

# Exploring the Use of Technology-Enhanced Language Learning Tools in ESL Classrooms in the KSA

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Received 31 January 2025 | Received in revised form 12 February 2025 | Accepted 15 February 2025

## APA Citation:

Almohideb, N.A. (2025). Exploring the Use of Technology-Enhanced Language Learning Tools in ESL Classrooms in the KSA. *Journal of English Language Teaching and Linguistics*, 10(1), 2025, 43-60. doi: <http://dx.doi.org/10.21462/jeltl.v10i1.1502>

## Abstract

*The aim of the study to explore the role of using TELL tools in facilitating ESL classes and their usefulness and implementation in teaching-learning. This study has used cross-sectional research design using quantitative research approach using purposive sampling method. The population of the study was ESL students of universities in the KSA. Survey questionnaire was used to collected primary data from 202 ESL students. In order to analyse data, statistical analysis has been used such as frequency distribution, statistical descriptive, correlation matrix, Chi-square, and T-test. Findings revealed that TELL tools are valued for their support of engagement enhancement, improvement in language skills, and flexible learning opportunities. Apps related to grammar and vocabulary became the most utilized. Mobile applications and online websites are considered predominant tools. Limited access to the device, technical problems, and difficulty navigating are challenges toward successful implementation. Nevertheless, a huge benefit that the participants encountered included increased motivation, enjoyment, and vocabulary improvement. The study concludes that TELL tools are pivotal in enriching ESL learning experiences but require improved accessibility, usability, and teacher training for broader adoption. This study will be helpful to educators, policymakers, and technological product designers only by understanding the effects of its applications on the learner.*

*Keywords: Digital Tools, ESL Education, Grammar Apps, Student Engagement, Technology-Enhanced Language Learning, Vocabulary Apps*

## 1. Introduction

Education has been highly enhanced by the introduction of technology in the modern world. The field of language learning is not an exception either, as new technologies play a vital role in providing language teachers with native tools and platforms to ensure the language learning instructions engage

TELL tools have become popular tools in ESL education and have been identified as the significant forms of resource used in technology-based learning. These tools include mobile applications and mobile learning, as discussed by Zain and Bowles (2021), apart from virtual reality platforms, game-based learning, and collaborative software. They can deliver individual approaches to learners, immediate feedback, and several rather practical media tools to improve the linguistic abilities of learners. However, using these tools entails many benefits and risks, which require further investigation in this paper. This study aims to establish the parts played by TELL tools in facilitating ESL classes and their usefulness and implementation in teaching-learning. The present study can yield relevant information to educators, policymakers, and technological product designers only by understanding the effects of its applications on the learner. With a rapidly increasing call for new and practical approaches to ESL instruction with rigid methods and full-time attendance requirements, evaluating TELL tools should fill the identified gaps and adapt to various learners' needs (Ahmed, 2019).

Previous research on TELL tools tends to adopt an overall view of the effects of such tools on language acquisition in general rather than the effects that these tools may have on ESL settings in particular (Thao et al., 2019). Some studies have looked at their advantages, such as increased learner motivation and availability of sources (Shadiev & Yang, 2020). However, there is a lack of information on how these tools help deal with some of the peculiarities of ESL learning, such as coping with cultural and language diversities and different levels of IT literacy (Zain & Bowles, 2021). In addition, the literature lacks research that compares the views of teachers and students. As a result, it does not present a comprehensive picture of tools' utility and efficacy. This research, therefore, seeks to fill these gaps through a thorough analysis of the use of TELL tools in ESL classrooms and provide strategies for their practical use. For the past ten years, TELL tools have received appreciation for their capacity to supplement or even support common ESL approaches (Gunderson et al., 2019). For instance, apps like Duolingo, Babbel, and Quizlet offer learner drills, games, and quizzes with feedback and learners' self-study; interactive references like Kahoot and Nearpod for classroom practices (Kohnke, 2023; Anastasiia, 2024; Hasumi & Chiu, 2024). Such tools have been put in a list of beneficial factors that directly affect learners' motivation level, learning activity, and language learning outcomes (Hasumi & Chiu, 2024).

Nevertheless, drawbacks to using such tools include different levels of computer literacy among teachers and students, unequal access to the internet, and insufficient preparation of educators for integrating tools into the learning process. However, questions such as the sustainability and flexibility of TELL tools for different ESL settings are still unknown. This research aims to fill these gaps by identifying how TELL tools can be incorporated into ESL classroom practice, emphasizing the advantages and the management of emerging challenges.

