Integration of Technology in the Teaching of the English Language to Young Learners with Special Educational Needs (SEN)

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ABSTRACT

This study analyzes the integration of technology in the teaching of the English language to young learners with special educational needs (SEN). It was employed both qualitative and quantitative approaches to investigate the integration of technology in the teaching of English to children with SEN. The sample was made up of 175 students from fifth to seventh grade middle basic level and six English teachers from a fiscommissional educational unit in Chone, Manabí, Ecuador. Data collection involved bibliographic research, interviews with teachers and observation sheets in English classes. The results highlight the benefits and challenges of integrating technology in the teaching of the English language to YLs with SEN. Emphasizing the importance of personalized learning experiences, access to adapted technological tools and ensuring inclusion through technology. Nonetheless, perceived challenges such as limited teacher training and schoolchildren engagement remain important considerations. To conclude, the results evidence the potential of technology to improve learning outcomes and promote inclusion in language education.

Keywords: technology, teaching of the English language, young learners (YLs), special educational needs (SEN)

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Integración de la Tecnología en la Enseñanza del Idioma Inglés en los Jóvenes Aprendices con Necesidades Educativas Especiales (NEE)

RESUMEN

Este estudio analiza la integración de la tecnología en la enseñanza del idioma inglés en los jóvenes aprendices con necesidades educativas especiales (NEE). Se empleó enfoques tanto cualitativos como cuantitativos para investigar la integración de la tecnología en la enseñanza del inglés a niños con NEE. La muestra estuvo compuesta por 175 estudiantes de quinto a séptimo grado del nivel de educación básica media y seis profesores de inglés de una unidad educativa fiscomisional de Chone, Manabí, Ecuador. La recolección de datos implicó investigación bibliográfica, entrevistas a docentes y fichas de observación en clases de inglés. En los resultados se destacan los beneficios y desafíos de integrar la tecnología en la enseñanza del idioma inglés a niños con NEE. Enfatizando en la importancia de experiencias de aprendizaje personalizadas, el acceso a herramientas tecnológicas adaptadas y garantizar la inclusión a través de la tecnología. No obstante, se perciben desafíos como la capacitación limitada de los docentes y la participación de los estudiantes siguen siendo consideraciones relevantes. Para concluir, los resultados evidencian el potencial de la tecnología para mejorar los resultados del aprendizaje y promover la inclusión en la educación de idiomas.

Palabras clave: tecnología, enseñanza del idioma inglés, jóvenes estudiantes, necesidades educativas especiales
INTRODUCTION

Technology has transformed the lives of human beings in diverse ways, it has even been immersed in areas of high impact for the development of society, in specific education, being one of the most benefited, allowing to transform educational processes, going from being monotonous to dynamic. Certainly, technology has improved the way teachers educate and students learn.

Nevertheless, it is essential to point out that it has broken barriers at a global level, by providing valuable methods and technological tools that have made it easier for educators to optimize the teaching processes of a second language, not only to regular students but also to those schoolchildren with special educational needs, who often tend to face difficulties in their learning, a factor that is more evident in the acquisition of the English language. Since schoolteachers and educational organizations regularly do not have sufficient preparation or resources necessary to face the limitations that arise when educating pupils with SEN, who show enthusiasm and enjoyment for learning.

Therefore, this research is aimed at analyzing the integration of technology in the teaching of the English language to young learners with special educational needs (SEN). For this reason, scientific tasks are proposed aimed at investigating relevant information in diverse sources, identifying the main benefits and limitations, and determining the importance of incorporating technology in the special education of a second language.

The integration of technology in teaching English to children with SEN proposes adaptive resources, interactive activities, and support tools. This personalizes learning, promotes autonomy, and encourages optimal language development. Besides, it is indispensable to highlight that some studies examine the integration of technology in teaching the English language to young learners with SEN, for instance, Hockly (2016) in her article, she explores the intersection of technology and SEN in the context of English language learning, she also emphasizes that students with special educational needs have diverse levels of support needs in their learning process.

