

The Influence of ICT Integration on ELT in Higher Education: A Systematic Literature Review

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ARTICLE INFO

Keywords:

ICT Integration;
ELT;
Higher Education;
Use of Technology

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ABSTRACT

This study aimed to discuss the integration of Information and Communication Technology (ICT) in English Language Teaching (ELT) in higher education based on a systematic review of several relevant articles. The articles analyzed include studies regarding teachers' knowledge and experiences regarding the use of ICT in English language teaching, as well as the challenges and potential associated with implementing these technologies in the classroom. The findings show that although many teachers, both novice and experienced, show high confidence in using ICT tools, difficulties in pedagogical application and lack of practical training are the main barriers. Some other inhibiting factors are a lack of access to technology, limited infrastructure, and resistance to change among more experienced educators. This article suggests a more holistic approach in preparing educators for ICT integration, including improved professional training focusing on developing pedagogical skills in ICT use and stronger institutional support. Although these challenges are significant, the potential of ICT in improving student engagement and learning outcomes suggests that effective technology integration can significantly impact English language teaching in higher education.

INTRODUCTION

The integration of Information and Communication Technology (ICT) in English Language Teaching (ELT) in higher education has become an increasingly important topic, along with the rapid development of technology and the need to prepare students to face the challenges of globalization. In this digital age, the use of ICT in the classroom provides opportunities to enhance the learning experience, facilitate access to global resources, and support a variety of innovative learning models (Hashemi & Kew, 2021; Solak & Cakır, 2015). In the educational environment, when the ICT-based learning is applied effectively and appropriately, students feel more at ease and can better understand the lesson (Salehi et al., 2015). Additionally, there is an increasing interest in understanding how ICT can affect the quality of English language teaching and how its application can contribute to student learning outcomes. Çakıcı (2016) concluded that implementing

ICT within the EFL context advocates students' problem-solving skills, develops practical and critical thinking, and promotes actively autonomous and collaborative language learning. It can also boost students' motivation to learn English and provide variety in the learning process (Purwati & Difinubun, 2024).

Studies on ICT integration in ELT are expanding quantitatively and include more in-depth aspects related to its impact on teaching, learning, and the role of ICT in improving students' language skills. (Sung et al., 2015). Although several studies have addressed the implementation of ICT in education, there is still uncertainty about its more specific impact on college English language teaching. For example, while some studies have shown positive outcomes, such as increased student engagement, easier access to teaching materials, and the development of communication skills, several EFL teachers still find it challenging to incorporate ICT in their English classrooms (Yuhana et al., 2022). Furthermore, the challenges may include inequality of access, limited resources, and lack of technological skills among teachers (Ahmadi, 2018). The help of the accessible ICT tools, which can make the second language teaching a fruitful one, to create a more fun English learning process (Alkamel & Chouthaiwale, 2018). Therefore, EFL teachers have a huge responsibility to comprehend the effective use of ICT in their classroom. When the teacher is capable and practical enough in handling the technology in ELT, the learning results will be close to what is expected (Ammade et al., 2018).

Against this background, this article aims to provide a systematic review of the existing literature on the impact of ICT integration on English language teaching in higher education. Using a Systematic Literature Review (SLR) approach, this article will analyze the main findings, existing research gaps, and factors that influence the effective use of ICT in ELT contexts. This research not only aims to summarize previous research, but also to identify aspects that need to be considered in implementing ICT to improve the quality of English language learning at the tertiary level.

METHODS

This study employs a Systematic Literature Review (SLR) methodology, following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework to analyze the influence of Information and Communication Technology (ICT) integration in English Language Teaching (ELT) in higher education. The steps are as follows: (1) Identification. Keyword-based searches were conducted in SINTA, Web of Science (WOS), and SCOPUS databases using terms such as "ICT integration in ELT, technology in English language teaching, and impact of ICT on ELT; (2) Screening. Duplicate and unrelated articles were removed; (3) Eligibility, articles published between 2020 and 2025 were included if they focused on ICT applications in ELT at the tertiary level and addressed either pedagogical impacts or implementation challenges; (4) Inclusion. Five peer-reviewed articles that matched all criteria were selected. Each article was assessed for methodological quality and relevance to ensure robust synthesis. The SLR approach enables a structured and transparent review of current literature trends and evidence.

