

Use of Information and Communication Technology (ICT) in Teaching English as a Foreign Language (EFL) in Saudi Universities

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Abstract:

The integration of Information and Communication Technology (ICT) has become a key component of contemporary developments in higher education, particularly in Saudi Arabia, where English as a Foreign Language (EFL) plays a vital role in students' academic and professional advancement. Despite the growing body of research on ICT in EFL instruction, studies conducted in Saudi universities remain fragmented, presenting inconsistent findings and lacking a comprehensive pedagogical synthesis. This study addresses this gap by systematically reviewing empirical research on ICT integration in EFL teaching and learning within Saudi universities.

A systematic review methodology was employed in accordance with established review protocols. Relevant studies were identified through major academic databases, including ERIC, Scopus, Web of Science, and Google Scholar. The review focused on peer-reviewed studies published over the past decade that examined ICT use in university-level EFL contexts in Saudi Arabia. Following a rigorous screening and selection process, thematic analysis was conducted on the selected studies.

The findings indicate that ICT integration is generally associated with improved teaching practices, particularly through learner-centered and interactive approaches, enhanced student engagement, and positive impacts on learning outcomes, including language proficiency and skills development. However, persistent challenges were identified, such as insufficient teacher training, inadequate infrastructure, and resistance to pedagogical change.

The study highlights key gaps that require institutional and policy-level attention and provides a comprehensive perspective on the role of ICT in enhancing EFL instruction in Saudi higher education. These findings offer valuable implications for educators, curriculum developers, and policymakers seeking to advance technology-based language teaching.

Keywords: ICT incorporation, English as foreign language (EFL), Saudi higher education institutions, higher education, systematic review, learning technology.

استخدام تكنولوجيا المعلومات والاتصالات في تدريس اللغة الإنجليزية كلغة أجنبية في الجامعات السعودية

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المستخلص:

أصبحت تكنولوجيا المعلومات والاتصالات جزءاً جوهرياً من التعليم الحديث، إذ أحدثت تحولاً جذرياً في جوهر أساليب التعليم والتعلم عبر مختلف التخصصات. تستلزم هذه الدراسة كيفية استخدام تكنولوجيا المعلومات والاتصالات في تدريس اللغة الإنجليزية كلغة أجنبية في الجامعات السعودية، مع التركيز على أثرها في طرائق التدريس، وتفاعل الطلاب، ونتائج التعلم. كما يتناول البحث مدى تبني هذه التكنولوجيا، وفوائدها، والتحديات التي تواجه دمجها الفعّال، وذلك من خلال مراجعة منهجية للأدبيات الثانوية ذات الصلة. وتشير النتائج إلى أن تكنولوجيا المعلومات والاتصالات تسهم في زيادة دافعية الطلاب ومشاركتهم، وتحسن من مستوى إتقان اللغة الإنجليزية بفضل توفير بيئات تعلم تفاعلية ومخصصة وتعاونية. ومع ذلك، ما تزال هناك معوقات قائمة تحد من تحقيق أقصى إمكاناتها، مثل قصور البنية التحتية، وضعف تدريب المعلمين، ومقاومة التغيير التربوي. وتلخص الدراسة إلى أهمية الاستثمار المستمر في البنية الرقمية، وتطوير الكفاءات المهنية للمعلمين، ومواءمة المناهج مع التطورات التقنية. في النهاية، يقدم هذا البحث توصيات عملية لصناع القرار والمعلمين من شأنها تعزيز دمج تكنولوجيا المعلومات والاتصالات في تدريس اللغة الإنجليزية كلغة أجنبية، إذ غيرت بشكل جذري جوهر أساليب التعليم والتعلم في مختلف التخصصات. تتناول هذه الدراسة كيفية توظيف تكنولوجيا المعلومات والاتصال في تدريس اللغة الإنجليزية كلغة أجنبية في الجامعات السعودية، مع التركيز على تأثيرها في طرائق التدريس، ومشاركة الطلاب، والنتائج التعليمية. كما تستعرض الدراسة مدى تبني هذه التكنولوجيا، وفوائدها، والتحديات التي تواجه تبنيها الفعّال من خلال مراجعة منهجية للأدبيات الثانوية. وتُظهر النتائج أن توظيف تكنولوجيا المعلومات والاتصال يسهم في زيادة الدافعية والمشاركة، وتحسين الكفاءة العامة في اللغة الإنجليزية عبر بيئات تعليمية تفاعلية ومخصصة وتعاونية. ومع ذلك، لا تزال هناك عوائق مستمرة تحد من تحقيق إمكاناتها الكاملة، مثل ضعف البنية التحتية التقنية، وقلة تدريب المعلمين، ومقاومة التغيير في الممارسات التربوية. وتؤكد الدراسة على الحاجة إلى استثمارات مستدامة في البنية التحتية الرقمية، وتطوير مهني مستمر للمعلمين، ومواءمة المناهج الدراسية مع التطورات التقنية. وفي الختام، تقدم هذه الورقة توصيات عملية لصناع القرار والمعلمين لتعزيز دمج تكنولوجيا المعلومات والاتصال في تدريس اللغة الإنجليزية كلغة أجنبية، بما يساهم في تحقيق مزيد من الحيوية والعدالة في التعليم العالي في السعودية.

