

Exploring the Transformative Impact of ICT Integration in the EFL Classroom

Exploración del impacto transformador de la integración de las TIC en el aula de EFL

Jose Alfredo Torres Duque, Antonio Lenín Argudo Garzón

ABSTRACT

This article examines the transformative impact of Information and Communication Technology (ICT) in English as a Foreign Language (EFL) classrooms. ICT facilitates effective learning by providing access to diverse information, allowing students to relate it to their courses and engage in discussions with peers and educators. The benefits extend to EFL teachers, enabling a shift towards learner-centered approaches through multimedia resources and direct contact with English speakers around the world. The objectives of the study encompass the analysis of the transformative use of ICT in EFL classrooms, the identification of best practices and tools used by educators, and the recognition of challenges associated with this integration. The article selection process involved filtering those related to ICT in EFL classrooms, excluding those focused solely on the COVID-19 pandemic to maintain a perspective in which ICT was not the only resource available. ProQuest served as the primary database, supplemented with cross-referencing in ResearchGate, Scopus, Web of Science, and Google Scholar. The review covers articles published between 2018 and 2024, using a variety of research methodologies, including quantitative, qualitative, and mixed studies. Three key research themes emerge: benefits of ICT use in EFL classrooms, challenges in ICT integration, and ICT methodologies and tools employed. In addition, frequency tables are presented detailing the distribution of articles by research topic and country.

Keywords: ICT Integration; EFL Classroom; Benefits of ICT; ICT Challenges; ICT tools.

Jose Alfredo Torres Duque

Universidad Católica de Cuenca | Cuenca | Ecuador. jose.torres.07@est.ucacue.edu.ec
<https://orcid.org/0009-0004-7745-8842>

Antonio Lenín Argudo Garzón

Universidad Católica de Cuenca | Cuenca | Ecuador. alargudog@ucacue.edu.ec
<https://orcid.org/0000-0003-4741-5935>

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RESUMEN

Este artículo examina el impacto transformador de las tecnologías de la información y la comunicación (TIC) en el aula de inglés como lengua extranjera (ILE). Las TIC facilitan un aprendizaje eficaz al proporcionar acceso a información diversa, permitiendo a los estudiantes relacionarla con sus cursos y entablar debates con compañeros y educadores. Los beneficios se extienden a los profesores de ILE, ya que permiten un cambio hacia enfoques centrados en el alumno mediante recursos multimedia y el contacto directo con hablantes de inglés de todo el mundo. Los objetivos del estudio abarcan el análisis del uso transformador de las TIC en las aulas de ILE, la identificación de las mejores prácticas y herramientas utilizadas por los educadores, y el reconocimiento de los retos asociados a esta integración. El proceso de selección de artículos consistió en filtrar los relacionados con las TIC en las aulas de ILE, excluyendo los centrados únicamente en la pandemia COVID-19 para mantener una perspectiva en la que las TIC no fueran el único recurso disponible. ProQuest sirvió como base de datos principal, complementada con referencias cruzadas en ResearchGate, Scopus, Web of Science y Google Scholar. La revisión abarca artículos publicados entre 2018 y 2024, utilizando una variedad de metodologías de investigación, incluidos estudios cuantitativos, cualitativos y mixtos. Surgen tres temas de investigación clave: beneficios del uso de las TIC en las aulas de ILE, desafíos en la integración de las TIC y metodologías y herramientas TIC empleadas. Además, se presentan tablas de frecuencia que detallan la distribución de los artículos por tema de investigación y país.

Palabras clave: Integración de las TIC; Aula de ILE; Beneficios de las TIC; Retos de las TIC; Herramientas TIC.

Introduction

Technology can present several benefits for students during their classes, so, researchers recommend that technology-enhanced teaching environments be used to improve student learning and that information technology be part of teaching (Azmi, 2017). ICT helps students learn more effectively, allowing them to find more information for learning, technology acts as a means for students to find information and be able to relate it to what they have learned during their classes, so they can later, discuss it with their teachers and classmates to improve their understanding and achieving effective learning. An advantage offered by the use of ICT to EFL teachers is that they can vary their teaching activities, for example, gradually changing their teaching style from teacher-centered to learner-centered, allowing students to have a more active role in the learning process, since thanks to the large amount of multimedia resources offered by ICT, as well as the opportunity to have direct contact with native English speakers or English learners from different regions or countries, would allow teachers to be more confident in the use of CLT (Le Thi, 2020). According to research conducted by Hussain (2010), on the effectiveness of using a technology-based learning environment, the results revealed that both high achievers and low achievers in the experimental group showed a significant difference in their—Theoretical article/review article mean grade point average after the tests conducted, demonstrating that even low achievers can benefit from the use of ICT in the EFL classroom. The integration of Information and Communication Technologies (ICT) in an English as a Foreign Language (EFL) classroom can significantly enrich the teaching-learning process. Among the benefits to be gained from the integration of ICT in the EFL classroom are online resources, online communication tools, interactive games, collaborative platforms, and specifically for teachers, online assessment tools (Azmi, 2017).