The need for this study originates from the trends of incorporating digital technology in the teaching and learning process and calls for more effective approaches to second language education (Chandana et al., 2023). English is an information and communication language in the modern world, especially in the context of globalization. TELL tools can be employed as a strategy for achieving these objectives. Still, their primary and secondary use is backed by technical, institutional, and pedagogical barriers (Ghavifekr et al., 2016). Concerning the above issues, this study aims to establish how TELL tools could be implemented in ESL classrooms. To this end, the present study offers theoretical and practical contributions by offering real-life examples and conceptual proposals for advancing and improving such approaches to language learning.

The importance of the present study is based on its ability to contribute to the theoretical and pragmatic knowledge of TELL tools in ESL learning. From a practical viewpoint, this research enriches technology-integrated learning. It advances understanding of how technology influences the process of language learning, learners' motivation, and teaching strategies. The work can be helpful to educators and the learning management system, which adopts institutions to align the TELL technologies to meet learners' requirements. Furthermore, this research may help policymakers determine resources and

develop programs as practical training for the teachers who will apply these tools (Hashim et al., 2023). This study intends to shed light on the present problems experienced in ESL education and provide possible solutions to promote improvement in the quality and accessibility of ESL learning. Therefore, the main research question formulated for this study is to examine how TELL tools can be integrated and used in ESL classroom and their efficiency. Their role as assistance tools in gender, student interactions, student participation, and learning achievement, as well as in facilitating teaching and learning, is examined in the study.

## 2. Research Methods

Using a quantitative survey design, the study intends to develop quantitative and generalisable results of the student's experiences and perceptions in the universities of Kingdom of Saudi Arabia (KSA). Following a cross-sectional survey-based approach, this study analyses TELL tools concerning perceptions, use, and perceived effectiveness in the ESL context. The quantitative data collection design ensures that population attitudes and behaviours are assessed quickly and systematically since data is collected at a given time. ESL students forming the target population of this study are those learning English in secondary and tertiary institutions. The targeted population is helpful for this study as it captures current learners involved in learning English; therefore, evaluating their TELL tools experience is feasible. This study used a structured survey questionnaire as the primary research data collection tool. The questionnaire design involves four main parts- the first section of demographics gets data on the participant's age, gender, and education years. The second section includes general questions related to the integration and use of TELL tools, and the third section outlines TELL tool usage patterns for understanding how participants engage with TELL tools. Whereas Section 4 regards the perceptions and effectiveness of TELL tools. The questionnaire contained close-ended questions and Likert scales to ensure proper capturing of the responses. Likert scale of questions ranging between 'Strongly Disagree' and 'Strongly Agree' allows research performance to capture participants' impressions and attitudes well. In contrast, close-ended questions lend themselves well to quantitative analysis. Furthermore, distribution analysis, descriptive statistics correlation matrix, independent t-test sampling, and chi-square have been employed to incorporate the required insights from the gathered information. All statistical analyses have been performed through SPSS to acquire accurate, efficient, and authentic results. The study, however, follows the research ethics guidelines to avoid violating participant rights and welfare during the research process. Given its comprehensiveness, the study exhibits a few limitations inherent in the quantitative survey-based approach to studying TELL tools in ESL classrooms. These may include the data's self-report nature, generalizability of outcomes, and inaccurate representation of all ESL. Additionally, the study lags in the rich details of the studies or the context that could be obtained from qualitative research methodologies.

## 3. Results

### 3.1 Distribution Analysis

#### 3.1.1 Summary of Demographic Variables

Table 1: Summary of Demographic Variables

Variables	Categories	Frequency	Percentage (%)
Experience in ESL Education	1-3 years	77	38.1
	4-6 years	35	17.3
	Less than 1 year	58	28.7
	More than 6 years	32	15.8
Age Group	18-24	149	73.8
	25-34	36	17.8
	35-44	5	2.5
	Under 18	12	5.9
Gender	Female	134	66.3
	Male	68	33.7

The demographic details of the respondents have been presented in Table 1. According to the table, most respondents have been involved in ESL education for 1–3 years (38.1%), followed by those with less than 1 year of experience (28.7%). A smaller proportion has 4–6 years (17.3%) or over 6 years of experience (15.8%). At the same time, the sample has been dominated by the respondents within the 18–24 age group (73.8%), with fewer in the 25–34 group (17.8%), 35–44 group (2.5%), or under 18 (5.9%). Additionally, the sample comprises females (66.3%) with 33.7%—male respondents.

