

Educational Technology for English Teaching at Kyambogo University, Uganda

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Abstract

This study examines the role of educational technology in learning English as a second language within the Department of Language and Communication at Kyambogo University. The key objectives were to assess how various educational technologies can improve the effectiveness of teaching and learning English, explore the attitudes of both teachers and students toward these tools, and evaluate the effectiveness of specific technologies in developing core language skills. A quantitative approach was adopted, using questionnaires distributed to 18 teachers and 243 students to collect data on their experiences with educational technology in language learning. The results show that instructors embrace a blended approach to English instruction that combines traditional techniques with educational technology. Students receiving quick responses was a significant benefit of instructional technology. Students showed positive attitudes toward these technologies, with language learning applications and computers enhancing English competence the most. However, the study also found that restricted computer availability and unreliable internet connectivity hinder language learning technology utilization. The report suggests that Kyambogo University increase computer and internet access and train teachers and students to handle these challenges. Identifying and overcoming these challenges will improve the integration and effectiveness of the university's English language educational technology.

Keywords

Educational Technology, English as a Second Language (ESL), Teacher

1. Introduction

English as a Second Language (ESL) is of paramount importance in Uganda, serving as a critical conduit for academic and professional communication. Proficiency in English is essential for students to access higher education opportunities and participate effectively in the global economy. Recently, the role of educational technology in enhancing learning has gained significant attention. Mishra and Koehler (2006) emphasize that integrating technology into education enriches learning experiences and improves educational outcomes, making it a vital aspect of contemporary teaching practices. This growing trend highlights the need for educational institutions to embrace and effectively implement modern technologies. These technologies must be tailored to meet students' specific needs and interests to maximize their benefits, thereby optimizing learning outcomes and fostering a more engaging and collaborative educational environment. Voogt and Tondeur further, highlight that Information and Communication Technologies (ICT) integration creates new opportunities for both teachers and students. However, the use of computers, laptops, tablets, and mobile phones in education must be approached thoughtfully, particularly in second-language learning (Schmid & Petko, 2019). Educational technology, which includes digital tools and technologies, offers numerous benefits in language learning. Cheunchroen and Klimova and Sanda emphasize that these tools increase student engagement, foster collaboration, and enhance the overall learning experience. Educational technology broadly encompasses hardware, such as computers and mobile devices, as well as software and online platforms (Chapman & Slaymaker, 2002). Extensive research supports the positive impact of educational technologies on student engagement and involvement. For instance, Robinson (2008) found that adaptive instructional technologies extend the time students spend on critical thinking and enhance higher-order skills like analysis, reasoning, and knowledge application. Similarly, Duderstadt et al. (2002) suggest that combining online learning with inquiry-based and participatory approaches promotes the use of complex cognitive abilities, including problem-solving and collaboration. In Uganda, English's importance is underscored by its role in the education system and its status as an official language. August (2018) highlights that effective ESL instruction is critical for academic success and social integration. Additionally, immersive learning technologies, such as virtual reality (VR) and augmented reality (AR), have shown promise in enhancing language acquisition by providing authentic linguistic contexts and practical application opportunities (Weng et al., 2024). As Golonka et al. (2014) note, the growing use of personal computers and Internet connectivity in language studies underscores the increasing role of technology in education. In the context of ESL learning, digital technologies provide access to high-quality

education and foster more learner-centered classrooms. Well-planned instruction using Information and Communication Technologies (ICT) allows students to focus on improving specific language skills, thus enhancing the learning experience. However, at Kyambogo University, teaching and learning English face several challenges. Many educational technologies ESL instructors use are outdated or basic, limiting their effectiveness. While teachers often rely on traditional audio-visual aids like tape recorders and projectors, students can access more modern devices such as smartphones, tablets, and online platforms like YouTube. This technological disparity contributes to a lack of student motivation and engagement in technology-based activities. This study aims to contribute to the existing literature on the role of educational technology in language learning, specifically in a university context, by identifying key challenges and opportunities for its more effective use. The specific objectives are:

- 1) To evaluate how different educational technologies can enhance the effectiveness of teaching and learning English and compare their relative advantages.
- 2) To assess teachers' and students' attitudes toward the use of educational technology tools in the teaching and learning process.
- 3) To identify and assess the efficacy of various educational technology tools in developing core English language skills such as reading, writing, listening, and speaking.

This research has the potential to significantly impact educational practices at Kyambogo University and beyond. By identifying effective educational technologies and strategies, the study can help improve student engagement and learning outcomes in ESL programs. Additionally, the findings can inform policy decisions and resource allocation, ensuring that both teachers and students have access to the most effective tools for language learning. Kyambogo University, one of Uganda's leading higher education institutions, has made efforts to incorporate educational technology into its ESL program. However, the effectiveness of these efforts is hindered by the use of outdated tools and a lack of alignment between the technologies used by teachers and students. Addressing these challenges is crucial for improving the quality of English language education at the university. The purpose of this study is to explore the role of educational technology in teaching and learning English as a second language at Kyambogo University. By identifying the challenges and opportunities associated with the use of technology in ESL education, the study aims to provide actionable insights that can enhance teaching practices and improve student outcomes. The significance of this research extends beyond Kyambogo University, offering valuable lessons for other educational institutions facing similar challenges.

2. Review of Literature

The application of technology-based tools in the teaching and learning of second languages has gained momentum in the last decade. The discovery of educational technologies in the teaching of languages is regarded as a cornerstone step in

making second language teaching easier (Mubai et al., 2020). Technology has become an important part of everyone's life, including teachers and students, and its use in teaching and learning second languages cannot be ignored (Kilpeläinen & Seppänen, 2014).

2.1. Theoretical Framework: Computer Assisted Language Learning (CALL)

Computer Assisted Language Learning (CALL) offers a comprehensive framework for integrating technology into language education. This approach leverages computers and digital tools to enhance the language learning process, providing diverse resources and interactive experiences that support student engagement and proficiency (Chapelle, 2001). The implementation of Call-in teaching English as a Second Language (ESL) at the university level has demonstrated considerable potential in improving language skills and student involvement. CALL enhances various aspects of language learning, including writing, reading, and vocabulary acquisition. Research highlights the effectiveness of CALL-based activities in improving academic writing. For instance, a recent study found that structured CALL interventions significantly advanced students' essay-writing abilities, leading to notable gains in language proficiency (Tariq, 2024). Additionally, CALL has been shown to boost reading comprehension. A quasi-experimental study revealed that students who engaged with CALL tools exhibited superior reading skills compared to those who used traditional methods (Bint-e-Javid & Anwar, 2023). In the area of vocabulary acquisition, CALL technologies have proven beneficial, particularly in specialized fields such as medical education. They support cognitive learning processes and are especially effective for enhancing receptive vocabulary knowledge. However, they may be less effective in developing productive vocabulary skills (Zhang et al., 2022). Despite the advantages of CALL, some educators advocate for a balanced approach, cautioning against an over-reliance on technology. They recommend integrating traditional teaching methods with digital tools to create a well-rounded educational experience (Yamazaki & Thomas, 2023).