This literature review analyzed how information and communication technologies (ICT) are used to achieve transformation in the English as a foreign language (EFL) classroom. To achieve this, a comprehensive analysis was conducted to identify the best approaches and methodologies used by educators to improve the competencies of their students, to recognize which ICT tools are most used by educators in the EFL classroom, and to contrast the benefits and barriers associated with the transformative use of ICT in the EFL classroom.

2. Methodology

Selection Process

The article selection process began with a search for articles related to the use of ICT in the classroom, then filtered out those that focused on the English as a foreign language classroom. To perform this search, the following keywords were used: EFL classroom, ICT integration, ICT in English learning, use of ICI, challenges of using ICT, and benefits of using ICT in EFL classrooms.

Searches are limited to the keywords indicated and to data available only in English and freely accessible. During the selection process, the predominant database consulted was ProQuest, however, the study also included an important triangulation and comparison of results from other sources of academic publications such as ResearchGate, Scopus, Web of Science, and Google Scholar. All the works in review were published in the last five years between 2020 and 2024. The articles in the review include quantitative, qualitative, and mixed methods studies. Table 1 provides the inclusion and exclusion criteria.

Table 1. Inclusion and exclusion criteria.

Criteria	Inclusion	Exclusion
Focus of the article	ICT in EFL classroom	Articles that do not cover ICT in EFL classroom
Publication date	2020–2024	Articles published before 2020 or after 2024
Publication Type	Scholarly, peer-reviewed articles	Book chapters, technical reports, or discussion papers that do not include a discussion of the procedures of the study or data analysis.
Language	English	Other languages were not included

Source: Own.

Initially, 3325 articles were found, however, those that were not focused on the use of ICT in the EFL classroom were excluded, leaving 1224 articles. From this search, it was decided to include only those that belonged to South American countries and Spain, which resulted in 150 articles. Those that only explained the use of ICT during the COVID-19 pandemic were also excluded since they are a special category. After applying this filter, there were finally 40 articles, which are the ones used in this paper. The exclusion of articles related to the COVID-19 pandemic has the intention to present a contrast of methodologies and results in which the use of ICTs in the learning

environment has not been forced, so these types of articles are excluded. In addition, the exclusion of articles by region was decided since it is intended to analyze the impact of ICT in countries with similar social contexts that are not so closely related to technology as world powers such as China and the United States.

Research themes

Research theme: Best Approaches and methodologies using ICT in EFL classroom

Description: In the EFL classroom, a variety of ICT approaches and methodologies are employed. These include communicative approaches like project-based learning with the use of software and multimedia resources, gamification through online educational games, and e-learning platforms for distribution of materials, assessments, and discussions, among others.

Research theme: Benefits and barriers in the integration of ICT in the EFL classroom

Description: With the constant development of information and communication technologies, they have begun to be used in ELF classrooms to improve one or more of the students' skills. The benefits obtained using ICT can be reflected in quantitative case studies that contrast the academic performance of students before and after integrating the use of ICT in their classes. In addition, the integration of ICT in the EFL classroom presents barriers, such as the digital divide, the need for teacher training, the selection of appropriate digital resources, student motivation, and security and privacy concerns.

Research theme: ICT tools used in EFL classroom

Description: To achieve the application of the best methodologies and approaches in the ESL classroom, it is necessary to know, study, and train in the appropriate ICT tools for each approach, for example, the use of messaging applications, games, videos, platforms for collaborative work and videoconferencing.

Development

Most of the articles found focus on the explanation and demonstration of the benefits and barriers involved in the integration of information and communication technologies in the English classroom. It is also observed that the least number of articles found was on ICT tools, which evidences an obvious lack of study on the implementation in the EFL classroom of the current technological tools available. Table 2 shows a summary of the number of articles analyzed by research themes.

Table 2. Research articles by research theme.

Research theme	Number of studies
Benefits and barriers	15
ICT tools	13
Approaches and methodologies	12

Source: Own.