### 3.1.2 Access to TELL Tools and Impact on Student Participation

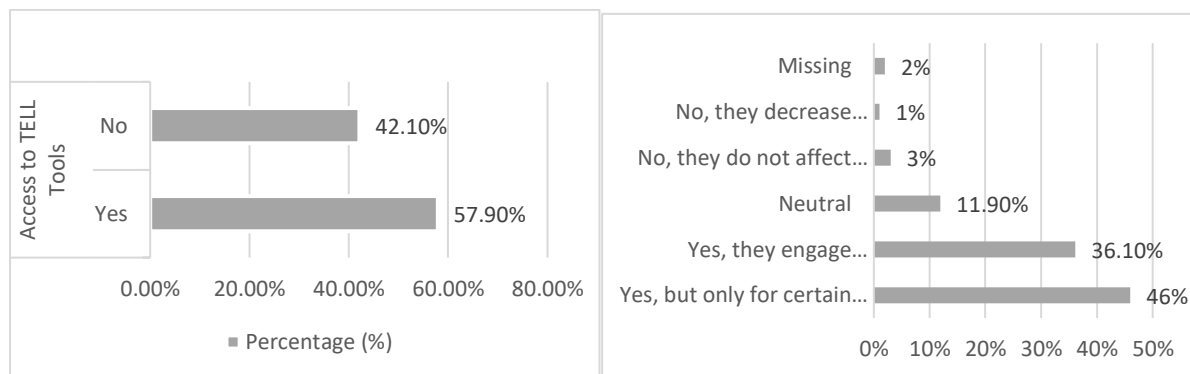


Figure 1: Access to TELL Tools and Impact on Student Participation

According to Figure 1, a significant portion of participants (57.9%) report having access to TELL tools, while 42.1% do not. In a corresponding query, most believe TELL tools engage students positively, with 46% stating the tools work well for specific activities and 36.1% noting general engagement. Only 3% felt TELL tools had no impact, and 1% thought they decreased participation.

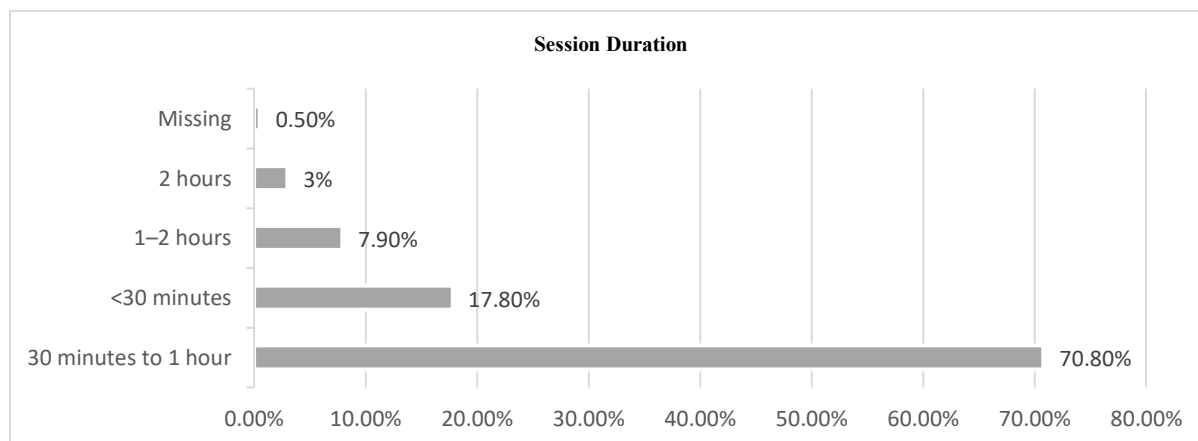


Figure 2: Session Duration and Challenges of TELL Tools

Figure 2 portrays the results for session duration and challenges of TELL tools. The respondents shared that most sessions last 30 minutes to 1 hour, covering 70.8 % of the sample. 17.8% of the respondents reported that the duration was less than 30 minutes. The other respondents shared 1–2 hours (7.9%), or 2 hours (3%).

