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Perspectives and challenges of technology integration in English language teaching: an academic approach

Perspectivas e desafios da integração tecnológica no ensino da língua inglesa: uma abordagem acadêmica

Perspectivas y retos de la integración tecnológica en la enseñanza del inglés: un enfoque académico

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ABSTRACT

Introduction: Teaching English as a foreign language is essential for the holistic development of students, and technology today serves as the scaffolding for meaningful and differentiated learning. This research analyzes the perspectives and challenges of technological integration in English language teaching from an academic approach within the Ecuadorian context. **Methods**: An exploratory and descriptive methodology was applied, combining qualitative and quantitative approaches. Surveys and interviews were used as instruments for data collection. The sample consisted of 150 individuals: 65 students, 65 teachers, 15 administrators (from educational institutions), and 5 English specialists, all within the Ecuadorian educational system. **Results**: While some teachers use technology only occasionally, there are also cases of teachers without technological training. A significant number of teachers believe that there is insufficient institutional support for technological integration. Teachers express ambivalence regarding the effectiveness of technology in English language teaching. Students hold an unfavorable opinion, claiming that while technology is present, its impact on learning and improving language skills is limited. **Conclusions**: The development of technological integration in English language teaching in the analyzed context is constrained by the lack of institutional support and limited teacher training. Overcoming these barriers requires a coordinated strategy that promotes professional development and provides resources tailored to Ecuador's local realities.

Keywords: Technology in Education, ICT Integration, Teaching, English, Ecuador, ESL.

RESUMO

Introdução: O ensino de inglês como língua estrangeira é indispensável para o desenvolvimento integral dos alunos e a tecnologia hoje é o andaime para uma aprendizagem significativa e diferenciada. A pesquisa analisa as perspectivas e os desafios da integração tecnológica no ensino de inglês a partir de uma abordagem acadêmica no contexto equatoriano. **Métodos**: Foi aplicada uma metodologia exploratória e descritiva, com uma abordagem qualitativa e quantitativa mista, usando a pesquisa e a entrevista como instrumentos. A amostra consistiu em 150 indivíduos, 65 dos quais eram alunos, 65 professores, 15 diretores (de instituições educacionais) e 5 especialistas na área de inglês. Todos no contexto do sistema educacional equatoriano. **Resultados**: Embora uma parte dos professores use a tecnologia apenas às vezes, também há casos de professores sem treinamento em tecnologia. Uma parte significativa dos professores considera que não há apoio institucional suficiente para a integração da tecnologia. Os professores são ambivalentes quanto à eficácia da tecnologia no ensino de inglês. Os alunos têm uma opinião desfavorável, embora afirmem que há alguma presença da tecnologia, a eficácia no aprendizado e no aprimoramento das habilidades linguísticas é limitada. **Conclusões**: O desenvolvimento da integração da tecnologia no ensino da língua inglesa no contexto analisado é limitado pela falta de apoio institucional e pelo treinamento restrito dos professores. Para superar essas barreiras, é necessária uma estratégia coordenada que promova o desenvolvimento profissional e recursos específicos para as realidades locais do Equador.

Palavras-chave: Tecnologia, Integração de TIC, Educação, Ensino, Inglês, Equador, ESL.

RESUMEN

Introducción: La enseñanza de inglés como lengua extranjera es indispensable para el desarrollo integral de los estudiantes y la tecnología en la actualidad es el andamiaje hacia un aprendizaje significativo y diferenciado. La investigación analiza las perspectivas y desafíos de la integración tecnológica en la enseñanza del inglés desde un enfoque académico en el contexto ecuatoriano. **Métodos**: Fue aplicada una metodología de carácter exploratoria y descriptiva, de enfoque mixto cualitativo y cuantitativo empleando como instrumento la encuesta y la entrevista. La muestra consistió en 150 individuos de los cuales 65 fueron estudiantes, 65 docentes, 15 directivos (de instituciones educativas) y 5 especialistas del área de inglés. Todos en el contexto del sistema de educación ecuatoriano. **Resultados**: Mientras una parte de los docentes utilizan la tecnología solamente a veces, también se evidencian casos de docentes sin capacitación de tecnología. Una parte significativa considera que no existe suficiente apoyo institucional para la integración tecnológica. Los docentes muestran ambivalencia sobre la efectividad de la tecnología en la enseñanza de inglés. Los estudiantes poseen una opinión desfavorable, si bien afirman que existe cierta presencia de tecnología, la efectividad en el aprendizaje y mejora de las habilidades lingüísticas es limitado. **Conclusiones:** El desarrollo de la integración de la tecnología en la enseñanza de inglés del contexto analizado es limitado por la falta de apoyo institucional y restringido entrenamiento a los docentes. Para superar estas barreras es necesario una estrategia coordinada que promueva el desarrollo profesional y recursos específicos a las realidades locales ecuatorianas.

Palabras clave: Tecnología en la Educación, Integración de las TIC, Enseñanza, Inglés, Ecuador, ESL.