الكلمات المفتاحية: تكنولوجيا المعلومات والاتصالات، اللغة الإنجليزية كلغة أجنبية، التربية الرقمية، التطوير التربوي.

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Introduction

The world has witnessed the emergence of information and communication technology that is changing the way we conduct education globally (Warschauer, 2000). It supplies us with ways of teaching as well as learning. Information and communication technology make possible classes that are participatory, flexible and focused on the learner. As a result, students become more engaged, work together better, and deliver better results. When teaching English as a foreign language, information and communication technology enables students to use their language skills in real life situations (Chapelle, 2001). Besides websites and applications that allow users to work with others, they could use images, audio, and videos.

Academic and research, as well as economical activities in Saudi Arabia, highly depend on proficiency in English. Universities should thus make sure that the students learn skills that will enable them to perform well in the international arena. Technology integration in English language teaching has been strongly supported and funded by the government and academic institutions (Alshahrani, 2024). Not all people employ this technology in similar manner. We are not entirely sure how much these tools really can help kids to learn English (Selwyn, 2019). Saudi universities are still developing effective strategies for integrating technology into English language teaching. (Alkinani, 2021).

In the context of the current research, information and communication technology or ICT means the use of equipment such as computers and internet to enhance learning of students and effectiveness of teachers in university studies. These tools help students share projects, web pages to share projects, videos and images to be used by teachers and applications, which help people to learn languages. Information and communication technology or ICT is essential as it can enhance

the results of the students in English classes and can even make the process of learning enjoyable to the students.

Studies on the use of technology in education have been conducted. The employment of technology at Saudi universities to teach English as a foreign language has not received much attention (Alkinani, 2021). Most of the time, researchers focus on just one school or one technology. Most studies rely on limited student opinions. This indicates that a comprehensive picture is still lacking. Additionally, we don't fully understand how technology impacts pupils' learning. Technology, according to some, makes it easier for children to focus and learn more, while others remain unsure (Selwyn, 2019). Additionally, there are issues with computers and professors who lack technological proficiency (Alkahtani, 2017). Some educators are unwilling to alter their methods of instruction (Baker et al., 2019).

This review will examine the gaps in our understanding of the use of ICT in Saudi Arabian colleges teaching English as a foreign language. The review will examine the findings of numerous studies on this subject. It aims to provide us with an understanding of how the use of technology impacts the way instructors instruct, how students participate in their education, and the issues that prevent technology from being used effectively in English instruction at Saudi universities. The review will examine the findings from all of these research regarding the use of ICT in the classroom.

Statement of the Problem

Despite the increasing use of technology in higher education, there is inconsistent usage of technology while teaching English to non-native English speakers in higher education. People are aware that teachers may use technology to improve instruction, increase student interest, and enhance learning. However, a large portion of the research on this subject is dispersed and examines only particular circumstances. Instead of focusing on how effective technology is at teaching English to non-native speakers, it primarily discusses the negative aspects of technology in general.