### 3.1.3 Challenges of TELL Tools

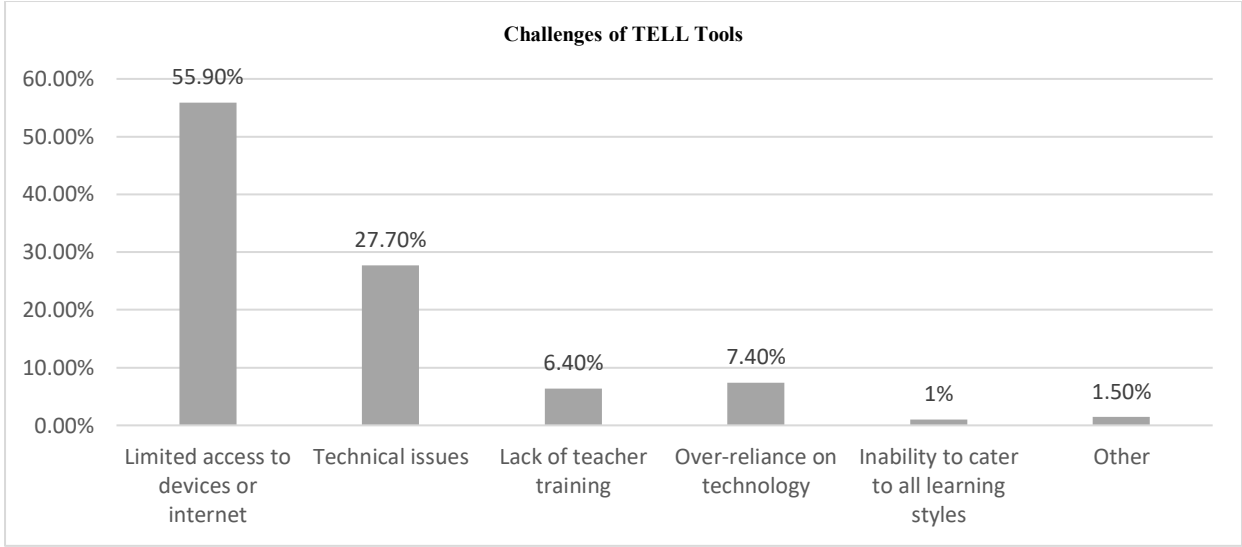


Figure 3: Challenges of TELL Tools

Figure 3 shows the results of various challenges identified by the respondents in learning TELL. The figure affirms that limited access to devices or the internet is the most cited challenge, with 55.9%, followed by technical issues (27.7%). Other concerns include over-reliance on technology (7.4%) and lack of teacher training (6.4%).

### 3.1.4 Perceived Advantages of TELL Tools

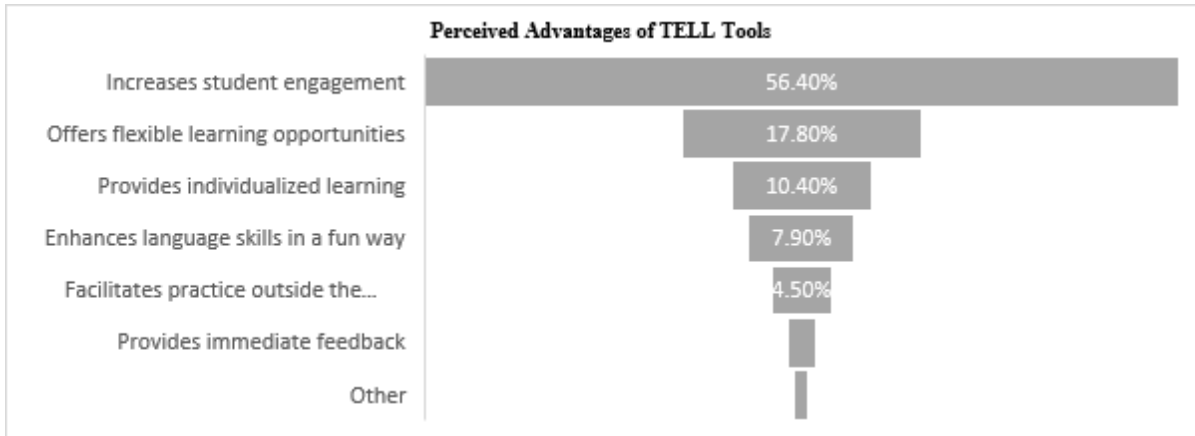


Figure 4: Perceived Advantages of TELL Tools

According to Figure 3, The principal perceived advantage is increased student engagement (56.4%). Flexible learning opportunities (17.8%) and individualized learning (10.4%) are also highlighted. Other benefits include enhancing language skills in a fun way (7.9%) and providing immediate feedback (2%).