INTRODUCTION

English language learning is currently a fundamental tool to strengthen opportunities and increase competitiveness in various areas of human development such as economics, academia, labor and social life. For this reason, it is important to lay solid foundations that allow students to achieve significant long-term learning and to be able to develop English as a second language. As Laura et al. (2021) state:

> The mastery of a foreign language, such as English, is an essential and necessary skill to achieve competitiveness in the current globalized era, due to the advantages it offers in the economic, labor, academic and social spheres. Recognizing the importance of learning a second language, teachers focus on learning new and varied pedagogical models, as well as methods and resources to improve the teaching-learning process of English. (p. 2)

According to Cedeño, Vásquez & Maldonado (2023), the contemporary educational context has undergone significant changes thanks to the rapid progress and adoption of ICTs, to the point that they are now considered not only as complementary tools but also as fundamental elements of the educational process. According to Cabrera (2024), technological evolution has transformed education worldwide. From the introduction of the first computers in classrooms to the development of online learning platforms, technology has radically changed teaching and learning methods.

For Diaz & Lima (2020) the most relevant transformation is due to technology that helps to guide an educational process centered on the student and mediated by digital tools. The challenge today is to achieve an innovative and motivating teaching process that encourages the active participation of students in the construction of their own knowledge. Technology is advancing by leaps and bounds and influences various areas of human life and education is not the exclusion in the new context technology emerges as the scaffolding towards a world of tools and resources that teachers can use to improve planning, teaching, evaluation, feedback, communication, etc. For Kramsch (2014) apud Hernandez, Cutillas & Britain (2020) there is a discrepancy between what is taught in the classroom and what students will need in the real world once they leave it. In recent decades, the world has changed so much that language teachers are no longer sure what to teach or what real-world situations to prepare their students for.

In the school process, according to Espinosa (2023), teachers will need resources, means and innovative ideas that allow them to efficiently measure the progress of students at each stage. According to Peña (2024) it is important to analyze whether technology is included in current English teaching strategies, since the way of teaching has evolved from traditionalist teaching where technology did not participate or "was not important" to the present where it is the fundamental pillar to achieve a more dynamic process that responds to the current demands of the new generations, being technology a conciliatory means to achieve active and meaningful learning.

Teaching English as a foreign language

Learning a foreign language, such as English, has become an essential and necessary skill to achieve competitiveness in the current globalized era, since it offers multiple benefits in the economic, labor, academic and social fields. Recognizing the relevance of learning a second language, teachers focus their attention on exploring new pedagogical models, as well as methods and resources that facilitate the improvement of the teaching-learning process of English (Laura et al., 2021).

The integration of technology in English language teaching has gained significant attention as educators recognize its potential to enhance learning outcomes. Rintaningrum (2023) emphasizes that technology offers numerous benefits, such as fostering collaborative learning, improving linguistic skills, and providing diverse resources. However, challenges such as cost, class size, and rapid technological advancements often hinder its effective implementation. Similarly, Liang (2021) highlights that despite positive perceptions, university teachers in mainland China predominantly use technology for teacher-centered purposes rather than active student engagement, attributing this to external barriers like insufficient training and limited institutional support. These findings align with the perspectives of Kabilan and Khan (2012), who argue that alternative technological tools, such as e-portfolios, provide opportunities to enhance teaching competencies but are constrained by challenges like workload and ethical concerns. Collectively, these studies suggest a critical need for professional development and resource allocation to optimize technology integration in English language classrooms.

In Ecuador, according to Carrión et al. (2024), English language learning has been given greater relevance. In fact, the Ministry of Education and Culture has established as a state policy to promote its learning, giving it a special hierarchy in the new curriculum for basic education and high school. Five hours per week have been assigned in elementary, middle and high school, with a future progression to ten hours per week in upper elementary and high school. With this approach, the Ministry considers English an essential tool for the future professionals currently being trained, making it a crucial component of their integral education. However, optimal results in the development of productive skills have not yet been observed

English, according to Vega Iza et al. (2022), encompasses the education of four fundamental skills: speaking, listening, reading and writing. Initially, it was believed that the best way to obtain significant results was by translating directly from

one language to another and learning grammatical rules. However, in recent years, new teaching methods have been developed that ensure effective language learning. Current methods, such as communicative approaches, are completely different from the old translation.

Technology in English language teaching

Within technology in education according to Coello et al., (2019) terms such as ICT (Information and Communication Technology) can be found, which are a set of available technologies whose use allows managing the information that can be accessed, facilitating the storage, manipulation and retrieval of such information through the Internet. ICTs can be introduced in schools through the use of video tutorials, online multimedia resources and various advantages offered by Web 2.0, such as virtual classrooms that provide new spaces for learning. ICTs can enhance students' meaningful and autonomous learning, as well as the development of competencies.

