

The Effect of Technology Devices on Learning ESL at the Undergraduate Stage

Doaa Noah

Directorate General of Education Diyala

duaanoah90@gmail.com

Abstract

This paper aims to emphasise the academic role of technology in enhancing learning within ESL classrooms for undergraduate candidates. It highlights the prevalent use of technology in the educational field, making it essential for every undergraduate candidate to have access to technology for their studies. The research employs a quantitative method using SPSS software to analyse responses from an equal number of male and female candidates (50-50%) from the English Department/ at the College of Basic Education/ University of Diyala. Many questions were posed to the participants, exploring the role, value, progress, and various applications of technology in education, with the results presented through graphs and tables. A majority of respondents agreed that technology plays a significant role in learning English as a second language.

However, they also reported technical challenges that need to be addressed by technology experts and developers to enhance this collaborative tool in the future. This research will be beneficial for undergraduate candidates who encounter difficulties with technology or are unsure of which tools are most effective at this level of study. Particularly for those pursuing English as their academic and career path, the strategies outlined in this paper will assist not only candidates and teachers but also guide technology developers in creating more supportive tools that enhance candidates' knowledge and confidence.

Keywords: Second Language, Technology, Candidates and Knowledge.

1. Introduction

Technology has a significant influence on learning ESL at the undergraduate level. In the current fast-paced world, mastery of ESL has become an added advantage for undergraduate candidates. Technology has long been regarded as an integral part of the teaching and learning process; it has provided teachers with a plethora of tools for facilitating student learning (Ahmadi, 2018). Proficiency in English enables access to a wide range of academic and professional opportunities. As candidates embark on their linguistic journey, technology has proven to be a reliable partner. This article delves into the crucial role that

technology plays in assisting undergraduate candidates in mastering ESL, supported by several insightful studies. Candidates must develop a certain level of technological competence to utilise various learning environments (Ibid) fully. The integration of technology has driven innovation and brought significant changes to social, cultural, and economic spheres. Lee and Kim (2020) explore the engaging world of virtual reality, demonstrating how it captivates candidates and enhances their language learning experiences (Warschauer,2002). Modern candidates need to acquire technological skills to maximise their benefits from different educational settings (Amin,2019). One study highlights that candidates in technology-rich language classrooms not only developed language skills but also gained essential information and communication literacies simultaneously (Ibid).

As researchers explore the intersection of ESL and technology, they discover how these advancements not only enhance accessibility to language learning but also transform it into an engaging and dynamic experience. With the intentional integration of technology, candidates have the opportunity to read, listen to, and view authentic, captivating, and relevant materials from the target culture. In addition, applicants can develop interpersonal skills through video, audio, or text-based

communications with a native speaker in real-time (Başar, 2021). Furthermore, the researcher discusses how technology is changing the face of ESL education at the undergraduate level, making language proficiency both achievable and enjoyable.

2. Literature Review

The convergence of technology with ESL learning has undoubtedly garnered significant attention in both educational and linguistic research fields. Over the last decade, the adoption of digital tools and platforms in ESL has been skyrocketing, opening up new horizons for both educators and learners (Smith, 2019). Numerous studies have focused on integrating technology, including language learning apps, online classrooms, and artificial intelligence, in language teaching. Several studies will provide a clear understanding of the diverse impacts of technology on undergraduate ESL learning, encompassing language acquisition, motivation, engagement, and the development of key communication skills. By way of illustration, the work by Johnson and Smith (2017) evaluated the efficacy of mobile phone language learning applications in enhancing the proficiency of ESL students. Their results showed that such applications lead to significant development in language vocabulary learning among undergraduate ESL learners through autonomous learning. Similarly, Smith et al., in

a longitudinal research study, aimed to investigate how the use of virtual classrooms enhances interactive ESL learning. The report highlighted a positive relationship between participation in virtual classrooms and the development of oral communicative proficiency. Another field where the use of AI in language tutoring has recently gained popularity is the use of AI-driven language tutors. Chen and Lee (2020) reported that using AI chatbots in ESL conversation practice increases learners' feelings of confidence in speaking after interacting frequently with AI language partners, as noted by Rodriguez et al. (2018).

4. Study Gap

Although these studies illustrate the vast potential of technology in ESL learning, various limitations and gaps in existing research need to be identified and addressed. In this regard, this review aims to provide an inclusive framework for understanding the complex relationship between technology and ESL learning in academic settings, as well as to guide the investigation into this emerging field.