Saudi Arabia has invested heavily in digital and technological resources for its academic institutions. However, it is still unclear how Saudi Arabian universities use technology to teach English to non-native speakers and how these tools actually help students learn English. Most

studies consider only one university, one tool, or a small number of students' opinions, which means that a complete picture of ICT use in EFL instruction is missing.

There is also limited understanding of how technology affects student engagement and learning outcomes in English language education. Teachers' readiness to use technology, lack of institutional support, and resistance to changing traditional teaching methods further complicate the effective integration of ICT in EFL instruction at Saudi universities.

Therefore, there is a need for a comprehensive review that examines all available studies on the use of ICT in teaching English as a foreign language in Saudi Arabian universities. Such a review is necessary to understand how technology is being used, how effective it is in improving teaching and learning, and what challenges continue to hinder its successful implementation.

Research Questions

1. How can university instructors teach English to pupils who don't speak it as their first language using computers and other technology? To make English as a Foreign Language (EFL) session more engaging and productive, they employ information and communication technology, or ICT for short. When teaching English as a foreign language, or EFL, to students at universities, the question is how precisely they accomplish this.
2. student engagement in Saudi higher education?
3. How does the use of technology in the classroom impact university performance for students learning English as a foreign language? It is unclear how information and communication technology affects students learning English as a Foreign Language (EFL)
4. What happens to students learning English as a Foreign Language (EFL)
5. at universities who utilize technology? Does it affect the academic performance of English as a foreign language students in Saudi universities?
6. What issues are discussed in the literature about the use of ICT for teaching English as a foreign language in Saudi Arabian universities?

Objectives of Research

The objectives of this research are as follows:

1. To examine how Saudi Arabian colleges use computers and the internet to teach English to non-native speakers, with a focus on the application of information and communication technology in teaching English as a foreign language.
2. To examine how ICT use affects EFL students' participation in Saudi higher education, as documented in previous empirical research.
3. To examine how ICT integration affects EFL students' learning outcomes at Saudi universities, with special emphasis on academic achievement and language competency.
4. To determine the main obstacles and limitations related to ICT integration in EFL instruction at Saudi universities.

Literature Review

ICT Integration in EFL Teaching Methodologies

The integration of information and communication technology (ICT) has been greatly discussed as one of the options that have been adopted to transform the teaching methods of language education. Early studies by Warschauer (2000) have noted the importance of technology in the teaching of the English language through the globalization process and changing demands of the information economy. Similarly, Chapelle (2001) highlighted the pedagogical possibilities of using computer application in second language acquisition arguing that technology can be used to create customized learning experiences, purposeful interaction and language use.

More current studies support the use of ICT integration and its support of learner-centered and interactive teaching methods. Bui (2022) explains that digital technologies are becoming increasingly more common among English teachers to offer them the chance to create flexible learning environments and multimedia-based teaching and cooperative activities. Integration in EFL instruction requires further analysis through a systematic synthesis. Akram et al. (2022) conducted a systematic study to find out that, in the case of institutional support and appropriate training, technological integration often leads to pedagogical changes among teachers. Studies indicate that there has been increased use of ICT in tertiary education in Saudi Arabia. Alkinani

(2021) concluded that Saudi university educators take advantage of ICT in enhancing the delivery of courses and supplementing traditional teaching methods. Those differences in the extent of the integration of pedagogies were also brought up in the study, and it was noted that technology is more often used as a means to augment existing practices than altering the instructional design. The implication of these findings is that despite the increasing ICT adoption, the synthesis of its application in the pedagogical instruction in EFL teaching remains to be done.

ICT and Student Engagement in EFL Learning

Student involvement has been cited as one of the major benefits of ICT integration in education. The use of digital tools presents interactive learning environments with multimodality that can be enhanced to increase engagement and motivation. To enhance student interest, Topping (2005) emphasized peer learning and interaction as a significant concept that is gaining more and more support in digital platforms. Similarly, Xu (2014a; 2014b) has argued that digital and mobile media can be used to enable continuous interaction with students even when they are not in the traditional classroom.