2.2. Teachers and Students' Attitudes towards Using Educational Technology

The integration of educational technology into teaching English as a Second Language (ESL) at universities has generally been met with positive attitudes from both teachers and students. Research reveals that a substantial majority of educators (97%) view the use of information and communication technology (ICT) favorably, while 90% of students share this positive outlook (Peñaranda et al., 2024). This enthusiasm among teachers is particularly important, as their attitudes significantly impact the learning environment and student engagement (Choudhury & Khatun, 2024). Educators recognize that ICT enhances the learning experience by making it more interactive and effective. Studies also show that prospective teachers in emerging economies exhibit positive attitudes toward technology

integration. Their enthusiasm is influenced by factors such as perceived ease of use and institutional support (Fernandez et al., 2024). Among students, the familiarity with and use of smart technologies is widespread, with 86% incorporating these tools into their daily lives. This familiarity translates into a strong preference for using technology in educational settings (Levterova-Gadzhalova et al., 2024). Additionally, research on computer-assisted language learning (CALL) indicates that university students in Kazakhstan hold favorable views on incorporating CALL into their language classes, although attitudes can vary depending on the academic year (Kazykhankyzy et al., 2023). Despite the overall positive sentiment towards educational technology, challenges such as IT anxiety and varying levels of technological proficiency among students can affect the implementation and effectiveness of these tools in ESL education. The attitudes of both teachers and students are crucial for successful integration. Positive attitudes can enhance enthusiasm and motivation, which are essential for achieving educational success. Conversely, negative attitudes or discomfort with technology can impede its effective use (Izquierdo et al., 2017).

2.3. Efficacy of Educational Technology in Second Language Learning

The integration of educational technology into teaching English as a Second Language (ESL) at universities has demonstrated considerable potential to enhance learning outcomes. Research highlights both the multifaceted benefits and the challenges associated with this integration. The technology significantly boosts student engagement and motivation by creating immersive learning environments through tools such as virtual reality (VR) and augmented reality (AR) (Roshan & Narra, 2024). It enables personalized learning experiences by adapting content to individual learner profiles, thereby optimizing the learning process (Nurmala et al., 2023; Roshan & Narra, 2024). Additionally, technology improves access to diverse resources and facilitates collaboration and communication among learners (Taumuratov, 2023). Mobile learning and ICT tools, in particular, have proven effective in creating accessible and flexible learning environments (Nurmala et al., 2023). Despite these advantages, challenges such as the digital divide, insufficient teacher training, and technical issues remain significant barriers (Nafea, 2024; Tabasi et al., 2024). Effective integration of technology into ESL teaching requires comprehensive training programs for educators (Nurmala et al., 2023). While the potential benefits of technology in ESL education are substantial, addressing these challenges is crucial for realizing its full potential. Technology can support learners by providing access to information in the target language, connecting them with native speakers, and offering opportunities for rapid feedback. It can enhance learners' enthusiasm and motivation, which are essential for success (Dörnyei & Ushioda, 2021). However, improper use of technology can lead to issues such as incorrect input, limited engagement, and inaccurate feedback (Chapelle, 2001).

2.4. Enhancing Language Skills through Educational Technology

Developing the four fundamental language skills—listening, reading, speaking, and writing—is crucial for learners of English, as it is for any language. Educational technology plays a significant role in supporting these skills by offering authentic materials and practice opportunities through tools such as audio devices, videos, and interactive platforms (Kuure et al., 2016; Yoon, 2014). Online platforms can provide additional practice materials, quizzes, and resources that bolster language learning (Chapelle, 2001; Salaberry, 2001). The integration of educational technology in teaching English as a Second Language (ESL) at universities has markedly transformed language learning methodologies. This approach enhances learner engagement, proficiency, and cultural understanding through innovative tools and resources. Interactive and personalized learning experiences are facilitated by technology, which is vital for effective language acquisition (Roshan & Narra, 2024; Tabasi et al., 2024). Online platforms, language learning apps, and virtual classrooms create immersive learning environments that allow students to practice English in diverse cultural contexts (Hasumi & Chiu, 2024; Roshan & Narra, 2024). These technologies not only support English language instruction and practice but also contribute to professional development and digital literacy, which are essential for effective technology use (Jegadeesan & Sherine, 2024). The widespread availability of technology and resources further enhances language proficiency by providing learners with varied and modern tools for practice (Priyadarshini et al., 2023; Siminto, 2023). Technology also aids in improving spoken language proficiency, offering insights for educators, curriculum designers, and learners striving for higher language skills (Le Thi Hoa, 2023). However, unequal access to technology remains a significant barrier, impacting the effectiveness of technology-enhanced learning (Camacho et al., 2024; Tabasi et al., 2024). To maximize the potential of these technologies in the classroom, adequate training for educators is essential (Camacho et al., 2024; Hasumi & Chiu, 2024). While the benefits of technology in ESL education are substantial, addressing challenges related to access and training is crucial to ensure equitable and effective language learning experiences.

2.5. Challenges in Integrating Educational Technology

Integrating educational technology into second language teaching, particularly in English as a Second Language (ESL) settings, involves navigating various challenges. These challenges are influenced by factors such as the attitudes of instructors and students, logistical issues, and the barriers that hinder the effective use of technology (Hedayati & Marandi, 2014). While educational technology offers substantial benefits—such as enhanced motivation, access to authentic materials, and increased practice opportunities—several obstacles must be addressed to fully leverage these advantages. One of the primary challenges is the digital divide, which refers to the unequal access to technology among students. Not all learners have access to devices or reliable internet, which can exacerbate educational

disparities and limit the effectiveness of technology-enhanced learning (Haleem et al., 2022; Maraisa et al., 2024). Additionally, technical issues such as frequent system malfunctions can disrupt learning and discourage both students and teachers from utilizing technology effectively (Taumuratov, 2023). Teacher training and support are also critical areas of concern. Many educators lack the necessary professional development to integrate technology effectively into their teaching practices (Ranbir, 2024; Roshan & Narra, 2024). Resistance to change is another issue, with some educators preferring traditional methods and being hesitant to adopt new technologies (Bang, 2024). This resistance can hinder the incorporation of digital tools and limit their potential benefits. In terms of pedagogical integration, balancing traditional teaching methods with digital advancements is essential. Effective integration requires a thoughtful approach that combines both pedagogical strategies to create engaging and comprehensive learning environments (Roshan & Narra, 2024). Moreover, access and equity issues extend beyond just the digital divide. Institutional infrastructure may also be inadequate to support widespread technology use, limiting opportunities for all students (Ranbir, 2024). Implementation challenges further complicate the integration of educational technology. Time constraints in the classroom can restrict the ability to meaningfully incorporate technology into lessons (Wibowo et al., 2024). Additionally, privacy concerns related to student data and security can deter both teachers and students from fully engaging with digital platforms (Bang, 2024). Despite these challenges, addressing them through strategic planning and ongoing support can lead to more effective integration of educational technology. By tackling these issues, educators and institutions can create more equitable and dynamic learning environments, ultimately enhancing the educational experience for students.

