., [19] & Jenson, Taylor, Fisher [20] also supported the view that technology allowed students to engage with classroom activities in ways that extend beyond the capability of textbook. Additionally, Bahr, Nelson & VanMeter [21] and Costley [22] stated that technology plays a significant role in improving and increasing motivation level of special needs students. Ennis – Cole study (2015) also emphasizes that technology tools are very motivating, visually appealing, and enjoyable. Special needs students' collaboration, which is a highly effective tool for learning, is also increased when technology is incorporated into lessons [22]. Students are given the opportunity to

cooperatively work together with their peers resulting in learning from each other [23].

3. METHODOLOGY

The objective of this research endeavor was to investigate the potential impact of technology on enhancing the comprehension and acquisition of English among students with special needs, focusing on selected primary schools in Kosovo. Additionally, the study sought to assess the effectiveness of technology integration in facilitating the learning process for these students.. The data in this research study were collected by using the qualitative research method, respectively observations in the classrooms. Qualitative research aims to study participants in their natural environment so that to interpret meaning that participants attach to their experiences [24]. This type of research typically involves different qualitative research methods. However, classroom observation was used in this study. Observation refers to recording what it is seen, heard, or encountered in detailed field notes by the researcher [25]. The observational phase of this study took place across five primary schools in the Gjilan municipality and the special school "Nënë Tereza" in the Prizren municipality, Kosovo. This phase involved closely observing the teaching and learning activities within English language classrooms. Before commencing the classroom observations, the researchers obtained informed consent from the English language teachers, parents, and students involved in the study. The data taken from the observation of students with special needs in the particular schools were very informative, important and valuable. They helped to see the use of technology in teaching English to special needs students and their reactions towards it. Moreover, in observations we were interested to see if the use of technology shows improvement in terms of motivation and engagement with reference to special needs student's attention, collaboration and participation in class.

3.1 Research Objectives

1. To assess the efficacy of technological interventions in facilitating English language learning among students with specific educational requirements.
2. To quantify special needs students' motivation in technology-driven English language lessons.

3. To analyze special needs students' engagement by observing their attention to task, their collaboration and participation in classroom activities.

3.2 Research Questions

1. What are some effects of using technological tools on teaching English to special needs students?
2. Does technology foster motivation among special needs students in English language classrooms?
3. Can technology assist in increasing engagement in relation to special needs student's attention to task, collaboration and participation in classroom activities?

3.3 Participants

The study enrolled 20 first-grade students from five primary schools in Gjilan ("Thimi Mitko," "Rexhep Elmazi," "Selami Hallaçi," "Abaz Ajeti," "Dëshmorët e Kombit") and from the special school "Nënë Tereza" in Prizren. These schools were selected due to their significant population of students with special needs. The majority of participants had conditions such as autism, Down syndrome, lower intelligence levels, and obsessive-compulsive disorder (OCD).

Observations were conducted twice a week over the course of a month. The first author documented observations in a secure notebook, focusing on students' motivation and engagement in the classroom. Collaborating closely with English language teachers, one class per week utilized technology tools, while another class relied solely on traditional instructional materials, such as books. This approach was consistently applied across all observed schools, with the exception of the special school "Nënë Tereza" in Prizren, where all classes were observed without technology tools. Overall, eight classes involving students with special needs were observed, evenly split between technology-enhanced instruction and traditional methods.

4. RESULTS

Over the course of a month, classroom observations are conducted in various primary schools in Gjilan and the special school "Nënë Tereza" in Prizren. The study involves 20

students with diverse disabilities, who are observed twice a week. Collaborating closely with teachers, one class per week utilizes technology tools, while another class relies solely on traditional instructional materials, such as books. This process is consistently implemented across all schools, except for "Nënë Tereza" in Prizren, where only traditional methods are observed.

In the first class, students are taught numbers using traditional methods, resulting in limited engagement and interest, particularly among students with autism. However, in the subsequent class utilizing technology, a YouTube video and song about numbers spark increased motivation and attention among students.