Empirical studies show that there is a positive correlation between ICT use and student engagement. Alqahtani et al. (2022) claim that Saudi university students were more likely to get pleasure and acceptance of the e-learning technologies when they were easy to use and aligned with the course objectives. As well, Hegarty (2022) mentioned that classrooms enabled by technologies can increase student enthusiasm through providing dynamic assistance.

Such encouraging results are not universal, as indicated in literature. Selwyn (2019) pointed out the necessity of pedagogically determined implementation, stating that technology alone does not offer anything meaningful in terms of participation. The synthesis of the current research should be done in detail due to the variation in digital literacy and teaching practices that could influence the success of ICT in enhancing student engagement in the Saudi EFL setting.

Impact of ICT on Learning Outcomes in EFL Education

A relationship between ICT integration and learning outcomes has been one of the primary subjects of the research on the topic of EFL. Research indicates that technology-based instruction has the potential to improve language competency through providing students with additional

practice opportunities and exposure to natural language input. Chapelle (2001) argues that computer assisted language learning facilitates development of skills due to flexibility of pace and immediate feedback.

The improved academic performance and skill acquisition in higher education institutions have been associated with ICT. Alqahtani et al. (2022) observed that e-learning successfully implemented in the Saudi universities was positively associated with the learning outcomes and experiences students attained. Similarly, Akram et al. (2022) found that, under the conditions of appropriate technology integration based on the goals of pedagogy and supported by teacher training, technology integration improves the learning outcome. Improved learning results also are inconsistent in literature, however.

Challenges of ICT Integration in the Saudi EFL Context

Although ICT has potential benefits, most studies identify barriers to successful implementation. According to Alkahtani (2017), the barriers in Saudi educational facilities are poor infrastructure, lack of training, and resistance to change. These problems exist even though there have been national efforts to embrace technology in revamping education.

Alkinani (2021) also found that the attitudes and technological skills of instructors significantly influence UTA of ICT at Saudi colleges. Similarly, Baker et al. (2019) noted that access to digital tools is not as critical to successful technology integration as institutional backing and continuous professional development. Mouza et al. (2022) also supported this view by demonstrating that the research-based professional development is critical in improving the use of technology by the teachers in its classroom.

Alkinani (2021) states that the use of ICT in Saudi colleges is highly influenced by the attitudes of teachers and their level of technology. Similarly, Baker et al. (2019) have stated that the success of technology integration can be attributed to institutional support and continuous professional development as much as the presence of the digital tools. The same view was upheld by Mouza et al. (2022), who demonstrated that research-based professional development is the key to improving the use of technology in the classroom by teachers.

Organizational and leadership variables also contribute towards the implementation of ICT. Alshahrani (2024) states that the success of technology adoption in the education system depends on the perceptions of school and institutional leaders regarding digital communication. The implications of these findings include the fact that barriers to ICT **integration** are multi-faceted, and they involve organizational, educational and technical factors.

Synthesis of Literature and Research Gap

The reviewed literature claims that ICT has considerable potential to enhance EFL teaching techniques, student interaction, and learning outcomes in higher education. Literature on Saudi Arabia and other parts of the world indicates that there are educational benefits of classroom technology use. Nonetheless, the literature, particularly related to Saudi EFL universities, is characterized by contradictory findings, inconsistent methodology and incoherent data.

The process of making comprehensive conclusions is compromised by the fact that most of the research focuses on specific tools, specific institutions or specific findings. Moreover, despite the common awareness of the issues in ICT integration, they are often examined individually as opposed to the analysis based on a unified analytical framework. The integration of ICT in the teaching methods, engagement, learning outcomes, and the implementation limitation of Saudi EFL higher education is thus poorly documented.

To offer a coherent and comprehensive understanding of the ICT integration in the EFL teaching at Saudi universities, it is through this gap that a systematic review that incorporates the existing empirical studies is needed. To facilitate evidence-based pedagogies, institutional decision-making and future research agenda, the present study combines the results of numerous studies.

Theoretical Framework

This study is guided by established theoretical models that explain the integration of information and communication technology (ICT) in teaching and learning. A clear theoretical framework is essential in analytical and review-based studies, as it provides a foundation for interpreting pedagogical practices, student engagement, and learning outcomes related to technology use in education.