### 3.1.5 Usage Duration

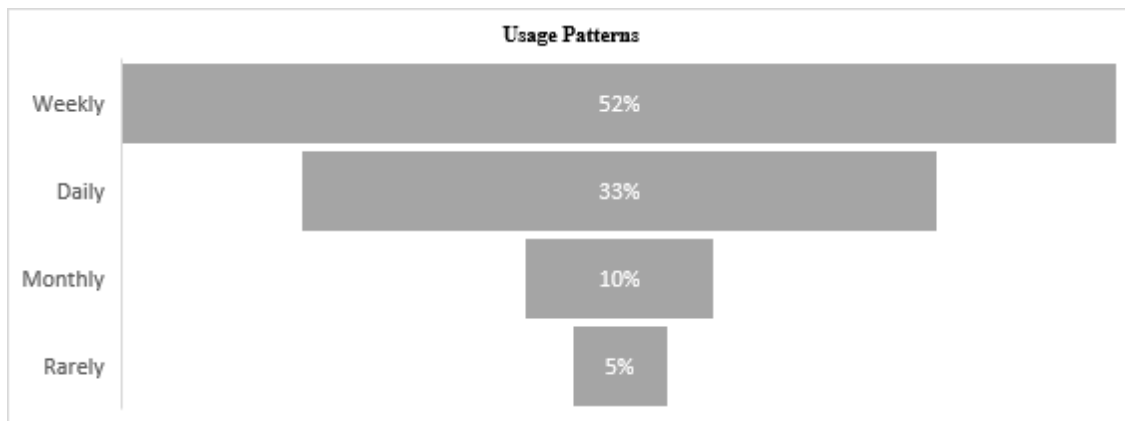


Figure 5: Usage Patterns

Figure 5 highlights that 52% of the respondents use TELL weekly, whereas 33.2% utilize the tools for their daily usage. Similarly, the study did not find evidence for less frequent and rare usages, respectively, with 9.9% and 5%.