2.6. Knowledge Gap

Despite the extensive research on the benefits and challenges of integrating educational technology into ESL instruction, there remains a notable knowledge gap concerning its application at Kyambogo University, Uganda. While existing literature highlights general challenges such as digital divides, technical issues, and the need for professional development (Maraisa et al., 2024; Ranbir, 2024; Taumuratov, 2023), there is limited empirical data on how these factors specifically impact ESL teaching and learning at Kyambogo University. This gap includes an understanding of context-specific barriers that ESL educators and learners face in this unique setting and how these barriers influence the effective use of technology in their learning environment. Moreover, although the positive effects of educational technology—such as increased motivation and enhanced access to authentic materials—are well-documented, there is a lack of focused research on how these technologies specifically affect language learning outcomes at Kyambogo University. There is a need for studies that assess the effectiveness of various digital tools and platforms in improving English language proficiency among students within

this particular context. Additionally, while the importance of teacher training and institutional support in the successful integration of technology is acknowledged (Ranbir, 2024; Roshan & Narra, 2024), there is insufficient research on the specific professional development needs of ESL instructors at Kyambogo University. Understanding these needs and optimizing support structures could significantly enhance technology use in their teaching practices. Equity and access issues also remain underexplored. The broader literature identifies problems related to the digital divide and inadequate technological infrastructure (Maraisa et al., 2024; Ranbir, 2024), but there is limited information on how these issues impact ESL learners at Kyambogo University, particularly regarding equitable access to technology and resources. Finally, while general strategies for integrating technology with traditional teaching methods are discussed (Roshan & Narra, 2024), there is a lack of research on how these strategies can be effectively implemented within the specific educational and cultural context of Kyambogo University. Exploring how to balance technological advancements with traditional pedagogical approaches in this setting is crucial for maximizing learning outcomes. Addressing these gaps will provide a more comprehensive understanding of the challenges and opportunities associated with educational technology in ESL instruction at Kyambogo University and inform more effective, contextually relevant practices and policies.

3. Methodology

This section describes the research strategy and methodology, the data collection instruments and procedures, and the research tools and data collection process. It also explains how the methods and tools used in this study helped achieve the goals set out in the previous sections. As part of the study, teachers of English and students at Kyambogo University studying English as a second language were given questionnaires with questions about educational technology in second language learning. These were used to find out the teachers' responses on how to make use of educational technology more effective; the teachers' responses regarding comparative advantages of using educational technology in teaching English; the attitude of students towards the use of educational technology-based lessons; and the efficacy of educational technology tools in teaching and learning English.

This study was conducted from July 2023 to October 2023 and aimed to examine attitudes toward educational technology in English language learning among students and teachers at Kyambogo University, School of Language. This survey employed a quantitative approach by distributing survey questionnaires to teachers and students at Kyambogo University, School of Language. The questionnaire used 5-point Likert-type scales to determine the attitudes of students and teachers towards the use of technology in teaching and learning English. Learners were permitted to place a tick on one of the scales based on their opinions. The questionnaires captured the students' demographic information (age and majors). The

questionnaires were also tailored to understand the teachers' responses on how to make use of educational technology more effective, the comparative advantages of using educational technology, and the efficacy of educational technology tools in teaching and learning English. The design was chosen so that the researcher could talk to a representative sample of teachers and students at Kyambogo University School of Language. The questionnaires were pilot tested using thirteen students who didn't participate in the real study. Spelling and any ambiguous errors were corrected. Questionnaires as data collection tools have been used by researchers over the years.

This study focused on teaching and learning English as a second language at Kyambogo University School of Language. The sample size was determined based on the proportion of usage of E-learning = 2.66 (53.2%) as reported by Nelson et al. (2024), with a 5% margin of error and a confidence level of 95%. To determine the sample size, we used a sample size formula for proportions, which is appropriate when studying attitudes or behaviors within a target population. The sample was drawn from Kyambogo University, with a focus on teachers and students in the School of Language, where the population size was assumed to be approximately 500 students and 50 teachers. To calculate the sample size, we aimed for a 95% confidence level and a 5% margin of error (or confidence interval). These are standard parameters for educational research and allow for a representative sample size with acceptable error margins. Using a 53.2% of Ugandan university students utilize ICT gadgets for E-learning ($p = 0.532$) to maximize variability, we used the following sample size formula:

$$n_0 = \frac{Z^2 \times p \times (1-p)}{e^2}$$

where; n_0 = Required sample size; $Z_{\alpha/2}$ = Value for selected alpha level of 0.025 in each tail = 1.96 (the alpha level of 0.05 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error); (p) = is the proportion (53.2%) of Ugandan university students utilize ICT gadgets for E-learning as reported by Nelson et al. (2024); e = The minimum error was set at 10%, implying that how many respondents must be studied if the estimate is to fall within 10% points (e) of the true proportion with 95% confidence. Plugging in the values:

$$n_0 = \frac{1.96^2 \times 0.532 \times (1-0.532)}{0.1^2} = 382.58648064 \cong 383 \text{ students}$$

Since our total target population (students and teachers combined) is relatively small (about, $N= 550$), we apply a finite population correction (FPC) to adjust the sample size:

$$n_{adj} = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

where, $N= 550$ (total population of teachers and students); $n_0 = 383$

$$n_{adj} = \frac{383}{1 + \frac{383-1}{550}} = \frac{383}{1.6945} = 226.019313304721 \cong 226 \text{ students}$$