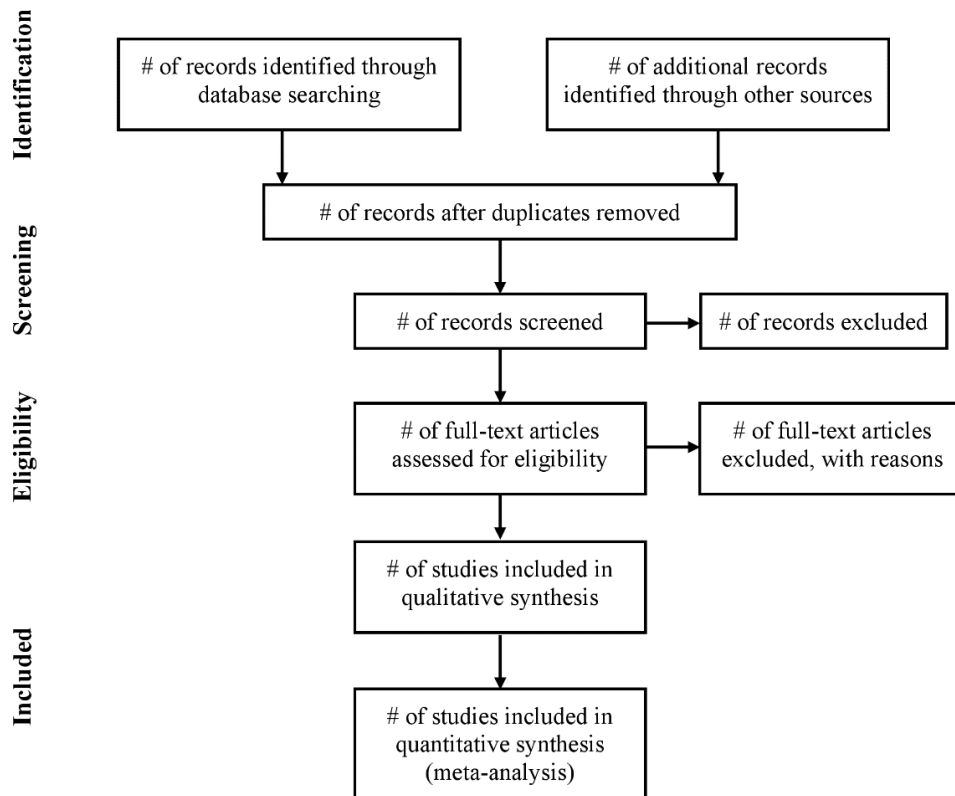


Figure 1: Flow Diagram of Literature Review using PRISMA (Moher et al, 2009)

FINDINGS AND DISCUSSION

Here is a summary of the articles based on the findings and discussions, followed by an evaluation of the integration of ICT in EFL teaching and learning:

Table 1: Summary of the Articles

| Author(s) | Year | Title | Abstract Summary | Findings |
|---------------------|------|---|---|---|
| Ciptaningrum et al. | 2021 | Evaluation of Knowledge of ICT integration among pre-service teachers | This study examines pre-service teachers' ICT knowledge and confidence levels using TPACK surveys. Results show that teachers feel confident using ICT tools and techniques but face challenges in effectively integrating them into pedagogical practices. | Pre-service teachers are confident in using ICT tools such as hardware and software. The study highlights that although their knowledge is high, integrating ICT in the classroom and using it for pedagogy is still challenging due to a lack of training and practical application in the teaching context. |
| Haerazi | 2024 | ICT Integration into English Language Teaching-Learning: Insights from Private Higher | This study investigates the views and strategies of English lecturers regarding ICT integration into English Language Education (ELE) programs in private universities in Indonesia. | ICT integration in English language education varies from basic to advanced usage, with some lecturers embracing it innovatively while others use traditional, hardware-based methods. Despite challenges in ICT adoption, lecturers |

| Author(s) | Year | Title | Abstract Summary | Findings |
|---------------------|------|--|---|--|
| | | Education Institutions | | emphasize the importance of role modeling and reflective practices to enhance integration. |
| Sabiri | 2020 | ICT in EFL Teaching and Learning: A Systematic Literature Review | This literature review evaluates various ICT tools, barriers, and teacher perceptions about ICT integration in EFL teaching, specifically in Oman. It explores the global and local impact of ICT in education. | Findings show that while ICT benefits teaching and student interaction, barriers such as limited access to resources, lack of teacher training, and resistance to change hinder its full integration. |
| Mamatkulovna et al. | 2024 | The Impact of ICT Integration on Teaching and Learning in ESL Classrooms of Tertiary Education | This research focuses on how multimedia and ICT tools enhance ESL teaching and learning in tertiary education. | Teachers' multimedia tools, such as presentations and digital tests, improve students' engagement and learning outcomes. However, challenges such as poor resource access and limited teacher training were noted. |
| Gloria & Bram | 2025 | Integrating ICT in Higher Education English Language Teaching | This study investigates the ICT knowledge and use level among novice and experienced English teachers and their challenges. | Novice teachers show greater confidence and innovative use of ICT tools, whereas experienced teachers are cautious and less likely to integrate ICT in their teaching practices fully. |

