

***What Hinders and What Promotes the Integration of Digital Resources in English
Language Teaching***

*Qué dificulta y qué promueve la integración de los recursos digitales en la
enseñanza del idioma inglés*

*Cosa ostacola e cosa favorisce l'integrazione delle risorse digitali
nell'insegnamento della lingua inglese*

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Abstract

The integration of digital resources in the teaching of English has increased, but their incorporation does not always translate into interactive, collaborative, and student-centered pedagogical practices. This study aimed to analyze the factors that slowed down and drove the integration of digital resources in the teaching of English as a foreign language in Ecuadorian educational contexts. A mixed, descriptive and exploratory, cross-sectional approach was developed. Four teachers and 123 students of English IV-1 and English IV-2 from the Zootechnics major of the ESPOCH participated. The DigCompEdu Check-In, a student perception questionnaire, semi-structured interviews, an observation checklist and a document review matrix were applied. The results showed a frequent presence of technology and a favorable teaching digital competence; however, its use was mainly concentrated in the presentation and practice of content. Connectivity, planning time, and pedagogical training were the main barriers, while teacher readiness, perceived usefulness, and institutional support acted as facilitators.

Keywords: digital literacy; connectivity; pedagogical mediation; teacher training; interaction.

Resumen

La integración de recursos digitales en la enseñanza del inglés ha aumentado, pero su incorporación no siempre se traduce en prácticas pedagógicas interactivas, colaborativas y centradas en el estudiante. Este estudio tuvo como objetivo analizar los factores que obstaculizaron e impulsaron la integración de recursos digitales en la enseñanza del inglés como lengua extranjera en contextos educativos ecuatorianos. Se empleó un enfoque mixto, descriptivo, exploratorio y de corte transversal. Participaron cuatro docentes y 123 estudiantes de las asignaturas Inglés IV-1 e Inglés IV-2 de la carrera de Zootecnia de la ESPOCH. Se aplicaron el cuestionario “DigCompEdu Check-In”, un cuestionario de percepción estudiantil, entrevistas semiestructuradas, una lista de cotejo de observación y una matriz de revisión documental. Los resultados mostraron una presencia frecuente de tecnología y una competencia digital docente favorable; sin embargo, su uso se concentró principalmente en la presentación y práctica de contenidos. La conectividad, el tiempo de planificación y la formación pedagógica fueron las principales barreras, mientras que la disposición docente, la utilidad percibida y el apoyo institucional actuaron como factores facilitadores.

Palabras clave: alfabetización digital; conectividad; mediación pedagógica; formación docente; interacción.

Riassunto

L'integrazione delle risorse digitali nell'insegnamento dell'inglese è aumentata, ma il loro inserimento non si traduce sempre in pratiche pedagogiche interattive, collaborative e incentrate sullo studente. Questo studio ha analizzato i fattori che hanno rallentato o favorito l'integrazione delle risorse digitali nell'insegnamento dell'inglese come lingua straniera nei contesti educativi ecuadoriani. È stato adottato un approccio metodologico misto, di tipo descrittivo, esplorativo e trasversale. Hanno partecipato quattro docenti e 123 studenti dei corsi di inglese IV-1 e IV-2 del corso di laurea in Zootecnia dell'ESPOCH. Sono stati utilizzati lo strumento "DigCompEdu Check-In", un questionario sulla percezione degli studenti, interviste semistrutturate, una checklist di osservazione e una matrice di analisi documentale. I risultati hanno evidenziato una presenza frequente della tecnologia e un buon livello di competenza digitale dei docenti; tuttavia, il suo utilizzo si è concentrato principalmente sulle fasi di presentazione ed esercitazione dei contenuti. La connettività, i tempi di pianificazione e la formazione pedagogica sono emersi come i principali ostacoli, mentre la preparazione dei docenti, l'utilità percepita e il supporto istituzionale hanno agito da fattori facilitanti.

Parole chiave: alfabetizzazione digitale; connettività; mediazione pedagogica; formazione dei docenti; interazione.

Introduction

The integration of digital resources has established itself as an opportunity to expand the ways of teaching and learning English, promote access to authentic materials, and diversify communicative activities. However, having technology does not guarantee their pedagogical integration. Evidence shows that teachers tend to use digital resources for purposes mainly focused on content presentation, while factors such as digital competence and confidence, pedagogical beliefs, availability of resources, and professional training condition the depth of their incorporation (Bui, 2022; Akram et al., 2022).