### 3.1.6 Types and Formats of TELL Tools

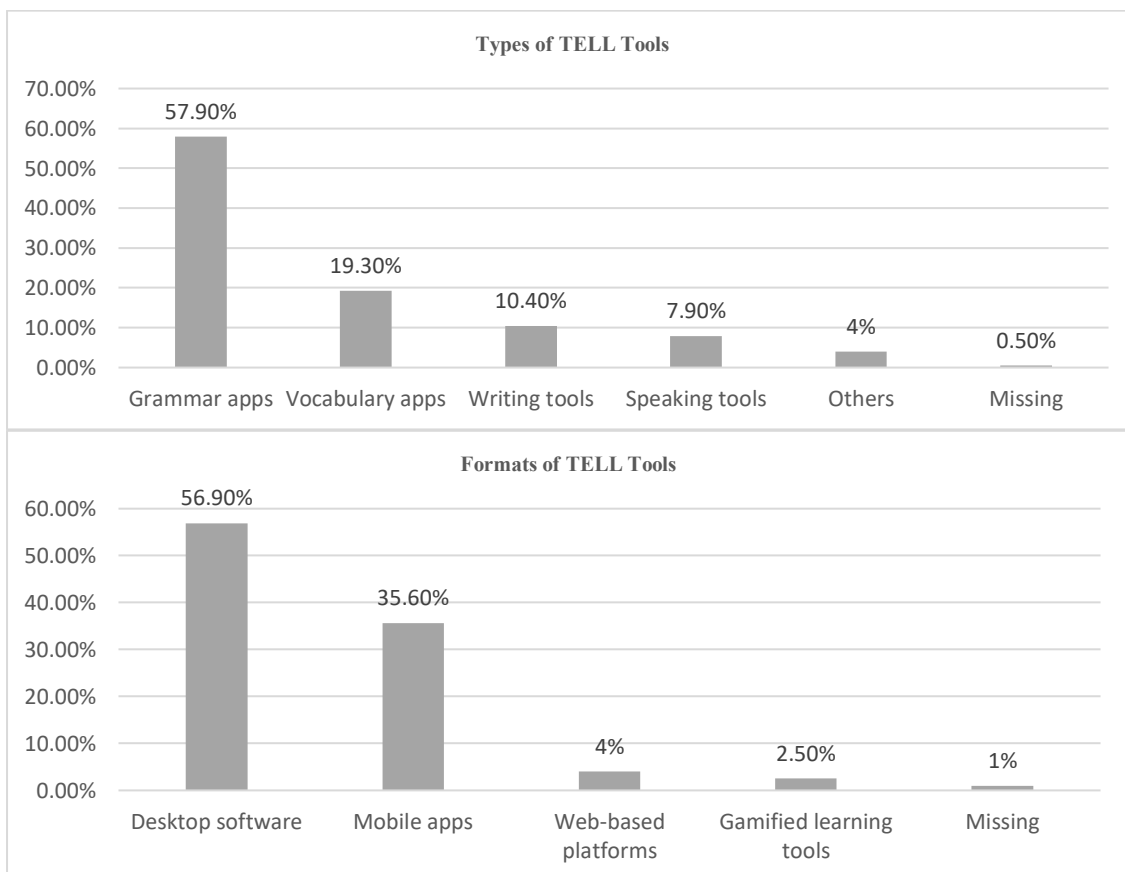


Figure 6: Types and Formats of TELL Tools

Figure 6 validates that grammar apps (57.9%) and vocabulary apps (19.3%) are the most popular, with speaking tools (7.9%) and writing tools (10.4%) being less common. In terms of preferred formats, 56.9% of the respondents shared that desktop software is the most favored format (56.9%), followed by mobile apps (35.6%) and web-based platforms (4%). Gamified tools are less popular (2.5%).

### 3.2 Thematic Assessment of TELL Tools Usage in ESL Classrooms

The analysis of the responses reveals distinct patterns and preferences of TELL tools among educators, emphasizing their role in enriching ESL teaching methodologies. Figure 7 shows the distribution of responses as per the following key themes.

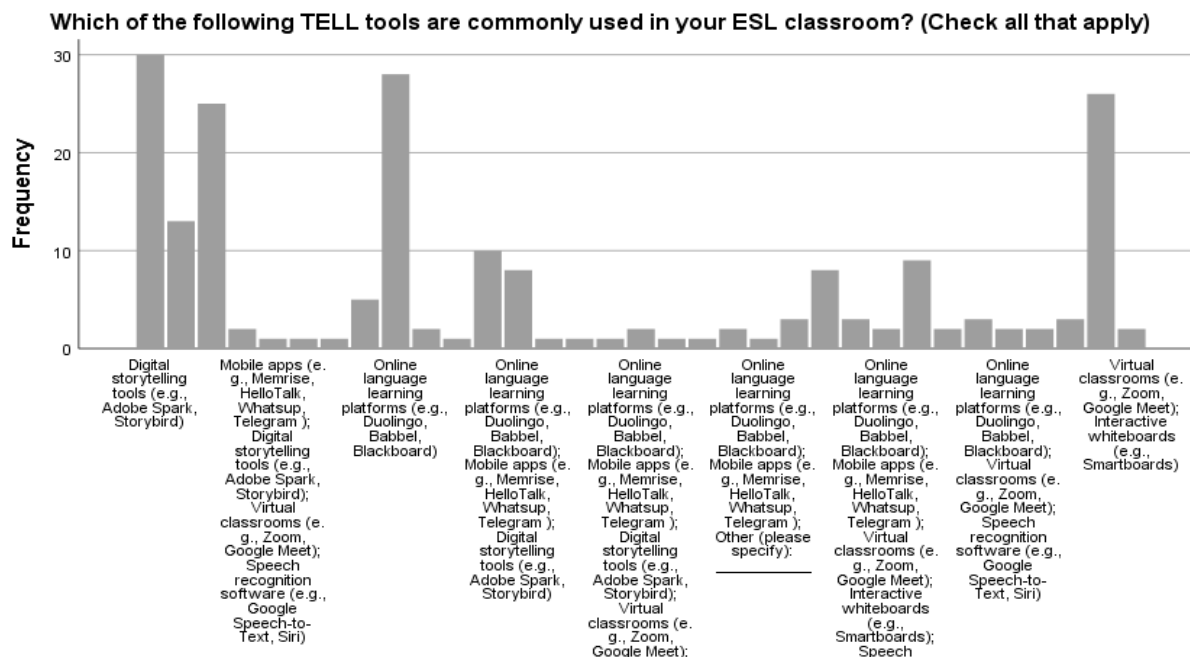


Figure 7: Usage TELL Tools in ESL Classrooms

#### 3.2.1 Dominant Tools Driving ESL Engagement

##### 3.2.1.1 Mobile Applications

Mobile apps like Memrise, HelloTalk, WhatsApp, and Telegram emerged as the cornerstone of ESL classrooms, with 25 respondents (12.4%) selecting them as a primary tool. Their versatility in enabling vocabulary building, real-time communication, and collaborative learning underscores their popularity. Sometimes, educators paired mobile apps with other tools, such as digital storytelling tools (1.0%) or virtual classrooms (2.5%).