On the other hand, Masitoh and Lstiqomah (2023) in their study aims to evaluate how EFL teachers integrate technology in teaching English online for students with hearing disabilities in inclusive school
settings, along with the challenges they face. Their findings offer valuable information for EFL teachers seeking to incorporate technology into technological instruction for students with SEN. Ultimately, Campado et al., (2023) investigated the use of assistive technology (AT) in teaching learners with special educational needs (LSE), they found that while AT is beneficial, challenges such as resource limitations and learner fixation on technology exist.

This study combines qualitative and quantitative approaches to investigate the integration of technology in teaching English to students with special educational needs (SEN) in an educational unit in Chone, Ecuador. The population includes 806 students and seven English teachers, with a sample of 175 fifth, sixth, and seventh grade students, and six English teachers. Interviews were conducted with English teachers and classes were observed to collect relevant information obtained.

LITERATURE REVIEW

Technology in education

According to Yıldırım (2015), technology is important in people’s lives, serving as a valuable aid in education rather than simply being a complementary element, encompassing a wide range of systems, methods and aids that facilitate the learning process, extending beyond just tools use. Without a doubt, technology in education is a set of clearly defined methods and procedures designed to represent a particular process intended to achieve a different result in an individual's learning environment (Burgin, 1999).

Conversely, technology offers numerous possibilities to improve the attractiveness and effectiveness of teaching, thus increasing its productivity in terms of advancements (Solanki & Shyamlee, 2012). Moreover, technology in education encompasses the integration of programs, procedures, and tools aimed at facilitating the educational process, involving both a systematic approach to implementing this process effectively and a positive outlook on achieving its objectives through learning (Murati & Ceka, 2017).
Technology in teaching a language

Nagy (2021) stated that the advancement of technology has significantly altered the role of language educators, requiring them to go beyond traditional knowledge and adopt modern teaching methods, allowing teachers to design interactive classes using digital tools and engage students creatively, reflecting a contemporary approach to education. Besides, the growing demand for the use of foreign languages in daily life has sparked interest in interactive language learning methods, which delve into linguistic and cultural aspects, facilitating social interaction and providing a comprehensive understanding of linguistic integration (Khusanboyevna & Sharobiddinovna, 2021).

Consequently, in language education, it is crucial that educators possess the necessary knowledge, skills, and mindset to creatively design, modify and implement technology in the classroom, tailored to the specific needs of the educational community (Warschauer, 2022).

Use Technology in Teaching the English Language

The integration of technology in teaching English language fosters numerous advancements and transformations across social, cultural, and economic domains (Başar & Şahin, 2022). Undoubtedly, technology integration in teaching English as a foreign language focuses on the creative utilization of various methods, tools, materials, devices, systems, and strategies specifically oriented to the teaching of the second language (Mofareh, 2019).

Thus, the use of technology to improve language skills, encourages creativity and offers attractive alternatives for language study, for instance, simplifies interaction, provides understandable input and output, cultivates critical thinking, promotes student-centered learning, autonomy, and confidence, and increases motivation for effective language acquisition (Nomass, 2013).

Young learners (YLs)

Young learners is a term used to refer to children who acquire a second language at an early age. Imaniah and Tan (2017) highlighted that young learners are primary-level children, between three and twelve years old, who are naturally predisposed to acquire language skills in a way that leads to an integrated approach that combines skills and content, emphasizing practical learning experiences.
Hence, instructing English to young students differs from teaching adults, basically because English educators working with primary school-age students must understand language teaching and learning theories and implement them effectively in language (Zahron et al., 2023).

**Technology and young learners**

Due to recent advances in technology and its wide integration into daily activities, it cannot be denied that information and communication technologies have had a significant impact on learning and teaching of YLs in various environments (Garton & Tekin, 2022). As a result of this, YLs, frequently referred to as digital natives, are accustomed to growing up with technology as an integral and inherent aspect of their daily lives; for them, technology serves to bridge the gap between the classroom and the outside world (Elaoufy, 2023).

**Young learners with special educational needs (SEN)**

Young learners are considered to have SEN when they experience learning difficulties or have a disability that requires personalized educational support (Star Academies [SA], 2018). Defining SEN is complex due to diverse definitions and varying symptoms among individuals, commonly, SEN relates to challenges in language learning and falls under the broader term “special learning disabilities”, covering a wide range of disabilities from mild to severe (Dopitová, 2007). Hence, while each child is unique, some may require special attention due to physical, emotional, health, or developmental needs, which limit learning even more in a second language (Mahmoud & Ibrahim, 2021).