The present study adopts the **Technological Pedagogical Content Knowledge (TPACK) framework** and the **Substitution, Augmentation, Modification, and Redefinition (SAMR) model** to support the analysis and interpretation of ICT integration in English as a Foreign Language (EFL) teaching at Saudi universities.

Technological Pedagogical Content Knowledge (TPACK)

The TPACK framework explains effective technology integration by emphasizing the interaction between three core forms of knowledge: content knowledge, pedagogical knowledge, and technological knowledge. In the context of EFL instruction, TPACK highlights the importance of teachers' ability to combine knowledge of the English language, appropriate teaching methods, and digital tools to enhance learning.

In this study, the TPACK framework is used to understand how university instructors in Saudi Arabia employ ICT in EFL teaching methodologies. It helps explain variations in teaching practices, teachers' readiness to integrate technology, and the pedagogical challenges identified in the reviewed studies. The framework is particularly useful for analyzing how ICT supports learner-centered instruction, interactive activities, and flexible teaching approaches in higher education.

Substitution, Augmentation, Modification, and Redefinition (SAMR) Model

The SAMR model is used to interpret the level and impact of technology integration in the educational process. The model categorizes technology use into four stages: substitution, augmentation, modification, and redefinition. These stages range from basic use of technology as a replacement for traditional tools to transformative practices that redefine teaching and learning activities.

In this study, the SAMR model supports the interpretation of how ICT integration affects student engagement and learning outcomes in EFL education. It provides a lens for understanding whether technology is used merely to support existing teaching practices or to create new learning experiences that were previously not possible. The SAMR model also assists in identifying institutional and pedagogical barriers that limit the effective transformation of EFL instruction through ICT.

Relevance of the Theoretical Framework to the Study

Together, the TPACK framework and the SAMR model provide a comprehensive theoretical foundation for this systematic review. TPACK explains how ICT is integrated into EFL teaching strategies, while the SAMR model helps evaluate the impact of such integration on teaching practices, student engagement, and learning outcomes. These frameworks guide the analysis of the reviewed studies and support the interpretation of findings related to ICT use in Saudi higher education.

Methodology

Study design

To compile empirical studies on the application of information and communication technology (ICT) in English as a foreign language (EFL) instruction at Saudi universities, this study uses a systematic review design. Because it enables a thorough, organized, and repeatable synthesis of previous research, a systematic review is appropriate. It offers insights into teaching strategies, student involvement, learning outcomes, and the difficulties of ICT integration.

Data Sources

The following scholarly databases were thoroughly searched in order to find pertinent studies: ERIC, Scopus, Web of Science, and Google Scholar. There are also other sources such as The Saudi Ministry of Education's government reports and case studies from Saudi universities "ICT in EFL," "technology in language instruction," "ICT integration in Saudi universities," "digital tools in English teaching," and "online learning in Saudi higher education"

The search was limited to peer-reviewed studies and official reports published between 2015 and 2025 to capture the most recent evidence.

Study Selection Process

The review was conducted within a five-phase screening process, which was based on PRISMA guidelines:

1. Phase 1: Define Research Questions & Objectives
 - Guided by the study's research questions, which focus on teaching methodologies, student engagement, learning outcomes, and ICT challenges.

Phase 2: Literature Search

- Systematic keyword searches in selected databases
- After the systematic process of screening and selection, a total of **15 primary studies** were included in this review. The procedures for selecting relevant studies were clearly presented in accordance with the PRISMA protocol, and the inclusion and exclusion criteria were specified.

” Phase 3: Screening & Inclusion Criteria

Inclusion Criteria	Exclusion Criteria
Studies conducted in Saudi universities or relevant to Saudi higher education	Studies outside Saudi context
Focused on ICT in EFL instruction	Non-English language publications
Published between 2000–2025	Opinion pieces or editorials
Peer-reviewed or official institutional reports	—

Table 1 Exclusion and Inclusion Criteria

2. Phase 4: Data Extraction & Thematic Coding

- Key information extracted: authors, year, university, ICT tools, study design, outcomes.
- Data analyzed using **thematic coding**, with codes aligned to the four research questions:
 - ICT in teaching methodologies
 - Student engagement
 - Learning outcomes
 - Challenges

3. Phase 5: Synthesis & Reporting

- Findings were synthesized across themes, highlighting patterns, trends, and gaps.
- Results were linked directly to the research questions to ensure methodological coherence.