The complexity of technology adoption in educational settings is further illustrated by the interplay between sociocultural contexts, teacher beliefs, and access to resources. Li (2014) identifies these factors as pivotal in shaping teachers' use of technology, suggesting that reflective practices and continuous professional development are essential for fostering confidence and competence. In addition, Bui (2022) synthesizes findings from 20 empirical studies, revealing that digital technologies are often implemented to address both teacher and student needs but are influenced by varying levels of pedagogical beliefs and resource availability. Similarly, Mao (2014) discusses how social media, despite its ubiquity, is underutilized for formal educational purposes due to conceptual and pedagogical limitations. These insights underscore the importance of aligning technology use with contextual realities and educational objectives to overcome existing disparities and enhance teaching efficacy.

Undoubtedly, current education has undergone a disruption in the teaching model "*the use of technology and digital tools in education is an opportunity to develop models of autonomous and personalized teaching*" (Cango & Bravo, 2020, p.4).

For Hernandez & Cordero (2021) emphasize that the use of technology in teaching English as a foreign language should be deeply analyzed to be adapted because the use of technological strategies can facilitate interaction and learning, take advantage of time by keeping information and activities available, eliminating space barriers, but not everyone learns in the same way so some technology-mediated activities may not be entirely appropriate for students in general this is due to the different learning styles that can be found in a group of students.

According to Padilla & Reynaga (2023) for integrating technology into English language teaching there are some important recommendations:

- ✓ Improve internet connection.
- ✓ Offer technical and support services.
- ✓ Sufficient infrastructure.
- ✓ Diversify teaching activities.
- ✓ To carry out eye-catching activities.
- ✓ Train teachers in the use of technology.
- ✓ Strengthen the digital competencies of teachers and students.

Emerging technologies, such as augmented reality (AR) and chatbots, further exemplify the evolving landscape of English language teaching. Faqih and Jaradat (2021) demonstrate how AR can foster creative learning environments, though its adoption is moderated by factors like performance expectancy and facilitating conditions. Annamalai et al. (2023) explore the role of chatbots in supporting learners' psychological needs, such as autonomy and competence, while noting limitations like lack of emotional engagement and occasional inaccuracies.

Overall, the literature studies highlight the dual nature of technological innovation: it provides new opportunities for interactive and differentiated learning but requires careful consideration of its practical and contextual challenges. This complex scenario of opportunities and obstacles forms the foundation of the present study, which seeks to analyze the perspectives and challenges of technological integration in English language teaching from a comprehensive academic lens.

Moreover, there is limited empirical evidence on the integration of these tools in specific sociocultural contexts, such as Ecuador, where language education reforms are ongoing. This study contributes to the literature by exploring the intersection of technology and pedagogy in English teaching, with a specific focus on Ecuadorian educational settings. By addressing barriers to implementation and identifying strategies to maximize the impact of technological tools, this research provides actionable insights for educators and policymakers. The findings aim to bridge the gap between the theoretical potential of technology and its practical application, offering a roadmap for future innovations in English teaching.
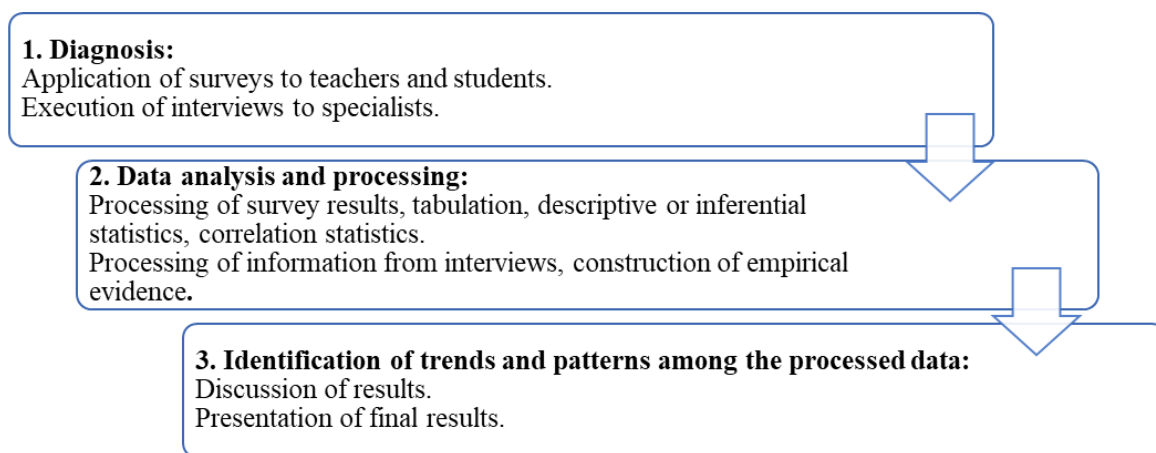
METHODS

This is an exploratory and descriptive research (Vittinghoff et al., 2005) as it inquires about perspectives on how technology is integrated into English teaching. It has a non-experimental and transversal design since it does not manipulate the variables but rather analyzes them at a specific moment. In addition, it is applied because it is oriented to a specific context, in this case the teaching of English.

It adopts a mixed qualitative and quantitative approach (Migiro & Magangi, 2011), using quantitative techniques such as a survey through a questionnaire and statistical analysis, and in the qualitative aspect, an interview with English specialists is used.