**Technology in teaching English young learners with SEN**

To begin with, the rapid evolution of technology has provided an enhanced framework to explore novel teaching approaches, making technology fundamental in English language education, using a multimedia environment to create contextual teaching environments offers unique advantages (Masruddin, 2014). Moreover, the application of technology for language learning among young learners has emerged as a substantial concern for EFL educators, learners, and stakeholders (Mudra, 2020). Nevertheless, Kauliņa et al., (2016) remarked that incorporating technology to teach English to children with SEN within the framework of inclusive education is a complex pedagogical and psychological task.
that requires a particular mindset and preparation on the part of educators, school staff, parents, students, and society. Similarly, Hallak and Osman, (2022) mentioned that technology integration in young children with SEN may vary depending on factors such as school, local area, region, and country.

**Benefits of technology in teaching English to young learners with SEN**

Technology improves children learning by boosting engagement and retention, its relevance in today’s world provides meaningful learning experiences and practical opportunities in learning the English language (Costley, 2014). In special education, technology is considered beneficial and has evolved alongside advances in learning tools for children with SEN; one of those advances is self-operating prompting systems, which provide visual or auditory cues to aid language comprehension and production (Hockly, 2016).

Rintaningrum, (2023) detailed that integrating technology into English language learning offers benefits such as coding practice, online tests/exams, improved speed of answering questions, higher test scores, learning new languages, independent learning, stay updated, use translation tools, and show innovation.

On the other hand, Hammad and Al-Sarraf (2020) pointed out that a main benefit of technology is its ability to personalize English language learning by providing children with SEN with applications to address their weaknesses, thus helping them avoid errors, it also grants access to authentic English materials.

**Challenges in implementing technology in teaching EL to YLs with SEN**

Despite the potential benefits of assistive technologies and adaptive learning tools in promoting inclusivity and addressing individual learning styles as mentioned before, challenges persist in their effective integration into special education. These include the digital divide among students with disabilities, limited resources hindering technology acquisition, and insufficient training for educators to utilize these tools optimally amidst rapid technological advancements (Oredein & Obadimeji, 2022).

Conversely, addressing the learning requirements of students with disabilities in education could pose noteworthy challenges, principally in settings with scarce resources such as schools, and districts (Bulat
& Hayes, 2017). Beyond doubt, in terms of integrating technology into the classroom, schoolteachers must face evaluation problems and low student participation (Lukas & Yunus, 2021).

**Adapting the technology to meet the needs of YLs with SEN**

Modifying teaching methods, such as technology, to meet the needs of students with SEN, involves their integration in specialized environments and special education focused on specialized educational technological tools aimed at supporting the learning of children with SEN (Florian, 2004). Therefore, Río et al. (2021) claimed that to achieve a thorough and cohesive approach to adapting language teaching to school learners with SEN, it is indispensable to consider key principles like continuous learning, language skills, moral considerations, and technical standards.

**METODOLOGY**

This study was focused on a quantitative approach that allows projections and generalizations through statistical inferences in population samples (Novoa & Alberto, 2017); and qualitative approach employed to comprehend individuals’ convictions, encounters, outlooks, conduct, and engagements (Pathak et al., 2013); with a type of descriptive research that concentrated on individual factors as well as on the connections between these factors (Lans & Voordt, 2002); with an observational design to evaluate possible causal links in exposure-outcome relationships, thus impacting preventive strategies (Thiese, 2014); regarding the “Integration of technology in the teaching of the English language to young learners with special educational needs (SEN).”

The population of the fiscommissional educational unit is 806 students, with seven teachers belonging to the English area. Therefore, the study sample was focused on 175 students belonging to the middle basic level of education of parallels A and B of fifth, sixth and seventh grade, with ages between nine to eleven years. Moreover, six English teachers from the educational unit located in the city of Chone, province of Manabí, Ecuador.