5. Scope of the Study

This research will be particularly important for undergraduate candidates who face difficulties in their academic pursuits, as it

will equip them with procedures on how to effectively utilise technology and identify areas of technology and applications that are known to significantly aid in learning English. The paper, therefore, presents a systematic framework that enables candidates to evaluate their own academic needs and enhance their proficiency in the English language. Moreover, it sheds light on the technical and qualitative challenges that experts must address to make such tools more user-friendly and helpful in the future. Technology enables candidates to move beyond the textbook and interact with authentic English materials relevant to their interests, thereby optimising their language acquisition. Moreover, with the use of technology in teaching, candidates become more interactive and interested, as activities are conducted engagingly compared to traditional methods. In this respect, it has made learning a very enriching experience.

5. Questions of the Study

1. How extensively is technology being utilised in current undergraduate English language learning programs?
2. What are the perceptions of undergraduate English language learners regarding the impact of technology, and which technological tools or methods do they prefer as ESL learners?

3. What challenges do learners encounter in ESL learning, and how does technology influence them?

7. Aims of the study

1. To assess the degree of integration of English language learning at the undergraduate level.
2. To enhance candidates' understanding of the effectiveness of technology in supporting their English language learning journey and to identify their preferred technological tools or methods.
3. To investigate the challenges learners face in ESL learning and examine the impact of technology on language learning outcomes.

8. Methodology

This research was conducted using a quantitative method, where we distributed a questionnaire to undergraduate candidates at Basic Education, ensuring our physical presence during the process. We asked each respondent twelve questions, using a close-ended questionnaire format that allowed them to select from predetermined options. The questionnaire was created using Google Forms, and we ensured that only university undergraduate candidates participated. The English department candidates are our target population. We received over 90

responses, from which we selected 90 candidates-45 male and 45 female- to ensure gender balance and assess their educational and social awareness regarding the use of technology.

9. Findings and Discussion

The findings of this paper, based on the three main research objectives, are presented below in the form of graphs, charts, and tables. These visual representations provide readers with a clear and concise overview of the study's results.

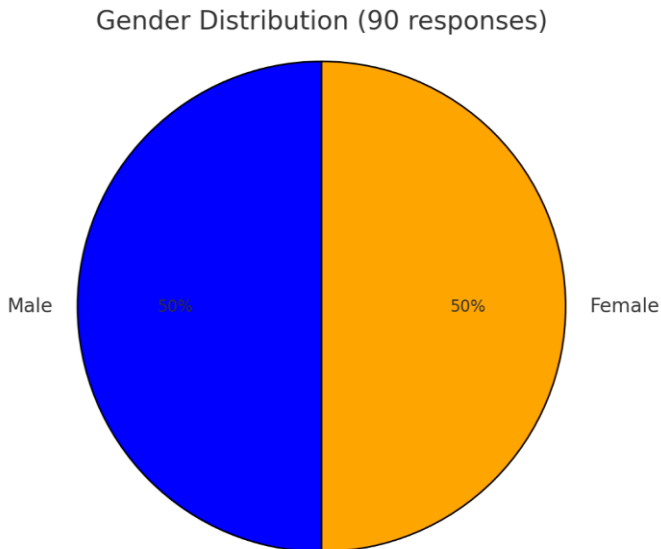


Figure (1) The Percentage of Gender

In Figure 1, the visual representation illustrates the responses from 100 participants, showing an equal distribution of male and female respondents, with each group accounting for approximately half of the total.

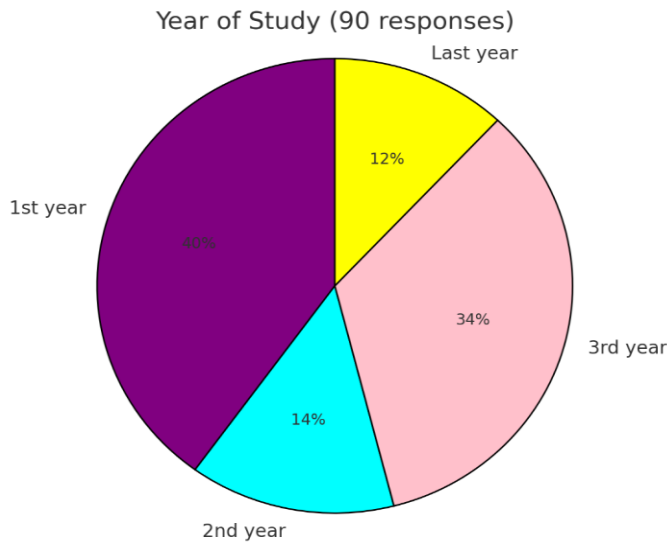


Figure (2) Percentage of academic-related

In Figure 2, the visual representation depicts the distribution of one hundred responses, illustrating the breakdown of candidates across various years of study: 40% are first-year candidates, and 14% are second-year candidates.