In Latin America, this problem acquires particular relevance due to differences in infrastructure, institutional support, and access conditions. Regional studies show that barriers and bottlenecks persist to fully take advantage of educational technologies, while research carried out in Ecuador points to the importance of strengthening teachers' digital competencies and contrasting them with the practices effectively developed (Saltos-Rivas et al., 2023; Zambrano & Rivadeneira, 2023).

The gap lies not only in knowing what tools teachers use, but also in understanding what factors slow down or drive their pedagogical integration in English teaching. The specific literature on English teachers identifies personal, pedagogical, institutional, and sociocultural factors, but it is still necessary to delve into how these elements interact in Ecuadorian educational contexts (Bui, 2022; Zadorozhnyy et al., 2025).

In this framework, the present study seeks to identify the main barriers and facilitators associated with the integration of digital resources by English teachers, considering both their personal and institutional conditions. This evidence can guide continuous training processes and educational management decisions more adjusted to the real conditions of Ecuadorian institutions. Therefore, the research question is: What factors slow down and what factors drive the integration of digital resources in the teaching of English as a foreign language in Ecuadorian educational contexts?

State of the art

The integration of digital resources in education has shifted its focus from the availability of devices and platforms to paying greater attention to teachers' ability to turn these resources into learning opportunities. In this shift, digital competence for teachers is a central component, although the literature shows that its development depends on both individual characteristics and institutional conditions. Recent reviews indicate that there is still diversity in the way this competence is conceptualized and measured, while technological integration continues to be evaluated, in many cases, from the teacher's self-report and not from effective classroom practice (Basilotta-Gómez-Pablos et al., 2022; Claro et al., 2024). This situation is especially relevant for English language teaching, where the use of digital resources can expand access to authentic

materials, communication, and multimodal activities, but does not necessarily transform pedagogical strategies.

In the specific field of teaching English as a foreign language (EFL), Bui (2022) found, through a systematic review of 20 empirical studies, that digital technologies were predominantly used for teacher-centered purposes. The author identified pedagogical beliefs, digital competence and confidence, availability of resources, professional development, and sociocultural context as determining factors. In a complementary way, Wong and Moorhouse (2021) showed that the digital competence of language teachers is related to the ways in which they adapt their practices to technological environments. Therefore, the problem does not seem to be reduced to whether or not teachers possess technological knowledge, but to how that knowledge is converted into concrete pedagogical decisions.

This distinction between competence and practice is one of the main trends in recent literature. Claro et al. (2024), in a systematic review of quantitative research on teachers' digital competence, found that DigCompEdu and the UNESCO frameworks are among the most widely used references. However, they observed a greater emphasis on measuring the use of technologies for planning and teaching than on assessing teachers' ability to promote digital activities aimed at developing student competencies. In contrast, Wang (2022), when developing a specific TPACK scale for EFL teachers, showed that technological-pedagogical knowledge can be analyzed in relation to levels of integration and the development of thinking skills. This suggests that the measurement of competence should be complemented with indicators that allow understanding the quality and purpose of technological use.

Within this debate, the DigCompEdu model offers a particularly broad perspective. Unlike approaches focused exclusively on technological knowledge, it contemplates areas related to professional engagement, digital resources, teaching and learning, assessment, student empowerment, and the development of their digital competence. Its usefulness has been empirically supported by Llorente-Cejudo et al. (2023), who validated the DigCompEdu Check-In questionnaire with 2,262 university professors and found evidence of reliability and validity. Likewise, Cabero-Almenara et al. (2023) applied this framework to 6,664 professors from Latin American universities and found intermediate levels of digital competence, as well as differences associated with variables relevant to their development. Consequently, DigCompEdu allows the study of teaching competence from a multidimensional perspective and is especially relevant for analyzing Latin American contexts.

In language teaching, the relevance of this model has also been supported. Rubio-Gragera et al. (2023) analyzed the digital competence of teachers in official language schools using DigCompEdu and found that experience and confidence in the use of ICT did not necessarily translate into greater pedagogical competence. This result is particularly important for the present study because it questions a linear relationship between time of use of technology and quality of integration. In other words, a teacher can use digital resources frequently and still use

them for traditional activities. This conclusion coincides with Bui (2022), who found a predominance of teacher-centered uses in the specific EFL literature.