Table 3 shows a summary of the articles found and analyzed in this literature review by country to highlight those with the largest number of studies.

Table 3. Research articles by country.

Country	Number of studies
Spain	12
Ecuador	11
Colombia	7
Chile	3
Peru	3
Argentina	2
Brazil	1
Paraguay	1

Source: Own.

Best Approaches and Methodologies using ICT in EFL Classroom.

The introduction of information and communication technology (ICT) in the teaching of English as a foreign language (EFL) requires the implementation of a range of effective pedagogical practices to ensure that the full potential of technological resources and tools is utilized to provide students with a rich learning experience while maintaining student-centered learning (Spataro et al., 2022).

The literature review identified technology-enhanced project-based learning, flipped classrooms, computer-assisted learning, and gamification as prominent pedagogical approaches to integrating ICT into EFL teaching.

Project-based learning (PBL) is an instructional approach that engages students in real-world problem-solving using digital tools and assigns them projects related to English language learning, such as multimedia presentations and video production, which allows students to improve their language skills and develop digital competencies and collaboration skills to contribute to their academic and professional lives (Belda, 2021).

Flipped classroom is a pedagogical approach in which students watch online content before class and, during class, engage in interactive activities that apply the knowledge gained from the previously watched content. To use this approach effectively, teachers provide digital resources, such as videos and interactive materials (Altamiranda et al., 2022) that students can access outside of class, which allows for more personalized learning and active engagement, and is therefore closely related to ICT (Martinez et al., 2023). Research conducted by Fernández-Carballo (2021), in a Spanish university was able to demonstrate through the implementation of an inverted classroom that students would prefer this modality to the traditional classroom.

Gamification in EFL classrooms is another methodological approach that supports the learner-centered learning goal, which involves using gaming elements to motivate and engage students in language learning (Cabrera, 2022), using digital applications and platforms designed for language learning, through which students can engage in interactive activities, challenges, and quizzes that reinforce language content in a fun and effective way (Fonseca et al., 2023).

The computer-assisted language learning (CALL) methodology encourages collaboration among students while using technological tools to achieve common goals (Fonseca et al., 2023). Students can work on collaborative writing projects online, participate in discussion forums, or conduct language learning activities in pairs or small groups through online platforms.

The Interactive Peer Instruction method emphasizes the primacy of the teacher's guidance and explanation as a pedagogical component, in addition to the use of technology, since it allows positioning of the Interactive Peer Instruction Method according to the student's interests, as they enjoy its use and feel motivated to learn more about it and its use for their education (Rivadeneira et al., 2023).

By providing access to adaptive language learning apps and software, teachers can adapt instruction to meet students' different learning abilities, styles, and pace. By strategically integrating ICT and sound pedagogical practices, educators can create rich and effective learning experiences that prepare students for success in an increasingly digitized world.

ICT tools used in EFL classroom

The integration of ICT in education has brought about a notable change in pedagogical practice, opening new opportunities to optimize the teaching and learning process. Digital tools have revolutionized the teaching of English as a foreign language by offering a wide range of online resources that facilitate access to information, promote interaction and encourage active and meaningful learning (Buitrago et al., 2022).

The increasing use of mobile devices in classrooms has expanded the availability of lexical resources such as freely available online bilingual dictionaries. However, it is important to note that the use of these tools is still not sufficiently explained and organized in many educational contexts. Concrete measures to address this problem have been proposed, such as the development of clear usage guidelines, a review of the curriculum for online courses and the design of training courses for teachers and students.

In addition, the use of a game-based learning (GBL) approach through platforms such as Genially has been shown to significantly improve English language learners' grammar and vocabulary knowledge (Cabrera, 2022). The use of online and role games not only improves students' concentration but also promotes active and collaborative learning, increasing their interest and creativity in the learning process, because students feel more comfortable and motivated to learn in an environment with social interaction by performing tasks embedded in games (Torres-Rodríguez & Martínez-Granada, 2022).

The use of instant messaging applications such as WhatsApp also has a positive impact on English language teaching and learning, especially when used for collaborative activities and real-time feedback (Martinez et al., 2022). The combination of authentic materials and collaborative work is crucial for developing learner motivation and success.

The use of applications highly known by students, such as YouTube, represents an opportunity to implement multimedia activities to reinforce listening skills, encouraging students to perform tasks using educational videos offered by the platform, with the advantage of being an easy and intuitive tool to use for students from elementary school to higher education (Fernández-Carballo, 2021).