Based on the table above, the integration of Information and Communication Technology (ICT) in English Language Teaching (ELT) has garnered significant attention recently. The articles reviewed here reflect a broad spectrum of ICT implementation in ELT across different educational contexts, from pre-service teachers to experienced educators and from developed to developing regions. Ciptaningrum et al. (2021) emphasize the strong confidence of pre-service teachers in using ICT tools like hardware and software, though challenges remain in translating this confidence into pedagogical integration. Haerazi (2024) illustrates varying levels of ICT integration in private higher education institutions in Indonesia. Some lecturers adopt innovative methods, while others remain more traditional in their approach. Sabiri (2020) provides an overview of the barriers and benefits of ICT in EFL, highlighting the need for further development of teachers' ICT skills. Mamatkulovna & Tolibovna (2024) underscore the impact of multimedia in ESL classrooms, pointing out both the positive effects and the challenges related to resource access. As the argument or implication, the findings from the reviewed articles suggest that while ICT holds great potential to enhance the teaching and learning experience in ELT, its full integration is hindered by several factors. One of the significant barriers identified is the insufficient training for novice and experienced teachers. Novice teachers, as found by Gloria & Bram (2025), tend to be

more confident and innovative in using ICT, which contrasts with the cautious approach of more experienced teachers. This gap has implications for teacher education programs, which should focus on equipping all teachers with the necessary skills to integrate technology into their teaching practices confidently. Additionally, Sabiri (2020) emphasizes the importance of teachers' attitudes towards ICT and suggests that teachers' perceptions directly affect their willingness and ability to incorporate technology effectively into their teaching.

Another significant implication of the findings is the role of institutional support in ICT integration. Haerazi (2024) points out that some lecturers in Indonesia embrace ICT, while others struggle due to limited resources and institutional backing. This highlights the need for educational institutions to provide better infrastructure, access to ICT tools, and professional development opportunities for teachers. Furthermore, Mamatkulovna & Tolibovna (2024) reveal that despite the positive impact of multimedia in ESL classrooms, challenges like poor internet connections and lack of technological assistance still persist, particularly in developing regions. This reinforces that ICT integration requires a systemic approach involving teachers and institutions working together to overcome these barriers.

As an evaluation, the articles reviewed provide valuable insights into ICT integration in ELT but also reveal some common limitations. Many studies, such as Ciptaningrum et al. (2021), rely on self-reported data from teachers and pre-service teachers, which may not fully capture the complexities of ICT integration in real classroom settings. While the confidence levels reported by teachers are high, these self-assessments may not align with actual classroom practices, as indicated by the studies of Haerazi (2024) and Mamatkulovna & Tolibovna (2024), where lecturers' reported use of ICT did not always translate into effective pedagogical practices. Additionally, the research often highlights barriers to ICT integration without offering sufficient solutions or strategies to overcome these challenges, particularly in resource-constrained environments.

Despite these limitations, the studies highlight the critical need for a more holistic approach to ICT integration, including teacher training and support from institutions regarding infrastructure and resources. Haerazi (2024) and Sabiri (2020) stress the importance of aligning teacher training programs with the practical realities of ICT integration. They argue that technology can enhance student engagement and learning. However, it cannot reach its full potential unless teachers are well-equipped to integrate it effectively into their teaching methods. This suggests that teacher education programs must adapt to the digital age by providing teachers with the technical skills and the pedagogical knowledge required for effective ICT integration.

CONCLUSION

In conclusion, while ICT integration in ELT offers promising benefits, including increased student engagement, improved learning outcomes, and enhanced teaching methods, the challenges of access, teacher training, and institutional support remain significant obstacles. The reviewed studies suggest that teacher education programs must be more proactive in effectively preparing educators to use ICT. This includes fostering positive attitudes towards technology and providing the tools and knowledge to successfully integrate ICT into their classrooms. Moreover, institutional support in providing adequate resources and professional development is crucial. This review significantly informs future research and practice by identifying key gaps and challenges in ICT integration practices. It provides a foundation for developing targeted interventions, policies, and research agendas aimed at enhancing ICT use in ELT, especially in higher education. Future

work should explore innovative training models, scalable support frameworks, and longitudinal impacts of ICT on teaching efficacy and student achievement.

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