Another group of research has focused on explaining what drives technological integration. Backfisch et al. (2021), through a mixed study based on teacher diaries, found that the perceived utility value influenced the quantity and quality of technological integration. In turn, Huang et al. (2022), with 1,881 basic education teachers, identified associations between different forms of informal professional learning and the intention to integrate technology. Learning through reflection and media presented particularly important associations, while interaction with students and colleagues was also related to technological adoption through mechanisms such as perceived usefulness and self-efficacy. Therefore, continuing education should not be limited to technical courses, but should incorporate reflection on practice, collaboration and analysis of experiences.

Institutional support is another relevant facilitator. Chiu (2022) demonstrated that school support can contribute to technological integration through mechanisms related to motivational needs and the perception of support. Similarly, Wang and Zhao (2021) found that institutional support in ICT was related to the TPACK of future teachers and that technological self-efficacy played a mediating role. These results contrast with an individualistic view of integration, according to which difficulties would be explained mainly by a lack of teaching skills. On the contrary, evidence indicates that having accompaniment, resources, time, and learning opportunities can substantially modify the possibilities of integration.

Institutional and contextual barriers become even more relevant in recent studies. Zadorozhnyy et al. (2025), when analyzing 470 difficulties reported by 159 EFL teachers in Hong Kong, found that 50% corresponded to exosystem factors, such as workload, and 23% to macrosystem factors, such as an exam-oriented education system. Only 15% corresponded to individual factors. This result questions the interpretation that low technological integration is mainly a consequence of limited teaching competence. In a similar vein, Rezai et al. (2024) identified macro-institutional, school, personal, and digital experiences factors of students when analyzing the conditions that affect informal digital learning of English.

In contrast, other models allow us to explain dimensions that DigCompEdu does not develop in the same depth. TPACK is useful for understanding the interaction between technological, pedagogical, and disciplinary knowledge. Wang (2022) demonstrated its relevance specifically with EFL teachers and developed a scale to analyze technological integration linked to thinking skills. However, TPACK is mainly oriented to the knowledge required by the teacher to integrate technology, so it may be less suitable for systematically identifying institutional barriers such as connectivity, time, managerial support, or organizational culture.

On the other hand, models of technological acceptance, such as TAM and its extensions, allow the analysis of variables such as perceived usefulness, ease of use, and intention to use

technology. Antonietti et al. (2022), for example, found in vocational education teachers that perceived usefulness had an important influence on the intention to use technology and that beliefs about digital competence influenced these perceptions. However, these models present a limitation for the present study: they adequately explain the individual disposition towards technology, but offer less coverage to simultaneously analyze pedagogical practices, teacher training, and institutional conditions.

Therefore, the ecological perspective offers a more contextualized explanation of the barriers. Zadorozhnyy et al. (2025) showed that the difficulties of EFL teachers are distributed among individual, school, institutional and social levels. This perspective is valuable because it allows us to understand that the same tool can be easily integrated by one teacher and rejected or limited by another due to differences in infrastructure, workload, institutional culture or educational policies. However, unlike DigCompEdu, the ecological approach does not by itself provide a sufficiently specific structure to measure the dimensions of teachers' digital competence.

Table 1. Comparative analysis of the models

Model/approach	Teaching competence	Institutional barriers	Facilitators	Pedagogical practice	English Teaching	Suitability for the study
DigCompEdu	★★★★★	★★★★☆	★★★★★	★★★★★	★★★★☆	Very high
TPACK	★★★★★	★★★☆☆	★★★☆☆	★★★★★	★★★★★	High
TAM/UTAUT	★★★★☆	★★★★☆	★★★★★	★★★★☆	★★★★☆	Media
Ecological perspective	★★★★☆	★★★★★	★★★★★	★★★★☆	★★★★☆	High
ICAP-TS	★★★★☆	★★★☆☆	★★★☆☆	★★★★★	★★★★☆	Media

This review of the literature identified DigCompEdu as the most pertinent model for analyzing teachers' digital competence, due to its multidimensional approach and the evidence of its application in higher education and language teaching (Llorente-Cejudo et al., 2023; Rubio-Gragera et al., 2023; Cabero-Almenara et al., 2023). However, its isolated application is insufficient to explain the factors that slow down or drive technological integration, so it was considered necessary to complement it with interviews and evidence of teaching practice. Recent literature showed a transition from technological access to the analysis of digital competence and the quality of integration, also recognizing the influence of institutional, labor, and sociocultural conditions (Bui, 2022; Rubio-Gragera et al., 2023). Despite these advances, there is still a gap in research that integrates digital competence, barriers, facilitators, and real practice specifically in the teaching of English in Ecuadorian contexts. Therefore, the study focused on the relationship between teaching competence, institutional conditions and pedagogical practice to identify the factors that favor or limit the integration of digital resources.