Data Analysis

The results were categorized into recurrent themes using thematic analysis. Every subject was in line with the following research questions:

- Teaching Methodologies: The Impact of ICT on Pedagogy
- Student Engagement: How ICT inspires and engages students
- Learning Outcomes: The effects of academic achievement and language ability
- Difficulties: Obstacles to successful ICT integration

Because coding was done by hand, the context, instruments, and published results of each study were carefully interpreted.

Results

The papers that were incorporated in this systematic review were about information and communication technology (ICT) integration in English as a foreign language (EFL) teaching in Saudi universities. The literature reviewed in terms of mixed, qualitative and quantitative research methodologies comprised of empirical studies. Although there were studies that focused on the views and institutional processes of instructors, most studies focused on the undergraduate EFL students. The ICT tools that were discussed in all the studies included learning management systems, multimedia materials, mobile-assisted language learning applications, and online communication platforms.

Overview of the Reviewed Studies

The papers used in this systematic review dealt with information and communication technology (ICT) integration in teaching of English as a foreign language (EFL) in Saudi universities. The literature reviewed consisted of empirical studies that used mixed-method research, qualitative research, and quantitative research. Although there were studies which focused on the views of instructors and the organizational process, most studies considered undergraduate EFL students.

ICT tools included in each of the studies were learning management systems, multimedia materials, mobile-assisted language learning apps, and online communication platforms.

ICT Integration in EFL Teaching Methodologies

The analyzed studies have revealed that the inclusion of ICT into the EFL teaching methods of Saudi institutions is primarily aimed at facilitating the interactive and technology-driven instructional strategies. Indeed, it has been mentioned that the use of ICT technologies facilitates online learning, lessons that are multimedia-based, and blended learning approaches. A range of studies indicated that the utilization of digital platforms enabled teachers to provide independent learning, provide more resources, and an opportunity to differentiate their teaching practices.

ICT has also been applied to enhance classroom activities by using virtual learning environment, digital assignments and online discussions. As demonstrated by the findings, it is evident that ICT integration has assisted EFL classrooms to move away from the traditional teacher-centered learning models to more learner-centered models of pedagogy.

Impact of ICT on Student Engagement

The overall involvement of students in EFL learning was reliably associated with ICT integration in the entire research that was studied. The findings revealed that digital resources enhanced enthusiasm, engagement, and interest of the students in learning English. Examples of an interactive form of ICT-based activities that have been identified to facilitate active student participation include multimedia exercises, online collaboration and mobile learning apps.

According to various studies, ICT-based learning environments enabled the students to reach course materials in the outside classroom to enhance interaction and prolonged engagement. Yet, such factors as digital literacy of students and the ability of teachers to integrate technology into classroom successfully influenced the level of engagement.

Impact of ICT on Learning Outcomes

The research studied determined that the overall result of integrating ICT in Saudi university EFL students was positive. The outcomes revealed improvements in language abilities, particularly in vocabulary development, reading, writing and listening. ICT resources have been reported to have given students more choices regarding practice, feedback and self-paced learning.

Also, other studies have indicated that technology-based trainings enhanced language mastery and academic success. The results mean that the involvement of ICT encourages the development of critical language skills as a precondition to succeed in higher education.

Challenges of ICT Integration in Saudi EFL Context

The reviewed study concluded that there are several barriers to integrating ICT in EFL teaching in Saudi universities despite the mentioned benefits. Among the difficulties that were frequently mentioned were lack of institutional support, poor technical infrastructure, pedagogical change resistance, and poor teacher preparation. Another research cited inadequate access to technology resources and limitations in time as reasons behind poor access to technology.

These challenges were reported in several institutions implying that though the country has made efforts at facilitating educational technology in higher education, barriers to successful application of ICTs still prevail.