After rounding up, the adjusted sample size needed for the study is 226 students. We aimed for 243 students and 18 teachers to ensure a balanced representation within the target population, resulting in a final sample size of 261 respondents, which provides an adequate sample size with slight over-sampling to account for potential non-responses. A total of 18 teachers and 243 students in Kyambogo School of Language were randomly selected for this study. A stratified type of probability sampling method was applied to group the respondents into categories to achieve a better representation of the target population. Students were stratified according to their year of study, and an equal number of students were randomly selected from each stratum. Stratification of the population is very key in achieving a homogenous representative population as well as reducing potential human bias in samples' selection. Survey questionnaires were used to collect data from the respondents. Two questionnaires were prepared for the students (**see Appendix II**) and teachers (**see Appendix I**) as respondents during the survey. The questionnaire was generated via the Microsoft survey platform and contained both open-ended and closed-ended questions. Students and teachers were contacted through text messages or were emailed with links to online surveys ahead of time to seek their kind permission and also explain the purpose of the study to them. Questionnaires are well known for their flexibility in research surveys, result-oriented tools, and ability to give both quantitative and qualitative data. Questions that were intended to assess attitudes and perceptions were formulated using a Likert scale. Both open-ended and closed-ended questions were constructed for use during this research survey. Open-ended questions gather detailed data, while closed-ended questions are intended for precise data collection. Quality control was ensured through test runs of the research questionnaire before actual data collection. After constructing the questionnaire, the researcher consulted with study supervisors who happened to be experts in the field to review the instrument to ensure that it measured what it was designed to measure. Any necessary adjustments were made after consultation with the supervisors, ensuring that the instrument was clear, relevant, specific, and logically organized. Additionally, a pre-test was conducted to assess and improve the questionnaire's reliability, followed by a calculation of the Content Validity Index (CVI) using the formula:

$$CVI = \frac{\text{The number of items or questions declared valid}}{\text{The total number of items/questions}} = \frac{12}{15} = 0.8$$

According to [Zamanzadeh et al. \(2015\)](#), an appropriate level of content validity for a research instrument is a CVI equal to or greater than 0.7. They further noted that, due to the high number of content experts that make consensus difficult, a high value of the scale-level index (S-CVI) with the average approach, equal to 0.93, is also supportive. In this study, the CVI of the research tool was 0.8, which

is above 0.7, indicating that it was valid. The reliability of the instrument was tested using Cronbach's coefficient alpha (α), calculated in SPSS v.29 to determine the research instrument's consistency and reliability. The data gathered from respondents was quantitatively analyzed using tabulations and descriptive statistics of frequencies, percentages, and charts in the computer software Statistical Product for Service Solutions (SPSS, version 20). The responses to all the close-ended questions were measured on a five-point Likert scale. Responses were given values between 1.00 (Strongly Disagree) and 5.00 (Strongly Agree). Open-ended questions were analyzed qualitatively to identify common themes and insights.

4. Results

In this study, data were collected through self-administered questionnaires administered to 18 teachers and 243 students at Kyambogo University. The sample included both experienced and novice users of educational technology. Among the teachers, 61.1% were male, while 38.9% were female. The majority of teachers fell into the age group of >39 years (72.2%). Regarding teaching experience, 38.9% had more than 10 years of experience. Among the students, 51.9% were male, and 48.1% were female. The age distribution of students included 35.4% in the 17 - 20 years group, 33.3% in the 21 - 23 years group, and 31.3% in the >23 years group. Most students had an intermediate level of English proficiency (53.1%), and the distribution across study years was 31.7% in Year I, 47.7% in Year II, and 20.6% in Year III (Table 1).

Table 1. Background characteristics of respondents.

	Characteristic	Frequency (<i>n</i>)	Percent (%)
Teachers	Gender		
	Male	11	61.1
	Female	7	38.9
	Age group		
	20 - 29 years	1	5.6
	30 - 39 years	4	22.2
	>39 years	13	72.2
	Teaching experience		
	<2 years	1	5.6
	2 - 5 years	4	22.2
	6 - 10 years	6	33.3
>10 years	7	38.9	
	Total	18	100.0

Continued

		Gender	
		Male	126 51.9
		Female	117 48.1
		Age group	
		17 - 20 years	86 35.4
		21 - 23 years	81 33.3
		>23 years	76 31.3
Students		Current level of English proficiency	
		Beginner	95 39.1
		Intermediate	128 53.1
		Advanced	19 7.8
		Year of study	
		Year I	77 31.7
		Year II	116 47.7
		Year III	50 20.6
		Total	243 100.0

The data from **Table 2** reveals the usage of various educational technology tools for teaching or learning English among teachers and students. Teachers predominantly use laptops/computers (20.9% of responses, 77.8% of cases), followed by language learning apps (17.9%, 66.7%), and online platforms like Zoom (16.4%, 61.1%). Digital textbooks and virtual reality tools are also commonly used each accounting for 16.4% and 14.9% of responses, respectively. Among students, language learning apps are the most frequently used tool (18.2% of responses, 57.1% of cases), followed by laptops/tablets/smartphones (17.4%, 54.6%), and online platforms (16.6%, 52.1%). Digital textbooks and audio/video materials are also significant, with usage rates of 15.8% and 15.4%, respectively. Therefore, laptops/computers and language learning apps are the most utilized tools by teachers, while students favor language learning apps and laptops/tablets/smartphones.

Table 2. Educational technology tools used for teaching or learning English.

	Responses		Percent of Cases	
	N	Percent		
Teachers'	Laptops Computers.	14	20.9%	77.8%
	Language learning apps.	12	17.9%	66.7%
	Online platforms (e.g., zoom).	11	16.4%	61.1%
	Digital textbooks.	11	16.4%	61.1%
	Audio/Video materials (e.g., projector).	9	13.4%	50.0%
	Virtual reality tools.	10	14.9%	55.6%
	Total	67	100.0%	372.2%

Continued

	Laptops/Tablets/Smartphones.	131	17.4%	54.6%
	Language learning apps.	137	18.2%	57.1%
	Online platforms (e.g., zoom).	125	16.6%	52.1%
Students'	Digital textbooks.	119	15.8%	49.6%
	Audio/Video materials.	116	15.4%	48.3%
	Virtual reality tools.	125	16.6%	52.1%
	Total	753	100.0%	313.8%

4.1. Optimization and Effectiveness of Educational Technology Tools in Enhancing ELS

The data from **Table 3** illustrates the perceived effectiveness of educational technology tools in enhancing English Language Skills (ELS) among teachers and students. Among teachers, 28.2% found these tools to be moderately effective, with 61.1% of cases reporting this level of effectiveness. A significant portion, 23.1%, rated the tools as very effective, and 17.9% considered them extremely effective. However, 15.4% of teachers found the tools either not effective at all or only slightly effective. On the student side, 22.5% rated the tools as very effective, with 56.7% of cases supporting this view. Moderately effective ratings were given by 20.5% of students, while 18.8% found the tools extremely effective. Nonetheless, a notable 18.4% of students found the tools not effective at all, and 19.8% rated them as slightly effective. Thus, both teachers and students generally find educational technology tools to be moderate to very effective in enhancing ELS, though a significant minority perceive them as less effective.

Table 3. Effectiveness of educational technology tools in enhancing ELS.