Similarly, when teaching about clothes, the traditional class elicits minimal engagement, whereas the technology-enhanced class, featuring a smartboard presentation, generates higher levels of motivation and collaboration among students.

The following week, teaching body parts through traditional methods proves to be uninteresting for all students, leading to reluctance in completing exercises. Conversely, the technology-based class, featuring a YouTube video and interactive quiz, is highly engaging and enjoyed by all students, particularly those with disabilities.

Lastly, teaching colors using traditional methods results in various difficulties, while the technology-based class, incorporating an online game, proves highly engaging and successful in task completion.

Overall, the observations underscore the benefits of technology and multimedia tools in facilitating English language learning, particularly for students with special needs. Despite the challenges encountered by these students, the integration of technology proves to be motivating and supportive, aiding in the differentiation of instruction and enhancing the overall learning experience.

5. DISCUSSION

The primary objective of this study is to evaluate the efficacy of technology integration in English language classes for special needs students and to assess its impact on their motivation and engagement in classroom activities. The research involves conducting classroom

observations with 20 first-grade special needs students across various primary schools.

The findings of this study align with previous research by Drexler [15], indicating that technology serves as a beneficial and effective tool for teaching English to special needs students. These students require tailored approaches to facilitate their learning process and express themselves effectively, and technology provides an alternative avenue to achieve these goals.

Lack of motivation can prevent students from mastering the language. According to the research studies of Bahr, Nelson & VanMeter [21]; Costley [22] and Ennis-Cole [26] technology plays a significant role in improving and increasing motivation level of special needs students. Similarly, based on the observations in the classrooms, special needs students are more motivated to learn the English language when the class is held using technology tools compared to the class held by using only the textbook. Thus, technology increases special needs students' motivation and boosts up their confidence to get included in the lesson.

The results of this research study prove that technology enhances special needs students' engagement and inspires their collaboration. Special needs students find classes more interesting. They are more focused on the lesson, work together and participate actively in classroom activities. These results are consistent with the findings of the studies by Rizk & Hillier [18] and [22] which indicate that technology allows special needs students to engage, focus and be attentive to their work as well as cooperatively work together with their peers [27,28].

6. CONCLUSION

The integration of technology tools in language classrooms is increasingly prevalent, driven by its recognized effectiveness within the educational system. Given the diverse challenges students face in the learning process, technology serves as a valuable facilitator for both teaching and learning, particularly for special needs students.

Observations of students during the study reveal that utilizing technology to teach English to students with special needs is not only effective but also beneficial. It is evident that technology

keeps special needs students engaged, interested, and motivated compared to traditional textbook-based classes.

In conclusion, the findings indicate that technology greatly enhances English language teaching and learning, especially for students with special needs. Its ability to foster engagement and motivation underscores its importance in facilitating effective instruction and learning outcomes. Using technology tools in the classroom increases special needs students' motivation and engagement in relation to their attention to task, collaboration, and participation in classroom activities.

CONSENT

As per international standards, parental written consent and Participants' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

REFERENCES

1. Westwood P. Commonsense Methods for Children with Special Needs and Disabilities (7th ed.). London: Routledge; 2015.
2. Favazza SB, Dalton ME. Universal design for learning: A blueprint for success for all learners. Kappa Delta Pi Record. Philadelphia, US; 2012.
3. Oxford Dictionary of English. Technology. Oxford University Press; 2015.
4. Smith J, Jones A. Enhancing inclusive education through virtual reality: A case study of students with autism spectrum disorders. Journal of Educational Technology and Inclusive Practices. 2023; 7(2):45-58.
5. Stanley G. Language Learning with Technology: Ideas for Integrating Technology in the Classroom. Cambridge: Cambridge University Press.W; 2013.