Concerning to the development of the qualitative approach, first, a bibliographic search was conducted in books, scientific articles, and thesis, etc., for valuable information on the integration of technology in the teaching of the English language to YLs with SEN.
Subsequently, as a data collection technique, six interviews were applied to teachers in the English area from which relevant results were obtained. On the other hand, in the development of the quantitative approach, 20 structured observation sheets were applied in various English classes from which percentages were obtained through their respective tabulation.

**RESULTS**

Table 1: Results of interviews with English teachers regarding the integration of technology in teaching the English language (EL) to young learners (YLs) with special educational needs (SEN)

<table>
<thead>
<tr>
<th>Statements</th>
<th>Main results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of technology in the teaching of EL to YLs with SEN.</td>
<td>➢ It provides tailored tools and resources to address the diverse needs of young learners. ➢ It facilitates the learning of children with SEN. ➢ It optimizes English language teaching by providing a variety of tools that teachers can use in their classes.</td>
</tr>
<tr>
<td>2. Benefits offered by technology in the teaching of EL to YLs with SEN.</td>
<td>➢ Encourage students to participate in class. ➢ The English class is back dynamic and interactive. ➢ Access to adapted educational materials. ➢ Personalize learning according to each child’s needs. ➢ Improvement of language skills when using educational programs.</td>
</tr>
<tr>
<td>3. Challenges in implementing technology in teaching EL to YLs with SEN.</td>
<td>➢ Poor mastery of technological tools by some teachers. ➢ Limited technological equipment in the educational institution. ➢ Students often get distracted and do not pay attention.</td>
</tr>
<tr>
<td>4. Technological tools to teach English to students with SEN.</td>
<td>➢ Smartphones ➢ Laptops ➢ Projectors ➢ Internet ➢ Speaker ➢ Educational platforms ➢ Social networks: YouTube, TikTok, WhatsApp, e Instagram, and others.</td>
</tr>
<tr>
<td>5. Adapting the technology to meet the needs of YLs with SEN.</td>
<td>➢ Customization of content and activities to the needs of students. ➢ Incorporation of support technological tools. ➢ Continuous feedback on content. ➢ Application of accessible multimedia resources.</td>
</tr>
<tr>
<td>6. Accessibility and inclusion of YLs with SEN in the teaching of SL through technology.</td>
<td>➢ Integration of all students into educational activities. ➢ Implementation of an educational approach based on Universal Design for Learning. ➢ Collaboration and teamwork among all students.</td>
</tr>
</tbody>
</table>
Table 2: Results of observation sheets applied to English classes regarding the integration of technology in teaching the English language (EL) to young learners (YLs) with special educational needs (SEN)

<table>
<thead>
<tr>
<th>Statements</th>
<th>Yes %</th>
<th>No %</th>
<th>Sometimes %</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Technology is used during class.</td>
<td>67</td>
<td>33</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>2. The technological materials are adapted to meet the needs of YLs with SEN.</td>
<td>61</td>
<td>28</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>3. YLs with SEN participate in activities where the technology is introduced.</td>
<td>56</td>
<td>33</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>4. Teachers face difficulties when introducing technology into their English classes.</td>
<td>61</td>
<td>28</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>5. Technological materials and activities are customized to fit YLs with SEN.</td>
<td>67</td>
<td>33</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>6. The inclusivity and accessibility of all YLs is ensured by introducing technological resources.</td>
<td>61</td>
<td>28</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>7. The teacher offers individualized support to YLs with NSS during the use of technology.</td>
<td>56</td>
<td>22</td>
<td>22</td>
<td>100</td>
</tr>
<tr>
<td>8. Collaboration and teamwork are encouraged among YLs with or without SEN.</td>
<td>67</td>
<td>33</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

DISCUSSION

In the Table 1, regarding the statement 1, English teachers stated that it assists the teaching process, granting specialized support and adaptations, and boosting English language teaching for children with SEN. With technology, educators can access a variety of tools and resources to create engaging and effective lessons that meet the individual needs of each student with SEN, thereby improving their language learning experience and outcomes. This aspect could be evidenced in the class observations, since in Table 2, in statement 1, around 67% of the time the teacher used technology in the development of his class, and only 33% did not carry it out.