		Responses		Percent of Cases
		N	Percent	
Teachers	Not effective at all	6	15.4%	33.3%
	Slightly effective	6	15.4%	33.3%
	Moderately effective	11	28.2%	61.1%
	Very effective	9	23.1%	50.0%
	Extremely effective	7	17.9%	38.9%
	Total	39	100.0%	216.7%
Students	Not effective at all	108	18.4%	46.4%
	Slightly effective	116	19.8%	49.8%
	Moderately effective	120	20.5%	51.5%
	Very effective	132	22.5%	56.7%
	Extremely effective	110	18.8%	47.2%
	Total	586	100.0%	251.5%

Table 4 presents teachers' ratings on the effectiveness of educational technology tools based on various criteria. For ease of use, the tools were rated as effective with a mean score of 3.22 and a standard deviation of 1.309. Engagement received mixed reviews, with a mean score of 3.06 and a higher standard deviation of 1.731, leading to a decision of not effective. The impact on learning outcomes was rated as effective, with a mean score of 3.28 and a standard deviation of 1.364. However, support for different language skills was deemed ineffective, with a mean score of 2.78 and a standard deviation of 1.353. Hence, educational technology tools are considered effective for ease of use and impact on learning outcomes, but less effective for engagement and supporting different language skills.

Table 4. Effectiveness of educational technology tools based on teachers' ratings.

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Std. Dev.	Decision
Ease of use.	3 (16.7)	2 (11.1)	3 (16.7)	8 (44.4)	2 (11.1)	3.22	1.309	effective
Engagement.	5 (27.8)	4 (22.2)	0 (0.0)	3 (16.7)	6 (33.3)	3.06	1.731	not effective
Impact on learning outcomes.	2 (11.1)	4 (22.2)	3 (16.7)	5 (27.8)	4 (22.2)	3.28	1.364	effective
Support for different language skills.	4 (22.2)	4 (22.2)	4 (22.2)	4 (22.2)	2 (11.1)	2.78	1.353	not effective

Note: N = 18, 1 = not effective at all, 2 = slightly effective, 3 = moderately effective, 4 = very effective, 5 = extremely effective. Decision – weighted average = $12.34/4 = 3.085$.

Table 5 presents students' ratings on the effectiveness of educational technology tools based on various criteria. For ease of use, the tools received a mean score of 3.01 with a standard deviation of 1.394, leading to a decision of not effective. Engagement was rated as effective, with a mean score of 3.14 and a standard deviation of 1.420. The impact on learning outcomes was deemed not effective, with a mean score of 2.92 and a standard deviation of 1.408. Similarly, support for different language skills was rated not effective, with a mean score of 3.01 and a standard deviation of 1.417. Therefore, students find educational technology tools effective for engagement but less effective for ease of use, impact on learning outcomes, and support for different language skills.

Table 5. Effectiveness of educational technology tools based on students' ratings.

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Std. Dev.	Decision
Ease of use.	45 (18.5)	49 (20.2)	58 (23.9)	41 (16.9)	50 (20.6)	3.01	1.394	not effective
Engagement.	43 (17.7)	43 (17.7)	50 (20.6)	50 (20.6)	57 (23.5)	3.14	1.420	effective
Impact on learning outcomes.	55 (22.6)	41 (16.9)	59 (24.3)	44 (18.1)	44 (18.1)	2.92	1.408	not effective
Support for different language skills.	46 (18.9)	52 (21.4)	51 (21.0)	42 (17.3)	52 (21.4)	3.01	1.417	not effective

Note: N = 243, 1 = not effective at all, 2 = slightly effective, 3 = moderately effective, 4 = very effective, 5 = extremely effective. Decision – weighted average = $12.08/4 = 3.02$.

Table 6 outlines strategies for optimizing the use of educational technology tools in teaching and learning English, based on responses from both teachers and students. Among teachers, the most recommended strategies include providing technical support and troubleshooting (27.3% of responses, 70.6% of cases) and ensuring regular updates and maintenance (25.0%, 64.7%). Training sessions for users are also important (20.5%, 52.9%), along with integrating these tools with other educational resources (15.9%, 41.2%) and customizing them based on specific needs (11.4%, 29.4%). For students, the top strategies include participating in training or orientation sessions (21.6% of responses, 56.7% of cases) and seeking assistance from teachers (20.9%, 55.0%). Self-directed learning is also a key strategy (20.8%, 54.6%), followed by obtaining feedback from peers (18.7%, 49.2%) and other unspecified methods (18.1%, 47.5%). Thus, both teachers and students emphasize the importance of training and support, with teachers focusing more on technical aspects and students on guidance and feedback.

Table 6. Strategies for optimizing educational technology tools in teaching and learning English.

	Responses		Percent of Cases	
	N	Percent		
Teachers	Training sessions for users	9	20.5%	52.9%
	Regular updates and maintenance	11	25.0%	64.7%
	Customization based on needs	5	11.4%	29.4%
	Integration with other educational resources	7	15.9%	41.2%
	Technical support and troubleshooting	12	27.3%	70.6%
	Total	44	100.0%	258.8%
Students	Training or orientation sessions	136	21.6%	56.7%
	Assistance from teachers	132	20.9%	55.0%
	Self-directed learning	131	20.8%	54.6%
	Feedback from peers	118	18.7%	49.2%
	Other	114	18.1%	47.5%
	Total	631	100.0%	262.9%

4.2. Attitudes Towards Educational Technology

Table 7 presents the attitudes of teachers and students toward using educational technology tools in teaching and learning English. Among teachers, the attitudes are varied: 27.3% are neutral, 22.7% are somewhat positive, and 13.6% are very positive. However, a significant portion holds negative views, with 18.2% being very negative and another 18.2% somewhat negative. Students' attitudes also show a range of perspectives: 20.0% are very positive, 19.6% are somewhat positive, and

19.6% are neutral. On the negative side, 21.3% of students are very negative, and 19.5% are somewhat negative. In summary, while there is a mix of positive, neutral, and negative attitudes toward educational technology tools among both teachers and students, a notable proportion of both groups hold neutral or somewhat positive views.

Table 7. Attitudes toward using educational technology tools in teaching and learning English.

		Responses		Percent of Cases
		N	Percent	
Teachers	Very negative	8	18.2%	47.1%
	Somewhat negative	8	18.2%	47.1%
	Neutral	12	27.3%	70.6%
	Somewhat positive	10	22.7%	58.8%
	Very positive	6	13.6%	35.3%
	Total	44	100.0%	258.8%
Students	Very negative	126	21.3%	54.1%
	Somewhat negative	115	19.5%	49.4%
	Neutral	116	19.6%	49.8%
	Somewhat positive	116	19.6%	49.8%
	Very positive	118	20.0%	50.6%
	Total	591	100.0%	253.6%

4.3. Challenges in Using Educational Technology Tools

Table 8 highlights the main challenges faced by teachers and students in using educational technology tools. For teachers, the most significant challenge is limited access to technology, reported by 31.7% of responses and 76.5% of cases. This is followed by a lack of training (26.8%, 64.7%) and insufficient support materials (17.1%, 41.2%). Technical issues, such as software glitches, are also a concern in 9.8% of responses and 23.5% of cases, while low engagement from students is noted in 14.6% of responses and 35.3% of cases. Students, on the other hand, primarily struggle with technical issues (27.5% of responses, 61.5% of cases) and a lack of guidance (26.1%, 58.4%). Limited access to technology is also a major challenge for 25.7% of responses and 57.6% of cases. Additionally, students find difficulty in navigating the tools, as indicated by 20.7% of responses and 46.3% of cases. Therefore, both teachers and students face significant challenges with limited access to technology and technical issues, while teachers also highlight a lack of training, and students emphasize the need for better guidance.