6. Januszewski A, Molenda M. Educational technology: A definition with commentary. Tartu, Estonia: American Journal of Educational Research; 2013.
7. Anastasiades ZP. Research on E-Learning and ICT in Education: Technological, Pedagogical and Instructional Perspective, Springer international Switzerland. Basel, Switzerland: Springer International Publishing; 2017.
8. Raihan AM, Lock HS. Technology integration for meaningful learning-the constructivist view. Dhaka, Bangladesh: Bangladesh Educational Journal. 2012; 11(1).
9. Pitler H, Hubbell RE, Kuhn M. Using technology with classroom instruction that works. Alexandria, VA: Association for Supervision and Curriculum Development; 2012.
10. Engstrom ML. Who Is Physically Active? Cultural capital and sports participation from adolescence to middle age--a 38-year follow-up study. Physical Education and Sport Pedagogy. 2009;13(4).
11. Pritchard AN, Chamberlain RD. Special Purpose English: Changing Approaches to English Language Teaching. RELC Journal. 1975;5(2).
Available:<https://doi.org/10.1177/0033688274005002>
12. Mason DS. Especially for high school teachers. Journal of Chemical Education. 2006;79(1).
13. Mazurek K, Winzer MA. Comparative Studies in Special Education. (K. Mazurek, Ed.) Washington D.C, US: Gallaudet University Press; 2002.
14. Dhawan ML. Learners with special Needs. Delhi, Adarsh Nagar, India: Isha Books; 2005.
15. Drexler DW. The networked student model for construction of personal learning environments: Balancing teacher control and study autonomy. Australian Journal of Educational Technology. 2010;26(3).
Available:<https://doi.org/10.14742/ajet.1081>
16. Loreman T, Deppeler J, Harvey D. A practical guide to supporting diversity in the classroom. Abingdon, UK: Routledge Falmer; 2005.
17. Ahmed A. Perceptions of using assistive technology for students with disabilities in the classroom. International Journal of Special Education. 2018;33(1).
18. Rizk J, Hillier C. Digital technology and increasing engagement among students with disabilities: Interaction rituals and digital capital. Computers and Education Open. 2022;3.
Available:<https://doi.org/10.1016/j.caeo.2022.100099>
19. Chen B, Gallagher-Mackay K, Kidder A. Digital learning in Ontario schools: The "new normal." Toronto: People for Education; 2014.
20. Jenson J, Taylor N, Fisher S. Critical review and analysis of the issue of skills, technology and learning: Final report. Ontario Ministry of Education, Toronto; 2010.
21. Bahr CM, Nelson NW, VanMeter AM. The effects of text-based and graphics-based software tools on planning and organizing of stories. Journal of Learning Disabilities. 1996;29.
Available:<http://dx.doi.org/10.1177/002221949602900404>
22. Costley CK. The positive effects of technology on teaching and student learning. Education, Computer Science; 2014.
23. Keser H, Uzunboylu H, Ozdamli F. The trends in technology supported collaborative learning studies in 21st century. World Journal on Educational Technology. 2012;3(2):103-119.
24. Guba EG, Lincoln YS. Competing paradigms in qualitative research. In Denzin NK, Lincoln YS. (Eds.), Handbook of Qualitative Research. Thousand Oaks, CA: Sage. 1994;105-117.
25. Bhandari P. What Is Qualitative Research? Methods and Examples; 2023.
Available:<https://www.scribbr.com/methodology/qualitative-research/>
26. Ennis-Cole DL. Technology for learners with autism spectrum disorders. Denton, TX, USA: Springer; 2015.
27. Ramadani R, Mustafa R. Benefit of incorporating technology in special education. Asian Journal of Research in Computer Science. 2024; 17(1): 1–10.
Available:<https://doi.org/10.9734/ajrcos/2024/v17i1408>

28. Ramadani R, Mustafa R, Mustafa K. The impact and benefits of the e-system for administration management in primary and secondary schools for teachers and parents. Asian Journal of Research in Computer Science. 2023;16(4):271–288. Available:<https://doi.org/10.9734/ajrcos/2023/v16i4388>

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