Method

The study adopted a mixed approach with a predominance of descriptives and a non-experimental, cross-sectional, and descriptive-exploratory design, aimed at characterizing teachers' digital competence and the factors associated with the integration of digital resources in the teaching of English. The unit of analysis consisted of four teachers of English IV-1 and English IV-2 from the Zootechnics major of ESPOCH, while the 123 students participated as a complementary source of information. Due to the small number of teachers, work was carried out through a census. The collection of information combined four techniques: application of the 22-item DigCompEdu Check-In, semi-structured interviews, structured classroom observation, and documentary review of plans. The DigCompEdu allowed the assessment of six areas of digital teaching competence, while the other techniques allowed the comparison of declared, observed, and planned practices. This methodological strategy favored a comprehensive understanding of technological integration and allowed different perspectives and evidence of the educational process to be triangulated (Llorente-Cejudo et al., 2023).

Analysis of results

Analysis of results: DigCompEdu Check-In

The application of the DigCompEdu Check-In made it possible to characterize the level of digital competence of the four teachers responsible for the subjects English IV-1 and English IV-2. The instrument, made up of 22 items and six areas of competence, allowed obtaining an overall score of up to 88 points. The scale includes progressive levels of digital competence, from A1 to C2, which made it possible to establish a descriptive profile of each teacher.

Table 2. Overall results of the DigCompEdu Check-In

Teacher	Score /88	DigCompEdu Level	Interpretation
D1	70	C1	Leader
D2	64	C1	Leader
D3	58	B2	Expert
D4	51	B2	Expert
Media	60,75	B2	Expert

According to Table 2, the overall average of 60.75 points corresponds to level B2 (Expert). Two teachers reached level C1, while the other two were placed at B2. No profiles were identified at levels A1, A2 or B1. In descriptive terms, this would indicate that the teaching group presented a relatively consolidated digital competence, although there would still be individual differences in the depth and autonomy with which technologies would be used. The existence of variability among teachers is relevant because the DigCompEdu is designed

precisely to identify strengths and needs for professional development, and not only to establish a global classification.

Table 3. Scores by Competency Area

DigCompEdu Area	Max.	Media	% of maximum	Relative level
A. Professional commitment	16	14,0	87,5 %	High
B. Digital resources	12	10,5	87,5 %	High
C. Teaching and learning	16	12,8	80,0 %	High
D. Evaluation	12	7,8	65,0 %	Medium
E. Student Empowerment	12	7,2	60,0 %	Medium
F. Digital competence of students	20	8,45	42,3 %	Low-medium
Total	88	60,75	69,0 %	B2

Likewise, the results of the DigCompEdu Check-In present a differentiated profile of digital teaching competence. The greatest strengths were concentrated in professional commitment and the management of digital resources, which indicated favorable conditions for selecting and using technological tools. The teaching and learning dimension also showed a favorable performance, although lower than the domain of resources. In contrast, student assessment and empowerment presented relatively lower levels, suggesting difficulties in using technology in processes of evaluation, personalization, and autonomous participation. The lowest result corresponded to the development of students' digital competence, particularly in information literacy, collaboration, content creation, responsible use, and problem solving. Overall, the pattern coincided with research that distinguishes between the instrumental domain of resources and the more complex pedagogical dimensions. Thus, the results suggested that a favorable teaching digital competence did not guarantee, by itself, a technological integration aimed at the autonomous and competency development of students.

Student Perception Questionnaire on the Integration of Digital Resources

Once the student perception questionnaire was implemented, it complemented the information obtained through the DigCompEdu Check-In, providing the perspective of the 123 English IV-1 and English IV-2 students of the Zootechnics major of the ESPOCH. The instrument was structured using a Likert scale of five response options, from 1 = strongly disagree to 5 = strongly agree, and examined the frequency, relevance, pedagogical purpose, participation, interaction, evaluation, feedback, autonomy and accessibility associated with the use of digital resources.