Table 9 provides suggestions from teachers and students for enhancing the effectiveness of educational technology tools in teaching and learning English. Teachers emphasize the need for increased technical support (23.8% of responses,

Table 8. Main challenges in using educational technology tools.

		Responses		Percent of Cases
		N	Percent	
Teachers	Technical issues (e.g., software glitches)	4	9.8%	23.5%
	Lack of training	11	26.8%	64.7%
	Limited access to technology	13	31.7%	76.5%
	Low engagement from students	6	14.6%	35.3%
	Insufficient support materials	7	17.1%	41.2%
	Total	41	100.0%	241.2%
Students	Technical issues (e.g., software glitches)	142	27.5%	61.5%
	Lack of guidance	135	26.1%	58.4%
	Limited access to technology	133	25.7%	57.6%
	Difficulty in navigating tools	107	20.7%	46.3%
	Total	517	100.0%	223.8%

55.6% of cases) and improved integration with the curriculum (23.8%, 55.6%). They also suggest incorporating more interactive features (19.0%, 44.4%) and diverse content (19.0%, 44.4%), along with better user interface design (14.3%, 33.3%). On the other hand, students highlight the importance of improved technical support (21.3% of responses, 56.9% of cases) and better user interface design (19.0%, 50.9%). They also call for more engaging content (18.7%, 50.0%) and additional guidance from teachers (19.0%, 50.9%). Other suggestions were noted by 22.1% of responses and 59.1% of cases. Therefore, both teachers and students prioritize technical support and user interface improvements, with teachers also focusing on curriculum integration and students on engaging content and guidance.

Table 9. Suggestions for enhancing the effectiveness of educational technology tools in teaching and learning English.

		Responses		Percent of Cases
		N	Percent	
Teachers	Better user interface design	6	14.3%	33.3%
	More interactive features	8	19.0%	44.4%
	Increased technical support	10	23.8%	55.6%
	More diverse content	8	19.0%	44.4%
	Improved integration with curriculum	10	23.8%	55.6%
	Total	42	100.0%	233.3%

Continued

Students	Better user interface design	118	19.0%	50.9%
	More engaging content	116	18.7%	50.0%
	Improved technical support	132	21.3%	56.9%
	More guidance from teachers	118	19.0%	50.9%
	Other	137	22.1%	59.1%
	Total	621	100.0%	267.7%

4.4. Impact of Educational Technology Tools on Students' English Skills

Table 10 presents teachers' perspectives on the impact of educational technology tools on students' English skills. For reading, the tools are considered impactful, with a mean score of 3.06 and a standard deviation of 1.305. Listening skills also benefit from these tools, with a mean score of 3.39 and a standard deviation of 1.335, indicating an impactful decision. However, writing skills are deemed not impactful, with a mean score of 2.83 and a standard deviation of 1.689. Similarly, speaking skills are rated as not impactful, with a mean score of 2.56 and a standard deviation of 1.504. Implying that educational technology tools are seen as impactful for improving reading and listening skills but less effective for enhancing writing and speaking skills.

Table 10. Impact of educational technology tools on students' English skills: Teachers' perspective.

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Std. Dev.	Decision
Reading	2 (11.1)	5 (27.8)	4 (22.2)	4 (22.2)	3 (16.7)	3.06	1.305	impactful
Writing	7 (38.9)	1 (5.6)	2 (11.1)	4 (22.2)	4 (22.2)	2.83	1.689	not impactful
Listening	2 (11.1)	2 (11.1)	6 (33.3)	3 (16.7)	5 (27.8)	3.39	1.335	impactful
Speaking	6 (33.3)	4 (22.2)	3 (16.7)	2 (11.1)	3 (16.7)	2.56	1.504	not impactful

Note: N = 18, 1 = not impactful at all, 2 = slightly impactful, 3 = moderately impactful, 4 = very impactful, 5 = extremely impactful. Decision – weighted average = $11.84/4 = 2.96$.

Table 11 presents students' perspectives on the impact of educational technology tools on their English skills. For reading, the tools are considered impactful, with a mean score of 3.08 and a standard deviation of 1.479. However, for writing, the tools are deemed not impactful, with a mean score of 2.93 and a standard deviation of 1.442. Similarly, listening skills are rated as not impactful, with a mean score of 2.98 and a standard deviation of 1.361. Speaking skills also fall into the not impactful category, with a mean score of 2.95 and a standard deviation of 1.406. Thus, students find educational technology tools impactful for improving reading skills but less effective for enhancing writing, listening, and speaking skills.

Table 11. Impact of educational technology tools on students' English skills: Students' perspectives.

Question	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Mean	Std. Dev.	Decision
Reading	51 (21.0)	45 (18.5)	39 (16.0)	50 (20.6)	58 (23.9)	3.08	1.479	impactful
Writing	54 (22.2)	48 (19.8)	51 (21.0)	40 (16.5)	50 (20.6)	2.93	1.442	not impactful
Listening	44 (18.1)	51 (21.0)	56 (23.0)	49 (20.2)	43 (17.7)	2.98	1.361	not impactful
Speaking	47 (19.3)	58 (23.9)	46 (18.9)	45 (18.5)	47 (19.7)	2.95	1.406	not impactful

Note. N = 243, 1 = not impactful at all, 2 = slightly impactful, 3 = moderately impactful, 4 = very impactful, 5 = extremely impactful. Decision – weighted average = $11.94/4 = 2.985$.

4.5. Discussion of Findings

The study aimed to evaluate how different educational technologies can enhance the effectiveness of teaching and learning English and to compare their relative advantages. The findings indicate that both teachers and students find certain educational technology tools to be effective in enhancing English language skills. For instance, teachers rated laptops/computers and language learning apps as the most utilized tools, with 20.9% and 17.9% of responses, respectively. Similarly, students favored language learning apps (18.2%) and laptops/tablets/smartphones (17.4%). Scholarly literature supports these findings, highlighting that digital technologies can significantly enhance language learning by providing interactive and engaging platforms for students. According to a study by Motteram (2013), digital technologies facilitate language development by allowing learners to engage in meaningful interactions and practice language skills in various contexts (Motteram, 2013). Additionally, the integration of technology into language teaching has been shown to improve student engagement and learning outcomes (Indrastana, 2022). Therefore, educational technologies such as laptops, language learning apps, and online platforms are effective in enhancing the teaching and learning of English, providing interactive and engaging learning experiences.