A. Evaluating Technology Addition

Assess the current level of technology integration in English language learning at the undergraduate level. This objective aims to assess the current use of technology in language education. The paper poses five questions to respondents regarding this objective, and their responses are provided below.

Table 1: Are you presently employing technology to aid in learning English as a second language?

Response	Frequency	Percent	Valid Percent	Cumulative Percent
A: Strongly Agree	41	43.0%	42.0%	43.0%
B: Agree	45	45.0%	46.0%	87.0%
C: Neutral	8	7.0%	8.0%	97.0%
D: Disagree	3	2.0%	3.0%	98.0%
E: Strongly Disagree	1	1.0%	1.0%	100.0%
Total	90	100.0%	100.0%	100.0%

It appears that 41% of respondents strongly believe that technology is beneficial for learning English, while 45% agree with this view. Furthermore, 8% of the respondents are neutral, and the remaining participants disagree with the statement.

Table 2: What apps or learning platforms do you employ for studying English?

Platform/Tool	Frequency	Percent	Valid Percent	Cumulative Percent
Duolingo	1	1.0%	1.0%	1.0%
Facebook	1	1.0%	1.0%	2.0%
Google Translator	11	14.0%	14.0%	16.0%

Platform/Tool	Frequency	Percent	Valid Percent	Cumulative Percent
Google Translator;	1	1.0%	1.0%	17.0%
Netflix	1	1.0%	1.0%	18.0%
Short courses	1	1.0%	1.0%	19.0%
Ted	1	1.0%	1.0%	20.0%
YouTube	50	56.0%	56.0%	76.0%
YouTube;	1	1.0%	1.0%	77.0%
YouTube; ChatGPT	1	1.0%	1.0%	78.0%
YouTube; ChatGPT and others	1	1.0%	1.0%	79.0%
YouTube; Duolingo	3	3.0%	3.0%	82.0%
YouTube; Google Translator	15	15.0%	15.0%	97.0%
YouTube; Google Translator;	1	1.0%	1.0%	98.0%
YouTube; Google Translator; ChatGPT	1	1.0%	1.0%	99.0%
YouTube; Google Translator; Duolingo; Twitter	1	1.0%	1.0%	100.0%
Total	90	100.0%	100.0%	100.0%

Based on the responses, it appears that 80% of participants are using YouTube for language learning. Additionally, 33% are utilising Google Translator, while a smaller portion, 5%, are using Duolingo. It is noteworthy to observe the diverse range of platforms being used, including ChatGPT, Twitter, Netflix, short courses, and Facebook.

Table 3: How often do you use technology for learning English?

Response	Frequency	Percent	Valid Percent	Cumulative Percent
A: Daily	50	54.0%	54.0%	54.0%
B: Weekly	27	29.0%	29.0%	83.0%
C: Monthly	2	2.0%	2.0%	85.0%
D: Rarely	10	13.0%	13.0%	98.0%
E: Never	2	2.0%	2.0%	100.0%
Total	90	100.0%	100.0%	100.0%

Based on the responses, 50% of participants use technology daily, while 27% utilise it every week. A smaller portion, 10%, reported using it rarely, with a few respondents indicating they use it monthly.

Table 4: Do you use language exchange or conversation partner apps to practice speaking English with native speakers or other learners?

Response	Frequency	Percent	Valid Percent	Cumulative Percent
No	40	40.0%	40.0%	40.0%
Yes	50	50.0%	50.0%	100.0%
Total	100	100.0%	100.0%	100.0%

This visual representation indicates that 50% of respondents use conversation partner apps to practice speaking English with native speakers, while 40% do not utilise any language exchange applications.

B. Detect Observation and Favorites

Collect data on candidates' views regarding the effectiveness of technology in supporting their English language learning journey, while also identifying their preferred technological tools or methods. This objective aims to assess candidates' attitudes and preferences toward technology-driven language learning. The paper poses four questions to respondents related to this objective, with their responses provided below.

Table 5: In what ways has technology contributed to improving your English language skills?