##### 3.2.1.2 Online Language Learning Platforms

Twenty-eight respondents (13.9%) chose platforms such as Duolingo, Babel, and Blackboard, making them the second most popular category. Their structured content delivery and adaptive learning features are particularly effective for grammar, pronunciation, and language practice. Combinations with mobile apps (5.0%) or digital storytelling tools (4.0%) reflect these platforms' flexibility in addressing varied learning goals.

##### 3.2.1.3 Virtual Classrooms

With 26 responses (12.9%), tools like Zoom and Google Meet showed strong adoption, reflecting their alignment with the rise of remote and hybrid learning environments. These platforms provide

synchronous learning opportunities and foster interactive engagement, making them indispensable in modern ESL teaching.

### 3.2.2 Moderately Utilized Tools for Enhanced Creativity

#### 3.2.2.1 Digital Storytelling Tools

Thirty respondents (14.9%) identified applications like Adobe Spark and Storybird, emphasizing their role in fostering creativity and narrative skills among learners. While not as widely used as mobile apps, they effectively engage students in storytelling activities that enhance language fluency.

#### 3.2.2.2 Interactive Whiteboards

Thirteen respondents (6.4%) reported using tools like Smartboards primarily to support interactive classroom activities, particularly in physical settings.

### 3.2.3 Strategic Combinations of TELL Tools

A significant number of educators demonstrated a preference for combining tools to achieve strategic teaching outcomes. Notable pairings included mobile Apps with Virtual classrooms facilitating real-time interaction and independent practice; this combination was selected by eight respondents (4.0%). Online Platforms with Digital Storytelling. Eight respondents (4.0%) reported that this approach integrates structured learning with creative activities and enhances comprehension and retention. These integrative strategies highlight educators' adaptability and the need for multifaceted teaching methodologies to address diverse learner needs.

### 3.2.4 Specialised and Niche Tools

The respondents opted for speech recognition software, and three respondents (1.5%) said that tools like Google Speech-to-Text and Siri are particularly valued for pronunciation training and immediate feedback on spoken language. A small segment of educators (2 responses, 1.0%) reported using unspecified or innovative tools, suggesting a willingness to experiment with emerging technologies.

## 3.3 Reliability Statistics

**Table 2: Reliability Statistics**

	Mean	Std. Deviation	N	Cronbach's Alpha
<b>Attitudes toward TELL Tools</b>				
TELL tools make learning more enjoyable.	4.45	0.716	191	0.67
I find TELL tools easy to use.	4.09	0.500	191	
I am motivated to study more when using TELL tools.	4.04	0.575	191	
<b>Perceived Benefits</b>				
TELL tools to improve my vocabulary.	4.14	0.549	191	0.751
TELL tools help me practice speaking skills.	4.04	0.623	191	
TELL tools offer personalised feedback.]	3.90	0.688	191	
<b>Challenges</b>				
Faced difficulty in navigating TELL tools.	3.68	0.800	191	0.898
Lack of relevant content for my proficiency level.	3.64	0.858	191	
TELL tools require more time than traditional methods.]	3.51	1.015	191	

**Overall Contribution to Language Learning**

TELL tools have improved my language learning experience.	4.10	0.571	191	0.876
TELL tools help me interact more in English.	4.09	0.591	191	
TELL tools play a crucial role in my academic progress.	3.98	0.640	191	

The item statistics in Table 2 point out the insightful patterns regarding attitudes, perceived benefits, challenges, and the overall contribution of TELL tools to language learning. Respondents expressed positive attitudes toward TELL tools, with high mean scores indicating agreement that these tools make learning enjoyable (M = 4.45) and are easy to use (M = 4.09). Perceived benefits were also well-rated, especially for vocabulary improvement (M = 4.14) and practicing speaking skills (M = 4.04). However, challenges such as navigating TELL tools (M = 3.68) and the time required (M = 3.51) received moderate agreement, suggesting areas for improvement. The overall contribution of TELL tools was rated positively, particularly for enhancing the language learning experience (M = 4.10) and facilitating interaction in English (M = 4.09). The Cronbach's Alpha values across categories (ranging from 0.67 to 0.898) indicate acceptable to excellent internal consistency, supporting the reliability of the measures.