The second objective was to assess teachers' and students' attitudes toward the use of educational technology tools in the teaching and learning process. The findings reveal a mix of positive, neutral, and negative attitudes among both groups. Teachers' attitudes ranged from very positive (13.6%) to very negative (18.2%), with a significant portion being neutral (27.3%). Students exhibited similar variability, with 20.0% being very positive and 21.3% very negative. These mixed attitudes are consistent with existing research, which suggests that while many educators and learners recognize the benefits of educational technology, challenges such as technical issues and lack of training can hinder its effective use (Lai & Kritsonis, 2006). The variability in attitudes underscores the need for targeted interventions to address these challenges and improve the overall perception of educational technology tools. Thus, while there is recognition of the benefits of educational technology, there are also significant challenges that need to be addressed to improve attitudes and increase adoption.

The third objective was to identify and assess the efficacy of various educational

technology tools in developing specific English language skills, such as reading, writing, listening, and speaking. Teachers rated the impact of these tools on reading and listening skills as impactful, with mean scores of 3.06 and 3.39, respectively. However, writing and speaking skills were rated as less impactful, with mean scores of 2.83 and 2.56. Students' perspectives were similar, with reading being the most positively impacted skill (mean score of 3.08), while writing, listening, and speaking were rated as less impactful. These findings align with research indicating that while educational technology can enhance certain language skills, its effectiveness varies depending on the skill being targeted. For example, digital tools are particularly effective for reading and listening due to the availability of interactive and multimedia resources (Motteram, 2013). However, writing and speaking may require more personalized and interactive approaches that technology alone may not fully provide. Thus, educational technology tools are effective in enhancing reading and listening skills but are less impactful for writing and speaking skills, highlighting the need for complementary teaching methods.

5. Recommendations

5.1. Professional Development for Faculty

One of the critical factors for successful technology integration is the continuous professional development of faculty members. Given the diverse technological competencies among faculty at Kyambogo University, adopting a tailored approach to professional development is essential. The following strategies are recommended:

5.1.1. Customized Training Programs

Developing professional development programs that address the specific technological needs of faculty at different levels of expertise is crucial. For faculty members less familiar with educational technology, training should focus on digital tools, such as creating PowerPoint presentations, using Learning Management Systems (LMS), and facilitating online discussions. For more tech-savvy instructors, advanced training should focus on integrating multimedia resources, creating interactive content, and adopting blended learning methods that combine face-to-face and online teaching.

Training programs should be held regularly and mandatory for all faculty members to ensure that they stay updated with emerging technologies. These programs should also provide practical, hands-on experience to help faculty feel more comfortable using educational tools in their teaching practice.

5.1.2. Peer Learning and Collaboration

Establishing a culture of peer learning within departments can be highly effective. Faculty members more experienced with using technology in the classroom could mentor others. Creating informal communities of practice can foster collaboration and knowledge-sharing among faculty members. Additionally, organizing teaching seminars where faculty can showcase their innovative technology uses

would motivate others to adopt similar strategies.

5.2. Technology Integration Strategies

5.2.1. Blended Learning Approaches

Blended learning, which combines face-to-face instruction with online learning, is a promising strategy for Kyambogo University. To integrate this approach, the university could begin by identifying essential courses where blended learning could be most effective. For example, large lecture-based classes may benefit from having pre-recorded video lectures, while smaller classes may focus more on interactive learning through online group work or forums.

Blended learning can be implemented gradually, with pilot programs in select departments or courses. Faculty would benefit from training on designing and delivering content effectively across both online and in-person platforms. Introducing online learning materials, quizzes, and multimedia could engage students deeply, creating a more dynamic and interactive learning environment.

5.2.2. Use of Localized and Low-Tech Solutions

Given the logistical challenges at Kyambogo University, such as intermittent internet connectivity and power outages, integrating low-tech and offline solutions into the teaching process would ensure that learning can continue despite these challenges. Tools such as offline learning apps, mobile-based platforms, and distributed learning materials (e.g., USB drives with video lessons) can be handy.

Faculty should be encouraged to design resources that can function offline, such as video lectures that students can download and view on their mobile phones. This would also help address the challenge of limited computer access or expensive internet data for students.

5.2.3. E-Assessment and Feedback Mechanisms

Integrating digital assessments and feedback systems could make the evaluation process more efficient and provide students with immediate feedback. Online quizzes, assignments, and peer assessments give students a more comprehensive and timely understanding of their progress. Furthermore, providing detailed, constructive feedback through LMS platforms can guide students in improving their academic performance.

5.3. Infrastructure and Policy Development

A comprehensive strategy to integrate technology should also include necessary infrastructural investments such as:

Improving IT Infrastructure

Investing in robust internet infrastructure is crucial for the success of technology integration at Kyambogo University. This includes ensuring reliable internet access across campus, improving Wi-Fi connectivity, and providing students access to modern computer lab devices. Collaboration with local telecommunication providers could help reduce internet costs and improve connectivity, making

online learning more accessible.

Developing Institutional Policies for Technology Integration

Kyambogo University needs to establish clear policies and guidelines on technology use in teaching and learning. These policies should address issues such as integrating educational technologies, protecting student data, and accessibility for students with disabilities. Establishing a technology integration framework would provide a clear roadmap for faculty and students to follow, ensuring a cohesive approach to digital learning.

6. Conclusion

The study at Kyambogo University highlights the potential of educational technology tools to enhance English language learning, particularly in areas like reading and listening skills. However, challenges such as limited technical support, mixed attitudes toward technology use, and logistical constraints must be addressed to optimize these tools' effectiveness. This research underscores the need for Kyambogo University to implement tailored professional development initiatives, such as customized training for faculty and ongoing technical support, to help educators integrate technology into their teaching practices more effectively. Emphasizing blended learning approaches and peer collaboration to help mitigate challenges related to infrastructure and access.

This study has several limitations. First, with a sample size of 18 teachers and 243 students, the findings may not represent other institutions in Uganda or similar regions. Expanding the sample size and including additional institutions would enhance the generalizability of the results. Second, as this research relied on self-reported data, there may be biases, such as social desirability or recall bias. Future studies could incorporate observational or longitudinal designs to validate findings. Third, while this study is primarily quantitative, integrating qualitative data through interviews or focus groups could provide richer insights into teachers' and students' experiences and perceptions. Additionally, exploring the long-term impact of educational technology on language proficiency and academic outcomes would provide a more comprehensive understanding of its effectiveness in English language education.

Conflicts of Interest

The authors declare no conflict of interest during or before the development of the paper.