The surveys developed are oriented to English teachers and students, which will contribute to identify the perspectives and challenges faced by both groups when integrating technology in the teaching-learning process. The conversation with three specialists in the area of English is efficient to highlight the perspective of these professionals on the level of integration of technology in the teaching of English.

The study sample consisted of 150 subjects: 65 students, 65 teachers, 15 directors and five specialists. All ethical principles of anonymity, privacy risk mitigation and confidentiality of participants were followed, as well as ensuring that responses were provided with a voluntary consent agreement. Furthermore, the phases of the research are in Figure 1.

Figure 1. Research phases

1. Diagnosis:
Application of surveys to teachers and students.
Execution of interviews to specialists.

2. Data analysis and processing:
Processing of survey results, tabulation, descriptive or inferential statistics, correlation statistics.
Processing of information from interviews, construction of empirical evidence.

3. Identification of trends and patterns among the processed data:
Discussion of results.
Presentation of final results.

Note. Authors' development

The research is also correlational (Patten, 2016) since it is intended to demonstrate the level of incidence or correlation of technology in teaching, i.e. how it affects the process and what are the challenges and perspectives resulting from this interaction. For this purpose, the following variables and dimensions of study are proposed.

Table 1. *Study variables and dimensions*

Variable	Dimensions
Dependent **Efficiency and effectiveness in English language teaching**	1. **Student academic performance**: Measuring the impact of technology integration on student performance and language skills. 2. **Student and teacher perceptions:** To assess how both students and teachers perceive the effectiveness of technology in learning and teaching English.
Independent **Technology integration in English language teaching**	1. **Adoption of technological tools:** assess how technologies (such as e-learning platforms, learning applications, etc.) are being used in English classrooms. 2. **Teacher training and support:** Analyze the level of training and support teachers receive to effectively integrate technology into their teaching.

Note. Authors' development

RESULTS AND DISCUSSION

The responses of the teachers in the independent variable of study on technological integration in the teaching of English, through the two dimensions of study highlight that 28 of them use technological tools in their classes only "sometimes", while 17 do so "frequently" and 8 "always". Regarding the perception of the adequacy of these tools, 19 teachers consider them to be "very adequate" and 19 see them as "somewhat adequate", while 15 think they are "adequate" and 12 consider them "not at all adequate". Regarding training, 24 teachers stated that they have "frequently" received training in the use of technology, 18 have never received it, and only 8 receive it "always". However, 31 rate institutional support as "neutral", and 27 see it as "negative", indicating a lack of support for technological integration in the classroom.

While the dependent variable the impact of technology on the teaching of English, 38 teachers consider that the use of technology has had a "neutral" impact on the academic performance of their students, while only 8 think it is "positive" and 3 rate it as "very positive". In terms of language skills, 25 teachers believe that technology has a "neutral" impact, and 18 consider it "positive". Regarding students' perception, 21 teachers rate their students' stance towards technology as "positive" and 21 as "neutral", with only 9 believing it to be "very positive". Finally, as for their personal stance on the effectiveness of technology in their teaching, 24 teachers remain "neutral", while 18 see it as "positive" and 14 as "negative". These data reflect a moderate acceptance and some ambivalence about the effectiveness of technology in teaching English. As can be seen in Figure 2:

Figure 1. Teachers' response

Teachers' survey				
Variable	**Dimension**	**Question**	**Options**	**Answers**
Independent variable: Technology integration in English language teaching	Dimension 1: Adoption of technological tools	Do you employ technological tools in English classes (platforms, applications, etc.)?	Always	8
			Frequently	17
			Sometimes	28
			Never	12
		At what stage do you consider the technological tools for teaching English to be adequate?	Very suitable	19
			Adequate	15
			Somewhat adequate	19
			Not at all adequate	12
	Dimension 2: Teacher training and support	Have you received instruction on the use of technology in English language teaching?	Always	8
			Frequently	24
			Sometimes	15
			Never	18
		How would you rate the support you receive from the institution for the use of technology in English classes?	Very positive	5
			Positive	2
			Neutral	31
			Negative	27
Independent variable: Efficiency and effectiveness in English language teaching	Dimension 1: Student academic performance	How would you say the use of technology has impacted the academic performance of your students?	Very positive	3
			Positive	8
			Neutral	38
			Negative	16
		Do you consider that technology has a significant impact on students' language skills?	Very positive	6
			Positive	18
			Neutral	25
			Negative	16
	Dimension 2: Student and teacher perceptions	How would you rate your students' attitude and response to technology in English classes?	Very positive	9
			Positive	21
			Neutral	21
			Negative	14
		How would you rate your students' attitude and response to technology in English classes?	Very positive	9
			Positive	18
			Neutral	24
			Negative	14

Note. Authors' development with the survey data

The students, on the other hand, define technological integration in the teaching of English, 21 of them affirmed that they use technological tools "sometimes", while 19 use them "always" and 15 "frequently". As for the perception of the adequacy of these tools, 25 students consider them "somewhat adequate" for learning, 17 see them as "adequate", and 11 consider them "very adequate". On the ability of teachers to integrate technology into classes, 36 students rate it as "somewhat good", but 15 consider it to be "not good at all". In addition, 30 students believe that their teachers' support for integrating technology is "somewhat good", but 21 believe that this support is "not good at all", which shows a lack of effectiveness in the implementation of these tools by teachers.