Table 4. Descriptive results of the student questionnaire

Dimension evaluated	Media /5	Agreement (%)	Level of perception
Frequency of use of digital resources	3,78	72,4	Favorable
Usefulness for understanding English	4,08	82,1	High
Relevance of resources	3,96	78,9	High
Participation during activities	3,74	70,7	Favorable
Interaction between students	3,42	61,8	Moderate
Variety of resources used	3,31	57,7	Moderate
Use for evaluation	3,05	49,6	Moderate-Low
Digital feedback	3,18	53,7	Moderate
Autonomy to learn English	3,71	69,1	Favorable
Accessibility of resources	3,27	56,9	Moderate
Overall average	3,55	65,3	Favorable

The perception shows a favorable approach of students towards the incorporation of digital resources in English classes, especially for their usefulness and relevance to understand the contents. The frequency of use was also positively valued, although below its perceived usefulness. Likewise, the resources favored participation and autonomy, particularly to continue activities outside the classroom; however, interaction between peers presented a lower value. The diversity of tools used was moderate, which suggested a relatively concentrated integration in known resources. The dimensions with the lowest valuation corresponded to digital evaluation and feedback, coinciding with the trends observed in the DigCompEdu. Accessibility also presented limitations associated with devices and connectivity. Overall, the student perception confirmed that technology was considered useful for learning, but its presence did not necessarily imply a deep pedagogical integration. The results pointed to opportunities for improvement in collaboration, diversity of resources, evaluation, feedback, and autonomy.

Analysis of results: semi-structured interview with teachers

The semi-structured interview allowed us to delve into the experiences of the four teachers responsible for English IV-1 and English IV-2 and to complement the results obtained through the DigCompEdu Check-In and the student perception questionnaire. The responses were organized through thematic analysis into five categories: teacher competence and confidence, technological availability, continuous training, institutional support and pedagogical use of digital resources.

Table 5. Synthesis of categories identified in the interviews

Category	Teachers who mentioned it	%
Positive assessment of digital resources	4	100 %
Connectivity as a conditioning factor	3	75 %
Lack of time to design digital activities	3	75 %
Need for pedagogical training	3	75 %
Device availability as an enabler	2	50 %
Institutional/managerial support	2	50 %
Increased student motivation with digital resources	3	75 %
Predominant use to present content	3	75 %
Use of tools for evaluation	2	50 %
Collaborative digital activities	1	25 %

The most relevant results of the interviews show a favorable assessment of digital resources as a support for teaching English, mainly because of their usefulness in accessing materials, presenting content, and favoring participation. However, their integration was conditioned by barriers such as connectivity, planning time, and the need to strengthen pedagogical training. Teachers indicated that, in the face of technological difficulties, they resorted to downloaded materials and offline alternatives. Among the main facilitators, the availability of devices, institutional support, and the perceived usefulness of the tools stood out. The use was concentrated on the presentation of content, explanation of vocabulary, audiovisual materials, and exercises, while collaborative activities, evaluation, and digital feedback had less presence. This trend coincided with the results of the DigCompEdu and the student questionnaire, evidencing a gap between technological mastery and its pedagogical application. Overall, the interviews suggested that the main challenge was not to accept technology, but to transform it into more interactive, collaborative, and competency-oriented experiences.

Analysis of results: checklist for structured classroom observation

The structured observation allowed us to identify how digital resources were actually integrated during the English IV-1 and English IV-2 classes of the Animal Science major. The checklist examined five components: pedagogical purpose of the resource, student participation, interaction, evaluation and feedback, in addition to the teacher's response to technological difficulties. For the purposes of the analysis, eight observed sessions were considered, distributed between both subjects.

Table 6. Results of structured observation

Observed indicator	Sessions with evidence	%
Use of digital resources during the class	8/8	100 %
Resource linked to the learning objective	6/8	75 %
Technology used to present content	7/8	87,5 %
Technology used to practice content	6/8	75 %
Activities that promoted active participation	5/8	62,5 %
Interaction between students through technology	3/8	37,5 %
Digital collaborative activities	2/8	25 %
Using Technology for Evaluation	3/8	37,5 %
Feedback through digital resources	3/8	37,5 %
Adapting to connectivity difficulties	5/8	62,5 %
Using Offline Alternative Resources	4/8	50 %
Promoting digital autonomy	3/8	37,5 %

Digital resources were constantly present in the observed classes, although their pedagogical integration was mainly functional. The use was concentrated in the presentation, explanation, and practice of content, while activities aimed at building, producing, or exchanging knowledge had less presence. Although there was a frequent relationship between resources and learning objectives, technology was predominantly used as an expository support. Student participation reached an intermediate level, but digital interaction and collaboration were limited, with a predominance of individual activities. Likewise, evaluation and feedback using digital tools were less frequent than the presentation and practice of content. These results coincided with the ICAP perspective and with previous studies that warn that the simple incorporation of technology does not guarantee greater cognitive engagement. Overall, the observations suggested that technological integration depended not only on the availability of resources, but also on pedagogical strategies, time, infrastructure, and the characteristics of the proposed activities.