Furthermore, 61% of the time the technological materials are adapted to meet the needs of YLs with SEN. Without a doubt, the use of technology in teaching the English language to young students with
SEN offers personalized tools and resources to address their diverse needs, providing learning technology resources adapted to them to students with learning difficulties (Hockly, 2016).

According to Table 1, in statement 2, teachers outlined that some of the benefits that technology offers in teaching EL to YLs with SEN include encouraging students to participate in class, the English class becomes dynamic again and interactive, access to adapted educational materials, personalization of learning according to the needs of each child, and improvement of language skills when using educational programs. In 51% of the classes observed, the YLs with SEN participated in the activities in which technology was introduced. They expressed interest in the content that the educator taught with the help of technology, although 33% did not do so because they were distracted by other types of activities; however, 11% only "sometimes" did so.

Based on Table 2, in statement 4, it was observed that 61% of the time, it was evident that English teachers face challenges in the implementation of technology in teaching EL to YLs with SEN. They declared that some of the challenges were the poor mastery of the technological tools, that is way; because of, many times teachers do not receive the adequate technological training that is necessary for educators to interact with students with special needs (Al-Shammari, 2008). Furthermore, the limited technological equipment and the little attention paid by the students when introducing the technological tools, is why some students did not like them, because at first, they thought they were difficult to use it.

As indicated in Table 1, in statement 4, educators suggested that they use technological tools to teach English to students with SEN, especially smartphones, laptops, projectors, the Internet, speakers, educational platforms, social networks such as YouTube, TikTok, WhatsApp and Instagram, etc. Furthermore, in Table 2, in statement 5, it was highlighted that 67% of the time, technological materials and activities are customized to adapt to YLs with SEN.

Accordingly, the technological tools that the teacher applies in his class are adapted to the needs of the students, making the class more personalized, although 33% did not do it because it was not
necessary. These students have the same access to social participation opportunities as their peers (Fernández-Batanero et al., 2022).

As far as Table 2 is concerned, in statement 6, 61% of the time the inclusion and accessibility of all YLs is ensured when introducing technological resources. In contrast, in statement 6 of table 6, educators mention that by adapting technology to meet the needs of YLs with SEN, 56% of time, they personalize the contents and activities to the needs of the students, incorporating support tools, continuous feedback about the content, and introducing accessible multimedia resources. Considering that within the framework of educational reform, the predominant position emphasizes satisfying the social demand of integrating all students in ordinary classrooms and adapting the educational process to meet the individualized needs of students (Karagianni & Drigas, 2023).

As showed in Table 1, in statement 7, the teachers maintained that the accessibility and inclusion of YLs with SEN in the teaching of SL through technology, they can integrate all students in educational activities, implement an educational approach based in Universal Design for Learning. In addition, teachers can encourage collaboration and teamwork among all students, an aspect that could be evidenced in the table 2, since 67% of the time the teacher carried out activities in which all students could participate, they felt motivated, an environment conducive to complete and effective learning is generated (Rodríguez et al., 2024).

CONCLUSIONS

Technology in teaching English as a foreign language highlight that it goes beyond being a mere complement and is, rather, a crucial aid to facilitate the language learning processes. Particularly as it urges language English educators to adopt modern teaching methods and design interactive and inclusive classes using digital tools to meet the changing demands of language education. Therefore, the integration of technology in teaching the English language to YLs with SEN not only improves teaching methods, but also encourages the creativity of children with or without SEN and integrates them into English classes, promoting self-centered learning and increasing motivation for second language acquisition.
The use of technology in teaching English to children with SEN provides benefits to adapted tools and diverse resources to address their needs, promoting participation, interactivity, and access to adapted educational materials. Tools such as smartphones, laptops, projectors, and educational platforms are used, adapted through content personalization, continuous feedback and accessible multimedia resources, thus promoting inclusion and accessibility in language learning. Nevertheless, it faces challenges such as the lack of technological mastery of some English educators and the limitation of equipment in educational institutions.

Technology plays a transformative role in language education, cultivating teaching effectiveness and improving language learning outcomes. In addition, it provides personalized tools and resources to address the diverse needs of students, facilitating learning for children with SEN, allowing them English classes become dynamic and interactive again, and consequently linguistic skills are improved by using educational programs.

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