In relation to efficiency and effectiveness in teaching English, 25 students believe that the use of technology has had a "neutral" impact on their academic performance, and only 12 consider that the impact has been "positive". Similarly, 25 students believe that technology has a "neutral" impact on their language skills, while 20 rate it as "negative". On the effectiveness of the technological tools used by their teachers, 28 students consider them to be "not at all effective", while 19 rate them as "effective". Finally, regarding their personal stance on the use of technology in English language learning, 28 students remain "neutral", while 19 see it as "positive". These results suggest a general perception that, although technology is present in English classes, its effectiveness and teacher support in its use are still limited from the students' perspective. As seen in Figure 3.

Figure 2. Students' response

Students' survey				
Variable	**Dimension**	**Question**	**Options**	**Answers**
Independent variable: Technology integration in English language teaching	Dimension 1: Adoption of technological tools	Do you employ technological tools in English classes (platforms, applications, etc.)?	Always	19
			Frequently	15
			Sometimes	21
			Never	10
		At what stage do you consider the technological tools for learning English to be adequate?	Very suitable	11
			Adequate	17
			Somewhat adequate	25
			Not at all adequate	12
	Dimension 2: Teacher training and support	How would you rate your teacher's ability to integrate technology into English classes?	Always	5
			Frequently	9
			Sometimes	36
			Never	15
		How would you rate your teacher's support in integrating technology into English classes?	Very positive	5
			Positive	9
			Neutral	30
			Negative	21
Independent variable: Efficiency and effectiveness in English language teaching	Dimension 1: Student academic performance	How do you consider that the adoption of technology has impacted your learning and academic performance?	Very positive	8
			Positive	12
			Neutral	25
			Negative	20
		Do you consider that technology has a significant impact on students' language skills?	Very positive	8
			Positive	12
			Neutral	25
			Negative	20
	Dimension 2: Student and teacher perceptions	At what level do you consider the effectiveness of the technological tools used by your teacher in the English classes?	Very effective	5
			Somewhat effective	13
			Effective	19
			Not at all effective	28
		What is your opinion about the use of technological tools in English classes?	Very positive	5
			Positive	19
			Neutral	28
			Negative	13

Note. Authors' development with the survey data

In general, teachers and students show a positive tendency, i.e., the higher the value of technology in English teaching in one group, the more importance the other group also tends to give it. In other words, if teachers use technology on a regular basis, students will also do so. However, the perspectives are not exactly the same, there are factors that influence the perception of each group (teachers and students) due to the experience, challenges and difficulties faced by each one from their role in teaching and learning respectively. As can be seen in Figure 4:

Figure 3. Teacher-student scatter plot
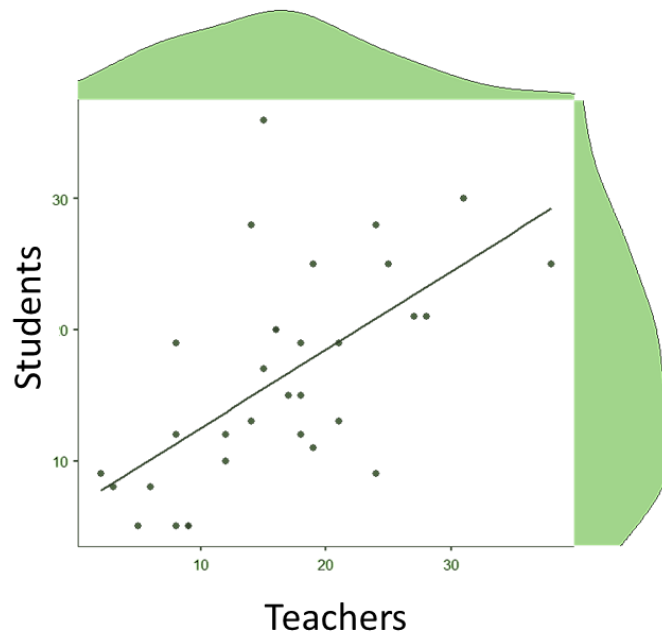
Note. Authors' development with the survey data

Specialists agree that technology has a positive impact on English language teaching, highlighting its ability to offer diverse resources and foster interactive learning. However, they stress that this impact depends largely on the training of both teachers and students, and on overcoming challenges such as the digital divide and resistance to change. As for the most effective tools, they mention interactive applications, augmented reality and conversation simulators, although all agree that technology must be accompanied by an appropriate pedagogical approach. Finally, they suggest that, in order to achieve effective integration, it is essential to increase teacher training, provide more resources and conduct studies that align technology with the specific needs of each educational context. This is shown in Table 2.