Analysis of results: document review matrix of plans

The document review matrix allowed us to identify how teachers incorporated digital resources in their plans, class guides, activities, and evaluation evidence. For these results, a corpus of 16 pedagogical documents was considered, corresponding to the four teachers of English IV-1 and English IV-2. The matrix examined six aspects: presence of digital resources, relationship with learning objectives, didactic purpose, student participation, evaluation, and feedback.

Table 7. Results of the documentary review

Matrix Indicator	Documents with evidence	%
Incorporated some digital resources	15/16	93,8 %
Explicitly identified the resource used	13/16	81,3 %
Linked the resource to a learning objective	9/16	56,3 %
He specified the pedagogical purpose of the resource	8/16	50,0 %
Used technology to present content	14/16	87,5 %
He used technology to practice content	11/16	68,8 %
It included active participation activities	8/16	50,0 %
It included digital collaborative activities	4/16	25,0 %
Incorporated evaluation through digital resources	7/16	43,8 %
Incorporated digital feedback	6/16	37,5 %
He considered alternatives in the face of technological problems	5/16	31,3 %
Promoted autonomy or digital production of the student	4/16	25,0 %

This table describes a high presence of digital resources in the teaching plans, although their pedagogical articulation was less consistent. Although most of the documents identified technological tools, only a part clearly established their relationship with the learning objectives and purposes. The use was mainly concentrated in the presentation and practice of content through videos, platforms, links and audiovisual materials, while collaborative and interactive activities had less presence. Likewise, digital evaluation and feedback appeared in a limited way, coinciding with the trends observed through DigCompEdu and classroom observation. There was also a lack of foresight of alternatives in the face of connectivity problems or availability of devices. Finally, student autonomy and digital production were the least incorporated aspects. Overall, the plans showed that the availability and selection of technology did not guarantee a deep pedagogical integration, with the teacher remaining the main manager of the resources and the student in a predominantly receptive role.

Table 8. Comparison of trends between planning and results previously

Appearance	DigCompEdu	Classroom Observation	Planning
Use of digital resources	High	High	High
Content Presentation	High	High	High
Content practice	Favorable	Favorable	Favorable
Interaction/collaboration	Medium-low	Low	Low
Digital assessment	Medium	Low	Medium-low
Feedback	Medium	Low	Low
Student autonomy	Medium-low	Low	Low
Adapting to difficulties	—	Moderate	Low

The comparison allowed us to observe a convergent trend: the plans confirmed that technology was incorporated in a regular way, but its use was mainly concentrated in presentation and practice functions. In contrast, the dimensions related to collaboration, evaluation, feedback and autonomy were less developed. This correspondence between what was planned and what was observed strengthened the internal consistency of the results and allowed the identification of a possible gap between technological integration and pedagogical transformation.

Central analysis of triangulated results

Table 9. Full triangulation matrix

Dimension analyzed	DigCompEdu	Students	Interview	Planning	Observation (8 sessions)
Presence of digital resources	High	72.4% reported frequent use	4/4 rated them positively	93.8% incorporated resources	100% of sessions submitted appeals
Usefulness for teaching English	Digital resources: 87.5% of the maximum	82.1% received profit	4/4 recognized utility	87.5% for presentation	87.5% for presentation
Technology–Target Relationship	Teaching/learning: 80%	78.9% assessed relevance	3/4 indicated prior planning	56.3 % established an explicit relationship	75% evidenced a relationship
Student Engagement	Empowerment: 60%	70.7% received participation	3/4 reported greater motivation	50% included active participation	62.5% showed participation
Interaction	Student development: 42.3%	61.8% perceived interaction	1/4 reported frequent collaborative use	25% included collaboration	37.5% showed digital interaction
Collaboration	Favorable profile, but no specific evidence	Moderate perception	1/4 used it regularly	25% planned it	25% were observed
Digital assessment	65% of maximum	49.6% perceived use	2/4 used it	43.8% incorporated it	37.5 % were observed
Digital feedback	Intermediate area	53.7% received it	Limited use	37.5% planned it	37.5 % were observed
Student autonomy	42.3% in digital competence development	69.1% perceived support for their autonomy	Limited use	25% promoted autonomy	37.5 % were observed
Diversity of resources	Digital resources: 87.5%	57.7% perceived variety	Using Familiar Tools	Not always specified	Relatively repetitive use
Connectivity	Not measured directly	56.9% reported favorable accessibility	3/4 pointed to it as a barrier	31.3% foresaw alternatives	62.5% showed adaptability
Planning time	Not measured directly	—	3/4 identified it as a barrier	—	—
Continuous training	Global competition B2–C1	—	3/4 indicated the need for training	—	—
Institutional support	Professional commitment: 87.5%	—	2/4 identified as a facilitator	—	—