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Appendices

Appendix I: Teacher Questionnaire: Educational Technology in English Language Learning

Introduction: This survey is being conducted to understand the use of educational technology tools in the teaching of English language skills. The responses will help improve the integration of technology in the classroom and enhance teaching effectiveness.

Informed Consent: Your participation in this survey is voluntary. The information you provide will be used for research purposes only, and your responses will remain confidential. Please feel free to skip any questions you do not wish to answer. By proceeding, you consent to participate in this study.

Section 1: Background Information

1. Gender:

a) Male

b) Female

2. Years of Experience in Teaching English:

a) Less than 2 years

b) 2 - 5 years

c) 6 - 10 years

d) More than 10 years

3. Type of Educational Institution:

a) High School

b) College/University

c) Language School

d) Other (please specify): _____

Section 2: Use of Educational Technology Tools

4. Which educational technology tools do you use for teaching English? (Select all that apply)

a) Interactive whiteboards

b) Language learning apps

c) Online platforms (e.g., Moodle, Blackboard)

d) Digital textbooks

e) Audio/Video materials

f) Virtual reality tools

g) Other (please specify): _____

5. How frequently do you use these tools?

a) Daily

b) Weekly

c) Monthly

d) Rarely

Section 3: Optimization and Effectiveness

6. How effective do you find the educational technology tools in enhancing English language teaching effectiveness? (Rate on a scale of 1 to 5).

- a) 1—Not effective at all
- b) 2—Slightly effective
- c) 3—Moderately effective
- d) 4—Very effective
- e) 5—Extremely effective

7. What strategies have been used to optimize these tools in your teaching? (Select all that apply).

- a) Training sessions for users
- b) Regular updates and maintenance
- c) Customization based on needs
- d) Integration with other educational resources
- e) Technical support and troubleshooting
- f) Other (please specify): _____

8. Please rate the following aspects of the educational technology tools in terms of their effectiveness: 1—strongly disagree (SD), 2—disagree (D), 3—uncertain (U), 4—agree (A), 5—strongly agree (SA)

Question	1	2	3	4	5
Ease of use.					
Engagement.					
Impact on learning outcomes.					
Support for different language skills (reading, writing, listening, speaking).					

Section 4: Attitudes towards Educational Technology

9. How would you rate your overall attitude toward using educational technology tools in teaching English? (Rate on a scale of 1 to 5)

- a) 1—Very negative
- b) 2—Somewhat negative
- c) 3—Neutral
- d) 4—Somewhat positive
- e) 5—Very positive

10. How do you perceive the impact of these tools on the following English language skills? (Rate each skill on a scale of 1 to 5)

Question	1	2	3	4	5
Reading					

Continued

Writing

Listening

Speaking

11. What are the main challenges you face when using educational technology tools? (Select all that apply)

- a) Technical issues (e.g., software glitches)
- b) Lack of training
- c) Limited access to technology
- d) Low engagement from students
- e) Insufficient support materials
- f) Other (please specify): _____

12. What improvements would you suggest for enhancing the effectiveness of educational technology tools in teaching English?

- a) Better user interface design
- b) More interactive features
- c) Increased technical support
- d) More diverse content
- e) Improved integration with curriculum
- f) Other (please specify): _____

Section 5: Impact on Language Skills

13. Have you noticed any improvement in your students' English language skills since using educational technology tools? (If yes, please specify which skills)

- a) Yes
- b) No
- c) If yes, please specify skills improved: _____

14. Please provide examples or anecdotes of how educational technology tools have specifically impacted your students' learning in English.

15. Would you recommend the use of educational technology tools to others for teaching English? Why or why not?

The End.***Thanks a lot for your cooperation!***

Appendix II: Student Questionnaire: Educational Technology in English Language Learning

Introduction: This survey is being conducted to understand how educational technology tools are used by students to learn English language skills. Your responses will help enhance the integration of technology in language learning.

Informed Consent: Your participation in this survey is voluntary, and all the information you provide will remain confidential. The responses will be used for research purposes only, and you can skip any questions you do not wish to answer. By proceeding, you agree to participate in this study.

Section 1: Background Information

1. Gender:

a) Male

b) Female

2. Current Level of English Proficiency:

a) Beginner

b) Intermediate

c) Advanced

3. Type of Educational Institution:

a) High School

b) College/University

c) Language School

d) Other (please specify): _____

Section 2: Use of Educational Technology Tools

4. Which educational technology tools do you use for learning English? (Select all that apply)

a) Interactive whiteboards

b) Language learning apps

c) Online platforms (e.g., Moodle, Blackboard)

d) Digital textbooks

e) Audio/Video materials

f) Virtual reality tools

g) Other (please specify): _____

5. How frequently do you use these tools?

a) Daily

b) Weekly

c) Monthly

d) Rarely

Section 3: Optimization and Effectiveness

6. How effective do you find the educational technology tools in enhancing your English language learning? (Rate on a scale of 1 to 5)

- a) 1—Not effective at all
 b) 2—Slightly effective
 c) 3—Moderately effective
 d) 4—Very effective
 e) 5—Extremely effective

7. What strategies have you used to optimize these tools in your learning? (Select all that apply)

- a) Training or orientation sessions
 b) Assistance from teachers
 c) Self-directed learning
 d) Feedback from peers
 e) Other (please specify): _____

8. Please rate the following aspects of the educational technology tools in terms of their effectiveness:

Question	1	2	3	4	5
Ease of use.					
Engagement.					
Impact on learning outcomes.					
Support for different language skills (reading, writing, listening, speaking).					

Section 4: Attitudes towards Educational Technology

9. How would you rate your overall attitude toward using educational technology tools for learning English? (Rate on a scale of 1 to 5)

- a) 1—Very negative
 b) 2—Somewhat negative
 c) 3—Neutral
 d) 4—Somewhat positive
 e) 5—Very positive

10. How do you perceive the impact of these tools on the following English language skills? (Rate each skill on a scale of 1 to 5)

Question	1	2	3	4	5
Reading					
Writing					
Listening					
Speaking					

11. What are the main challenges you face when using educational technology

tools? (Select all that apply)

- a) Technical issues (e.g., software glitches)
- b) Lack of guidance
- c) Limited access to technology
- d) Difficulty in navigating tools
- e) Other (please specify): _____

12. What improvements would you suggest for enhancing the effectiveness of educational technology tools in learning English?

- a) Better user interface design
- b) More engaging content
- c) Improved technical support
- d) More guidance from teachers
- e) Other (please specify): _____

Section 5: Impact on Language Skills

13. Have you noticed any improvement in your English language skills since using educational technology tools? (If yes, please specify which skills)

- a) Yes
- b) No
- c) If yes, please specify skills improved: _____

14. Please provide examples or anecdotes of how educational technology tools have specifically impacted your learning in English.

15. Would you recommend the use of educational technology tools to others for learning English? Why or why not?

The End.

Thanks a lot for your participation!