Table 2. *Response from specialists*

SPECIALISTS					
Question	**Specialist 1**	**Specialist 2**	**Specialist 3**	**Specialist 4**	**Specialist 5**
In your opinion, what impact has technology had on English learning and teaching in the current context?	It has a positive and profound aspect as it offers the option of accessing multiple resources, tools and learning instruments.	The use of technology is very good, but it depends on the capabilities of teachers and students to make the most of it.	The impact that technology can have on learning is invaluable but there is still resistance to change and fear of the unknown.	Technology is ideal for learning English, especially when using tools that contribute to gamification and gamification of activities.	Technology alone cannot generate a significant impact; it needs to have a pedagogical and didactic approach.
Which of the available tools do you consider effective for teaching English?	I lean towards interactive applications and especially e-learning platforms.	Most significant is the use of adaptive applications that highlight equal access to education.	The use of augmented reality tools is interesting as they can greatly enrich the educational process.	To learn English the practical applications where the student can apply practice error over and over again until the knowledge is achieved.	Auditory applications such as conversation simulators are optimal for learning English fluently.
In your opinion, what are the challenges that exist in the use of technology for the teaching of English?	The digital divide, lack of training and limited training of teachers and students.	Resistance to the new, traditional teaching paradigm, lack of resources.	Generational difficulties many teachers show resistance to change. Lack of training.	Low availability of resources in the institutions. Fear of new forms of teaching,	There is no effective integration of technology in the curriculum. Lack of governmental support in the institutions.
What do you think is the students' attitude towards the adoption of technology for teaching and learning English?	In general, the reaction of the students is positive, but there are inequalities that do not allow everyone to access in the same way.	It is not possible to define a standard position, everything depends on the context, accessibility and availability of resources.	Students tend to be more accepting of technology than teachers due to generational issues and are more familiar with technology.	The acceptance of technology by students is good, they learn to be more efficient in their tasks and learn better.	Superficially it can be said that students accept technology in a positive way but there are more studies that demonstrate or support this acceptance.
What recommendation or suggestion would you give for the effective integration of technology in English language teaching?	Increased teacher training and preparation.	Support in the provision of resources to facilitate access to and availability of technology in the institutions.	Include the use of technology from the early school years so that both teachers and students become familiar with it,	Increased government support in terms of resources, training and dissemination of the benefits of using technology in education.	It is necessary to carry out studies that serve as a basis for implementing technology according to the needs and reality of the educational context in each institution.

Note. Authors' development with the interview data

Discussion

The findings of this study align with existing literature on technology integration in English language teaching, highlighting both the benefits and challenges inherent to this process. As noted by Rintaningrum (2023), the integration of technology can enhance various dimensions of language learning, including coding skills, collaborative learning, and opportunities for independent practice. However, these benefits are often counterbalanced by challenges such as technological infrastructure, time constraints, and the need for teacher training. Similarly, our results are consistent with the findings of Liang (2021), who emphasized that university teachers predominantly employ technology for teacher-centered practices, reflecting a cautious approach toward active student engagement. This highlights the importance of addressing external barriers, such as insufficient technical training, to optimize technology use in English teaching contexts.

Technology integration in English language teaching presents both encouraging prospects and significant challenges, according to the results obtained from teachers, students and specialists. Teachers, for the most part, recognize the importance of technological tools in English language teaching, but they also show a variety of responses regarding their use and effectiveness. While 28 out of 65 teachers use technology tools only occasionally, 17 use them frequently. This reflects uneven implementation, possibly linked to lack of training and institutional support, as indicated by the high proportion of neutral or negative responses regarding the support received for technology integration.

Bui (2022) further supports the notion that teachers' beliefs, competencies, and access to resources significantly influence their ability to integrate digital technologies effectively. This aligns with our findings that successful implementation requires not only resources but also professional development tailored to teachers' pedagogical needs. The socio-cultural context, as highlighted in studies by Li (2014) and Liang (2021), also plays a critical role, particularly in regions where access to technology and digital literacy remain unevenly distributed.

On the other hand, students seem to show a greater predisposition towards the use of technologies in their learning, although their perception of the effectiveness of these tools varies considerably. Of the respondents, 19 students always use the available technologies, but 25 consider these tools to be only "somewhat adequate" for learning English. This suggests that, although there is an initial acceptance of technology, the perception of its effectiveness may be influenced by factors such as the way in these tools are implemented and used in the classroom.

Interviews with specialists highlight some of the critical challenges faced by both teachers and students in technological adoption. The digital divide, lack of adequate training and resistance to change were recurring themes mentioned by the specialists. These challenges are reflected in the responses of teachers, many of whom perceive technology as having a neutral or even negative impact on students' academic performance. This discrepancy between the potential of technology and its effective implementation in the educational context is an issue that requires urgent attention and can be observed in other studies (Li, 2014; Liang 2021; Yaman, 2015; Kormos & Wisdom, 2021; Ertmer et al., 2012).

It is clear that while technology has the potential to enrich English language instruction, its integration into the academic curriculum faces significant obstacles. This is a particular observation in the Ecuadorian context, but it extends to territories of the so-called global south (Sanchez & Salinas, 2008; Cardenas & Inga, 2020). Lack of resources and institutional support, coupled with resistance to change, especially among generations of teachers less familiar with these tools, limits the positive impact that technology could have. Effective adoption of these tools requires a more strategic approach, including ongoing training and the development of adaptive resources that are tailored to the specific needs of students.