The triangulation of the results denotes a frequent integration of digital resources in English teaching, although predominantly oriented to instrumental functions, such as presenting and practicing content. Teachers presented favorable levels of digital competence and students positively valued the usefulness of technology; however, planning and observations showed less incorporation of collaborative activities, digital interaction, evaluation, feedback, and student autonomy. Likewise, the interviews allowed us to identify factors that partially explained this gap, mainly connectivity difficulties, limited time to plan, and pedagogical training needs. In contrast, the availability of resources, perceived usefulness, and institutional support acted as facilitators. Overall, the evidence converged that the main challenge was not the acceptance or basic management of technology, but its transformation into more interactive, collaborative, and student-centered learning experiences.

Discussion

The research and results showed that the integration of digital resources was widely present in English classes, although a functional use oriented to the presentation and practice of content predominated. This finding coincided with the systematic review of English teachers' integration of digital technologies in the classroom, which identified a predominance of teacher-centered uses and pointed out that competence, pedagogical beliefs, confidence, available resources, and professional training conditioned technological integration (Alharbi, 2026; English teachers' integration of digital technologies in the classroom, 2022). Likewise, the evidence obtained among university English teachers in China showed favorable perceptions towards technology, but a predominantly teacher-centered use, accompanied by barriers related to time, training, and technical support, which supported the trend observed in this study.

The main discrepancy identified was the difference between declared digital competence and observed pedagogical integration. Although teachers presented favorable levels of competence, observations and planning showed less presence of collaboration, interaction, digital evaluation, feedback, and autonomy. This situation was consistent with a systematic review of 116 studies that warned that much of the research on teachers' digital competence is based on self-reports and that the role of the teacher tends to remain more functional than oriented to pedagogical design. In contrast, studies on language teachers in Hong Kong found more strategic technological adaptation processes, including decisions on synchronous and asynchronous modalities and adjustments aimed at students' needs (Digital competence and online language teaching, 2021).

Therefore, the barriers of connectivity, time, and need for training coincided with recent research that highlights that infrastructure, professional development, and institutional support are decisive conditions for sustainable integration. Therefore, the results suggested that strengthening technological integration requires overcoming a vision focused exclusively on the

mastery of tools and moving towards situated pedagogical training, institutional accompaniment, and the design of activities that favor interaction, formative evaluation, and autonomy.

Conclusions

The study and the results allowed us to conclude that the integration of digital resources in the teaching of English was frequently present, but it did not always translate into a deep pedagogical integration. The digital competence declared by the teachers showed favorable conditions for the use of technological tools; however, the evidence from the planning, classroom observation and student perception indicated that their use was mainly concentrated in the presentation of content and practice activities. Consequently, the instrumental mastery of technology did not guarantee a transformation of learning dynamics by itself.

Likewise, it was identified that the main limitations were related to connectivity, the time available to plan activities, evaluation and digital feedback, as well as the limited incorporation of collaborative and interactive strategies. In contrast, the availability of resources, the perception of the usefulness of technology, teaching disposition and institutional support acted as favorable conditions for their integration. The triangulation allowed us to understand that these variables did not operate in isolation, but interacted with the pedagogical decisions of the teachers.

The study provided evidence to guide continuous training processes towards the pedagogical, and not only technical, use of digital resources. However, the results, obtained from a small sample of teachers, did not allow generalizations to be made about the set of English teachers in Ecuador. Future research should expand the sample and incorporate different institutions and regions to contrast these findings and delve into how institutional conditions and digital competence influence technological practices focused on interaction, autonomy and learning English.

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