A tool that can complement multimedia tools such as YouTube is authentic digital storytelling, in which students can practice and improve their oral skills, through the creation of digital media in specialized software that allows them to record and listen to their voices, including audio, video, and text. This tool can be highly effective for students to improve their oral skills, but it is important to keep in mind that for its application, the willingness of teachers is indispensable (Arroba & Acosta, 2021).

Social networks and web blogs are also tools that both students and teachers use during their teaching and learning process (Ferrero-De-Lucas et al., 2021.), although they have been diminished in the face of new alternative tools powered by artificial intelligence.

An innovative aspect of integrating ICT into English language teaching is the use of artificial intelligence tools such as ChatGPT. The ability of ChatGPT to generate coherent and qualitative responses has proven useful for designing teaching tasks and lesson planning, although care must be taken to ensure the reliability of the information generated (Octavio et al., 2024).

In line with current multimedia content, podcasts have been presented as a tool that can help students improve their language skills, mainly listening, however, this can be scaled to improve speaking, writing, and reading skills, as students can attach collaboratively created podcasts to their portfolios (Chaves et al., 2023), which not only improves their skills, but also contributes to their soft skills such as effective communication and teamwork.

In this context, it is vital to develop and implement digital competency frameworks that meet the specific needs of different educational institutions and levels of education. However, it is important to recognize that there are limitations in the analysis and implementation of these frameworks, suggesting the need for further research and the need to broaden the inclusion of different perspectives and frameworks (Mattar et al., 2022).

The incorporation of online resources into English language teaching has opened new opportunities for connection, learning, and development. In this context, it is vital to develop and implement digital competency frameworks that meet the specific needs of different educational institutions and levels of education. However, it is important to recognize that there are limitations in the analysis and implementation of these frameworks, suggesting the need for further research and the need to broaden the inclusion of different perspectives and frameworks (Mattar et al., 2022). However, it is important to maintain a balanced approach that combines traditional teaching methods with digital resources to provide rich and effective learning experiences (Cantos et al., 2023). The future of English language teaching will certainly be digital, but it will depend on effective teaching, cultural sensitivity, and a lifelong learning mindset.

Benefits and barriers in the integration of ICT in the EFL classroom.

The integration of information and communication technologies (ICT) into the teaching of English as a foreign language (EFL) offers a striking contrast between the potential benefits and the significant barriers faced by teachers and students.

The benefits are undeniable, ICT offers a wide range of resources and tools that can transform the learning process. Online platforms, mobile applications, video conferencing, and social media provide immediate access to a wide range of authentic materials, allowing students to immerse themselves in the language and practice it interactively (Rojas et al., 2023). The use of multimedia content, such as videos and audiobooks, not only improves listening comprehension but also motivates students by providing authentic and meaningful context (Abarzua et al., 2023).

It is significant to mention that the global dimensional structure composed by the frequency of ICT use is confirmed, studies show that the positive behavior of students generated by the use of ICT in the EFL classroom (Huaman et al., 2022), and the perceived usefulness of ICT on the side of teachers for the development of educational or academic activities, so that it allows communicating with students in the best way, appealing to behavioral and emotional factors and achieving greater engagement (Vargas et al., 2022).

Despite the innumerable advantages that have been demonstrated in several studies, many teachers maintain the position of avoiding the integration of ICT in their daily academic activities, for fear that the interest shown by the students will be short-lived only caused by a “novelty effect”, however, it has been shown that students can maintain their positive attitude about the integration of ICT in the EFL classroom in a prolonged period, eliminating the possibility of obtaining positive results only momentarily (Kopinska, 2020).

However, these advantages are overshadowed by several obstacles. One of the main ones is the lack of teacher training in the effective use of ICT, as many teachers lack the knowledge and skills to fully integrate these technologies into the classroom, limiting their ability to reach their full educational potential (Abarzua et al., 2023).

A study by Guillén-Gámez et al. (2021), which initially attempted to demonstrate the gender digital divide among teachers in an educational institution, revealed significant deficiencies in digital competencies, digital ethics, ICT anxiety, quality of ICT resources and intention to use ICT, thus highlighting that there is an urgent need to propose training plans for teachers to improve their digital competencies.

In addition, a significant barrier to the effective implementation of ICT in educational institutions is the lack of technological infrastructure combined with limited access to facilities and internet connectivity (Padilla et al., 2023). This inequality is exacerbated by the disparity between private and public institutions. While some private institutions have the resources to make full use of ICT, public institutions often face difficulties in ensuring equal access to these technologies. As a result, students from disadvantaged backgrounds may not benefit from the educational advantages that ICTs offer, further widening the educational divide (Gonzalez et al., 2023).