Finally, the discussion highlights the need for a more coordinated and sustained approach to technology integration in English language teaching. It is not enough to incorporate new tools; it is crucial to ensure that both teachers and students are trained to use them effectively. Likewise, institutional and governmental support plays a key role in bridging the digital divide and promoting pedagogical practices that truly take advantage of the benefits of technology in the teaching-learning process.

FINAL REMARKS

There is a notable disparity in the integration of technologies in English language teaching, with uneven implementation among teachers and a mixed perception of their effectiveness by students. This suggests that, although technological tools are valued, their use is not yet fully optimized in the educational environment.

In the Ecuadorian context, lack of adequate training and insufficient institutional support are significant barriers to the effective adoption of technology in English language teaching. Both teachers and specialists stress the need for more training and resources to overcome resistance to change and maximize the potential of technological tools. For technology integration to have a sustained positive impact on English language teaching, a more strategic approach is essential, including ongoing training, strong institutional support, and the tailoring of technology resources to the specific needs of students and teachers.

Limitations and future research

One theoretical limitation of the study is its narrow focus on technology integration without exploring other socio-cultural factors that may influence language learning in Ecuador and broader Latin-America. Methodologically, a more diverse sample, including different educational contexts and regions, would improve the robustness of the analysis and findings generalization. Future studies could explore the role of government policies on technology adoption in English language teaching across the global south, as well as longitudinal studies to track the long-term impact of technology on language proficiency.

REFERENCES

Annamalai, N., Eltahir, M. E., Zyoud, S. H., Soundrarajan, D., Zakarneh, B., & Al Salhi, N. R. (2023). Exploring English language learning via Chabot: A case study from a self determination theory perspective. *Computers and Education: Artificial Intelligence*, *5*, 100148. https://doi.org/10.1016/j.caeai.2023.100148

Bui, T. H. (2022). English teachers' integration of digital technologies in the classroom. *International Journal of Educational Research Open*, *3*, 100204. https://doi.org/10.1016/j.ijedro.2022.100204

Cabrera Loayza, K. V. (2024). Transformando la Educación Básica: Retos y Perspectivas de la Inteligencia Artificial. *Vitalia Revista Científica y Académica*, *5*(2), 01 - 17. doi:https://doi.org/10.61368/r.s.d.h.v5i2.113

Cango Patiño, A. E., & Bravo Reyes, M. A. (2020). La enseñanza del inglés en las instituciones educativas públicas del Ecuador en la era digital. *Polo del conocimiento*, *05*(03), 51-68. Retrieved from: https://dialnet.unirioja.es/servlet/articulo?codigo=7398419

Cardenas, J., & Inga, E. (2020). Novel Approach for Teaching English Language using Emerging Information and Communication Technologies for Visual Impairment Students. *Enfoque UTE*, *11*(1), pp. 28 – 40. https://doi.org/10.29019/enfoque.v11n1.577

Carrión M., B. K., Pillajo Angos, C. G., Castellanos Fonseca , J. A., & Vega Aguaiza, R. (2024). WebQuest como herramienta de aprendizaje: análisis del impacto en la producción y aprendizaje del inglés como lengua extranjera. *Ibero-American Journal of Education & Society Research*, *4*(1), 129–141. https://doi.org/10.56183/iberoeds.v4i1.661

Cedeño, R. J., Vásquez Castro, P. d., & Maldonado Palacios, I. A. (2023). Impacto de las Tecnologías de la Información y la Comunicación (TIC) en el Rendimiento Académico: Una Revisión Sistemática de la Literatura. *Ciencia Latina Revista Científica Multidisciplinar*, *7*(4), 10297 - 10316. doi: https://doi.org/10.37811/cl_rcm.v7i4.7732

Coello Acosta , A. D., Menacho Vargas, I., Uribe Hernández, Y. C., & Sánchez Aguirre, F. d. (2019). Oportunidades de aprendizaje a través de las TIC desde la perspectiva de las TAC. *Scientific Journal of Education - EDUSER*, *6*(2), 94 - 105. doi: https://doi.org/10.18050/eduser.v6i2.2308

Diaz C. E., & Lima Silvain, G. (2020). El pensamiento computacional. Nuevos retos para la educación del siglo XXI. *Virtualidad, Educación y Ciencia*, *11*(20), 115 - 137. Retrieved from: https://dialnet.unirioja.es/servlet/articulo?codigo=7869092

Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. *Computers & education*, *59*(2), 423-435. https://doi.org/10.1016/j.compedu.2012.02.001

Espinosa C. P. A. (2023). Los retos de la evaluación en la educación preescolar: cómo medir el progreso y el desarrollo de los niños de manera adecuada. *POCAIP*, *8*(2), 477 - 488. doi: https://doi.org/10.23857/fipcaec.v8i2