Discussion

ICT Integration and Teaching Methodologies

The outcomes of The overall overview indicates that the teaching methods in EFL courses of Saudi universities have shifted significantly due to the incorporation of ICT. The trend in the shift to learner-centered methods, multimedia-based learning, and blended learning follows even greater tendencies observed in previous EFL research. Such findings are in line with past studies that ICT enables the teacher to employ interactive and flexible methods of teaching as opposed to conventional lecture-based training.

Yet, it appears, the level of change of ICT in teaching is decided by the institutional support and technological skills of instructors. Some studies found that ICT was used as an added supplement as opposed to a transformational instructional method, whereas some found positive pedagogical innovation. This implies that despite the potential to improve EFL pedagogy by use of ICT, there are contextual and professional factors that affect its applicability in Saudi universities.

ICT and Student Engagement

The analyzed studies suggest that ICT integration enhances the involvement of students in EFL learning. The cases of reported growth in motivation, engagement, and involvement were frequent,

particularly when digital technologies were being used to support interactive and collaborative learning processes. The findings are in line with the earlier studies that emphasize the power of technology in encouraging active learning and student engagement over a long period of time. Nonetheless, other studies recorded varying results in regard to engagement implying that ICT alone does not guarantee higher participation. The levels of engagement were influenced by such aspects as digital literacy of students, access to technology, and pedagogical practices of teachers. This highlights the importance of the pedagogically informed use of ICT compared to the reliance on technology as a motivator.

ICT and Learning Outcomes

The findings of the review indicate that the integration of ICT in the EFL teaching is generally associated with positive learning outcomes, i.e. academic performance and language proficiency gains. These findings align with the previous studies that demonstrated that technology-based learning environments enhance the development of language skills.

Nevertheless, the magnitude of learning gains was also different among studies, which means that the quality of instructional design and implementation influences learning outcomes. Other studies reported slight or indirect effects whereas others reported improvements to be significant. Such a difference highlights the importance of a proper incorporation of ICT in curriculum development to maximize its role in learning a language.

Challenges of ICT Integration in Saudi EFL Context

The study reveals that there are long-term challenges that have hindered successful integration of ICT in Saudi EFL classes despite the noted benefits. Some of the most frequently mentioned barriers were resistance to pedagogical change, insufficient teacher training and inadequate infrastructure. These challenges are in line with the findings of previous studies that have been conducted in similar learning institutions.

The fact that these issues are still continuing suggests that institutional policy-level responses are required to ensure that ICT adoption is sustained. ICT potential to enhance the process of teaching and learning in EFL can also still be untapped due to the lack of adequate infrastructure provision and professional growth.

Conclusion

This systematic review has shown that incorporating ICT into EFL instruction at Saudi universities has major advantages, such as better learner-centred instruction, increased student engagement, and favorable language proficiency learning outcomes. Learning management systems, multimedia resources, mobile-assisted apps, and online communication platforms are examples of ICT tools that have made teaching more flexible and interactive, which has improved English language acquisition.

However, it is important to recognize that the current study has a number of limitations. First, the findings may not be as broadly applicable as they could be because the review mainly relied on studies with different methodologies, frequently concentrating on single universities, particular tools, or small student samples. Second, the full potential of ICT integration is still hampered by enduring obstacles like poor teacher preparation, inadequate infrastructure, opposition to pedagogical change, and a lack of institutional support. Last but not least, the quick development of digital technologies raises the possibility that some methods and instruments will become antiquated, underscoring the necessity of continued research.

Future Recommendation

Based on these findings, **future research** should:

- Conduct longitudinal studies to evaluate the long-term effects of ICT integration on instructional strategies and student outcomes,
- Analyze how well teacher preparation programs increase ICT adoption and digital literacy. Examine the application of cutting-edge technologies in EFL classrooms, such as virtual reality, artificial intelligence, and mobile-assisted language learning.
- Examine institutional and policy-level tactics that facilitate ICT integration, such as financing, infrastructure, and leadership positions.
- Analyze the impact of students' digital literacy on learning outcomes and engagement. Conduct large-scale, multi-university research to guarantee more broadly applicable findings in Saudi higher education.
- Evaluate the pedagogical innovation of ICT use, making a distinction between transformative teaching practices and straightforward replacements of conventional methods.

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