Although ICT have the potential to revolutionize the teaching and learning of English as a foreign language, barriers related to teacher training and technological infrastructure may hinder effective implementation (Cuadrado et al., 2023). In addition, it has been observed that the socio-economic factor can be relevant in the ease and effectiveness of implementation and integration of ICT in the EFL classroom (Harris, 2021), so overcoming these barriers is essential to ensure that all learners have equal access to the learning opportunities offered by ICT.

Conclusion

The integration of information and communication technologies (ICT) in teaching English as a foreign language (EFL) is a crucial step in modern education. This literature review examines different approaches and methodologies, highlighting flipped classrooms, gamification, project-based learning (PBL), computer-assisted language learning (CALL), and interactive peer instruction as innovative strategies to change the approach to teaching and learning English, through its analysis, it could be observed that these approaches and methodologies have in common to maintain a student-centered approach, which can be shown as a trend in teaching today.

These approaches and methodologies that implement ICT could not be achieved so successfully without the help of the emergence of specific technological tools for each of them, platforms such as YouTube have facilitated the availability of educational videos to complement classroom activities, interactive online games have facilitated student learning in a more dynamic and participatory environment implementing the approach of game-based learning (GBL) or gamification, podcasts that have allowed the development not only of listening skills but have also encouraged teachers to motivate their students to create their podcasts and collaborate in the creation of dynamic presentations created with tools such as Genially that have further enriched the process of teaching and learning languages.

The benefits of this integration are evident for both students and teachers at different educational levels, i.e., from primary to higher education. On the one hand, for students, the use of ICT has proven to be an effective tool to improve their language skills and develop effective communication skills in a fun and dynamic way, as the interactive and accessible resources encourage their interest and participation in English classes. On the other hand, for teachers, these technologies allow them to diversify and enrich their teaching methods, making classes more dynamic and interesting for their students, which keeps them focused and much more attentive to the classes taught, so that the teacher can advance faster in the content of classes, also, allows you to create online assessments with automated grades which helps to minimize your workload grading.

Although the advantages and benefits of using ICT in the EFL classroom are remarkable, it should be noted that some of these benefits are overshadowed by several challenges that must be overcome to ensure the effective implementation of ICT in the teaching of English as a foreign language. Among these barriers, the ones that stand out the most are the lack of Internet access and the limited availability of mobile devices, which especially affect people with a less favorable

educational level, so it is advisable to promote measures to reduce this digital divide and ensure that all students have equal access to these tools. There is also another barrier that affects the effective integration of ICT in the EFL classroom, which is the lack of teacher training since educational institutions do not promote that teachers can be adequately trained in the use of these new technological tools to improve the quality of education provided in this current technological era.

As seen, multiple studies support the use of ICT in the EFL classroom, as it offers a wide range of benefits for both students and teachers, as long as these tools are effectively integrated with innovative approaches and methodologies such as flipped classroom and gamification, having the potential to radically transform the English language learning experience. However, it is crucial to address existing barriers and work towards a more equitable and accessible implementation of ICT in the educational setting, to maximize the positive impact of these technologies and provide enriching learning experiences for all learners of English as a foreign language.

One thing to note is that during the research and selection of articles to review for this literature review, there was a lack of research and case studies on the integration of ICT in the teaching and learning of English as a foreign language in Latin American countries. This shows that Latin American countries have not yet deepened in the implementation of these new technologies, which means that it is essential that more researchers contribute on the impact generated by these tools, approaches and methodologies, to encourage governments to implement reforms that promote equality at the level of education to reduce the technology gap.

Finally, it is important to note that ICTs facilitate adaptation to different learning contexts, including virtual and hybrid environments, which have become especially important in contexts of disasters, pandemics, or social problems such as those faced by Ecuador, where insecurity has reached levels where it has become impossible to maintain a normal academic environment in a face-to-face setting.

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Autores

Jose Alfredo Torres Duque. Licenciado en Ciencias de la Educación mención Lengua Inglesa y Lingüística.

Antonio Lenín Argudo Garzón. Docente-investigador del Centro de Idiomas de la Universidad Católica de Cuenca. Licenciado en Ciencias de la Educación en la especialización de Lengua y Literatura Inglesa. Licenciado en Ciencias de la Educación en la especialización de Filosofía, Sociología y Economía. Maestría en Migración, Derechos Humanos y Política Pública.

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