Faqih, K. M., & Jaradat, M. I. R. M. (2021). Integrating TTF and UTAUT2 theories to investigate the adoption of augmented reality technology in education: Perspective from a developing country. *Technology in Society*, *67*, 101787. https://doi.org/10.1016/j.techsoc.2021.101787

Hernandez C. J. M., Cutillas Espinosa, J. A., & Britain, D. (2020). Variação e competência sociolinguísticas no ensino de inglês como língua estrangeira. *Revista Entre Línguas*, *6*(1), 183 - 201. doi: https://doi.org/10.29051/el.v6i1.13379

Hernández Ching, R. C., & Cordero Badilla, D. (2021). El estímulo de la motivación intrínseca del estudiantado en un curso de inglés como lengua extranjera. *RIPIE - Revista Internacional de Pedagogía e Innovación Educativa*, *1*(1), 149 - 172. doi: https://doi.org/10.51660/ripie.v1i1.30

Kabilan, M. K., & Khan, M. A. (2012). Assessing pre-service English language teachers' learning using e-portfolios: Benefits, challenges and competencies gained. *Computers & Education*, *58*(4), 1007-1020. https://doi.org/10.1016/j.compedu.2011.11.011

Kormos, E., & Wisdom, K. (2021). Rural schools and the digital divide: Technology in the learning experience. *Theory & Practice in Rural Education*, *11*(1), 25-39. https://doi.org/10.3776/tpre.2021.v11n1p25-39

Laura , K., Noa , S., Lujano , Y., Alburqueque, M., Medina, G., & Pilicita , H. (2021). Una nueva perspectiva desde la enseñanza de inglés. El aprendizaje invisible y sus aportes en la adquisición de una lengua extranjera. *Revista Innovación Educación*, *3*(3), 140-148. doi: https://doi.org/10.35622/j.rie.2021.03.009

Li, L. (2014). Understanding language teachers' practice with educational technology: A case from China. *System*, *46*, 105-119. https://doi.org/10.1016/j.system.2014.07.016

Liang, W. (2021). University teachers' technology integration in teaching English as a foreign language: Evidence from a case study in mainland China. *SN Social Sciences*, *1*(8), 219. https://doi.org/10.1007/s43545-021-00223-5

Mao, J. (2014). Social media for learning: A mixed methods study on high school students' technology affordances and perspectives. *Computers in Human Behavior*, *33*, 213-223. https://doi.org/10.1016/j.chb.2014.01.002

Migiro, S. O., & Magangi, B. A. (2011). Mixed methods: A review of literature and the future of the new research paradigm. *African journal of business management*, *5*(10), 3757-3764. DOI: 10.5897/AJBM09.082

Padilla P. S., & Reynaga C. I. (2023). Percepciones docentes sobre los obstáculos para integrar las tecnologías a la enseñanza del inglés. *CPU-e Revista de Investigación Educativa*, *2023*(36), 202-219. doi: https://doi.org/10.25009/cpue.v0i36.2839

Patten, M. L. (2016). *Understanding research methods: An overview of the essentials*. Routledge, London.

Peña L. V. L. (2024). Enseñanza del inglés como lengua extranjera y desarrollo de competencias lingüísticas. *MQR Investigar*, *8*(1), 6067 - 6100. doi: https://doi.org/10.56048/MQR20225.8.1.2024.6067-6100

Rintaningrum, R. (2023). Technology integration in English language teaching and learning: Benefits and challenges. *Cogent Education*, *10*(1), 2164690. https://doi.org/10.1080/2331186X.2022.2164690

Sánchez, J., & Salinas, A. (2008). ICT & learning in Chilean schools: Lessons learned. *Computers & Education*, *51*(4), 1621-1633. https://doi.org/10.1016/j.compedu.2008.04.001

Vega Iza , J. I., Pillajo Bonito, A. F., Gallardo Rodríguez, M. P., & Ramón Amores, S. G. (2022). La enseñanza del inglés como lengua extranjera y desarrollo de competencias. *Polo del Conocimiento*, *7*(6), 1304 - 1322. Retrieved from: https://dialnet.unirioja.es/servlet/articulo?codigo=9042454

Vittinghoff, Eric, Stephen C. Shiboski, David V. Glidden, and Charles E. McCulloch. "Exploratory and descriptive methods." *Regression methods in biostatistics: linear, logistic, survival, and repeated measures models* (2005): 7-27. https://doi.org/10.1007/0-387-27255-0_2

Yaman, İ. (2015). Digital divide within the context of language and foreign language teaching. *Procedia-Social and Behavioral Sciences*, *176*, 766-771. https://doi.org/10.1016/j.sbspro.2015.01.538

Contribution of each author to the manuscript:

Task	% of contribution of each author			
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A. theoretical and conceptual foundations and problematization:	25%	25%	25%	25%
B. data research and statistical analysis:	25%	25%	25%	25%
C. elaboration of figures and tables:	25%	25%	25%	25%
D. drafting, reviewing and writing of the text:	25%	25%	25%	25%
E. selection of bibliographical references	25%	25%	25%	25%
F. Other (please indicate)	-	-	-	-