Response	Frequency	Percent	Valid Percent	Cumulative Percent
A: Increased vocabulary	32	32.0%	32.0%	40.0%
Above All	1	1.0%	1.0%	38.0%
All these skills	1	1.0%	1.0%	40.0%
B: Improved pronunciation	30	30.0%	30.0%	71.0%
C: Enhanced listening comprehension	20	20.0%	20.0%	93.0%
D: Better writing skills	6	6.0%	6.0%	100.0%
Total	90	100.0%	100.0%	100.0%

This visual representation indicates that 30% of respondents chose increased vocabulary, 30% opted for improved pronunciation, 20% stated it enhanced their listening comprehension, and 6% believed it improved their writing skills. Additionally, only 2% of responses favoured the "above all these skills" option.

Table 6: Do you believe that using technology increases your effectiveness and interest in learning English as a second language?

Response	Frequency	Percent	Valid Percent	Cumulative Percent
A: Strongly Agree	36	36.0%	36.0%	36.0%
B: Agree	41	41.0%	41.0%	86.0%
C: Neutral	10	10.0%	10.0%	97.0%
D: Disagree	2	2.0%	2.0%	99.0%
E: Strongly Disagree	1	1.0%	1.0%	100.0%
Total	90	100.0%	100.0%	100.0%

A significant portion of respondents, around 36%, strongly agree that using technology improves their effectiveness and interest in learning English as a second language. An additional 41% agree, which is also a notable percentage. Approximately 10% remain neutral, indicating they neither agree nor disagree, while the remaining few expressed disagreement.

C. Comment on The Results:

Enhancing the use of technology in undergraduate ESL (English as a Second Language) classrooms can significantly boost student engagement and improve learning outcomes. Following are some strategies that ESL candidates can employ to make the most out of their learning through technology:

1. Multimedia: This includes videos, podcasts, and even interactive sites that immediately put candidates in contact with real content in English.
2. Language Learning Apps: Duolingo, Babbel, or Rosetta Stone can be recommended to complement their practice outside of the classroom.
3. Web-based language labs: These are online language tasks containing exercises designed to practice in the areas of pronunciation, grammar, and vocabulary.
4. Sites of Language Exchange: One may request candidates to join some language exchange apps or platforms for conversational practice with native-speaking interlocutors.
5. Flashcards Digitally: Recommend they leverage tools like Anki and Quizlet to create and exchange flashcards for expanding vocabulary.
6. Gamification: With Kahoot! or Quizizz, initiate more quizzes and games in the process of language learning to make it all the more fun and interesting.
7. Online Discussion Forums-Create online forums or social media groupings where candidates can discuss desired topics in English.

8. Online Writing Tools: make them accessible and utilise online tools like Grammarly to improve the writing and grammar of candidates.
9. Digital Assessment Support Use of online tools for quizzes and tests, student assignments enabling immediate feedback, and monitoring student progress.
10. Digital Reading Resources: Accessing e-books, online articles, and blogs on topics of interest and at an appropriate level of difficulty and proficiency.
11. Group Projects: Give projects that the candidates must undertake collaboratively, like using Google Docs, Slides, or Sheets.
12. Professional Development Conduct large/small group workshops/training sessions that will see most instructors gain knowledge of the new technologies of education, as well as fresh teaching methods.
14. Accessibility: Allow equal access to the digital diversity of resources and technology for each candidate, including those with disabilities.

Conclusion

Based on the findings of this study, the following conclusions are drawn to answer the research questions:

1. Technology is deeply and extensively integrated into the current ESL learning practices of undergraduate students. A significant majority (88%) of respondents agree or strongly agree that they use technology to learn English, with over half (54%) engaging with technological tools daily. YouTube emerged as the dominant platform, used by 80% of participants, indicating its central role in the self-directed language acquisition process.

2. Undergraduate ESL learners perceive technology as a highly effective and engaging tool that significantly aids their language development. An overwhelming 77% of candidates agree or strongly agree that technology increases their effectiveness and interest. Their preferences are clearly oriented towards accessible and versatile tools, such as YouTube and Google Translate. Furthermore, they report that technology contributes most notably to improving vocabulary (32%) and pronunciation (30%), highlighting a preference for skills developed through audiovisual and interactive media.

3. While technology positively influences outcomes by providing access to authentic language input and interactive practice, learners encounter significant challenges. Half of the respondents do not use language exchange apps to practice speaking, potentially indicating a gap in the practical

application of conversational skills or a preference for passive consumption. The primary challenges are not pedagogical but technical, including issues like software malfunctions and a lack of face-to-face interaction. These technical barriers must be addressed by developers and educators to fully optimise technology's potential for enhancing comprehensive language proficiency, particularly in productive skills like speaking and writing.

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