**3.4 Descriptive Statistics**

**Table 3: Descriptive Statistics**

Category	Statement	Mean	Std. Deviation
Attitudes toward TELL Tools	TELL tools make learning more enjoyable.	4.45	0.716
	I find TELL tools easy to use.	4.09	0.495
	I am motivated to study more when using TELL tools.	4.05	0.583
Perceived Benefits	TELL tools to improve my vocabulary.	4.15	0.546
	TELL tools help me practice speaking skills.	4.05	0.636
	TELL tools offer personalized feedback.	3.91	0.694
Challenges Faced	Difficulty in navigating TELL tools.	3.69	0.809
	Lack of relevant content for my proficiency level.	3.65	0.865
	TELL tools require more time than traditional methods.	3.50	1.028
Overall Contribution to Language Learning	TELL tools have improved my language learning experience.	4.11	0.581
	TELL tools help me interact more in English.	4.08	0.629
	TELL tools play a crucial role in my academic progress.	3.97	0.668

The descriptive statistics highlight respondents' positive attitudes toward Technology-Enhanced Language Learning (TELL) tools. Among the "Attitudes toward TELL Tools" Category, the highest-rated statement, "TELL tools make learning more enjoyable" (M = 4.45, SD = 0.716), reflects strong agreement, followed by ease of use (M = 4.09, SD = 0.495) and motivation to study more (M = 4.05, SD = 0.583). Under "Perceived Benefits," respondents rated vocabulary improvement the highest (M = 4.15, SD = 0.546), while personalized feedback received a slightly lower score (M = 3.91, SD = 0.694).

In terms of "Challenges Faced," moderate agreement was noted regarding navigation difficulties ( $M = 3.69$ ,  $SD = 0.809$ ) and lack of relevant content ( $M = 3.65$ ,  $SD = 0.865$ ), while the time demands of TELL tools received a slightly lower rating ( $M = 3.50$ ,  $SD = 1.028$ ). Finally, under "Overall Contribution to Language Learning," participants strongly agreed that TELL tools enhanced their learning experience ( $M = 4.11$ ,  $SD = 0.581$ ) and interaction in English ( $M = 4.08$ ,  $SD = 0.629$ ), with a slightly lower agreement regarding their role in academic progress ( $M = 3.97$ ,  $SD = 0.668$ ). These findings underscore the positive perceptions of TELL tools while highlighting areas for improvement, particularly in usability and content relevance.

### 3.4 Correlation Matrix

**Table 4: Correlation Matrix**

		Attitudes toward TELL Tools	Perceived Benefits	Challenges Faced	Overall Contribution to Language Learning
Attitudes toward TELL Tools	Pearson Correlation	1	.590**	0.106	.604**
	Sig. (2-tailed)		0	0.133	0
	N	202	202	202	202
Perceived Benefits	Pearson Correlation	.590**	1	0.118	.698**
	Sig. (2-tailed)	0		0.095	0
	N	202	202	202	202
Challenges Faced	Pearson Correlation	0.106	0.118	1	0.009
	Sig. (2-tailed)	0.133	0.095		0.901
	N	202	202	202	202
Overall Contribution to Language Learning	Pearson Correlation	.604**	.698**	0.009	1
	Sig. (2-tailed)	0	0	0.901	
	N	202	202	202	202

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation matrix reveals significant relationships between several variables related to TELL tools. Attitudes toward TELL Tools show a strong positive correlation with Perceived Benefits ( $r = 0.590$ ,  $p < 0.01$ ) and Overall Contribution to Language Learning ( $r = 0.604$ ,  $p < 0.01$ ), indicating that a favorable attitude toward TELL tools is associated with higher perceived benefits and their contribution to language learning. However, the correlation between attitudes and Challenges Faced is weak and insignificant ( $r = 0.106$ ,  $p = 0.133$ ). Perceived Benefits also exhibit a strong positive correlation with Overall Contribution to Language Learning ( $r = 0.698$ ,  $p < 0.01$ ), suggesting that perceived benefits significantly enhance learners' overall language learning experience. The relationship between Perceived Benefits and Challenges Faced is weak and insignificant ( $r = 0.118$ ,  $p = 0.095$ ). Finally, Challenges Faced show no meaningful correlation with Overall Contribution to Language Learning ( $r = 0.009$ ,  $p = 0.901$ ), indicating that the challenges encountered do not directly affect learners' overall experience. These results underscore the importance of fostering positive attitudes and maximizing perceived benefits to enhance the effectiveness of TELL tools.

3.5 Independent Sample t-Testing

Table 5: Independent Sample t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Attitudes toward TELL Tools	Equal variances assumed	4.912	0.028	-.011	200	0.913	-0.0167	0.14814	-.3089	0.275379
	Equal variances not assumed			-.012	164.342	0.903	-0.0167	0.13757	-.2884	0.254898
Perceived Benefits	Equal variances assumed	4.913	0.028	1.149	200	0.252	0.1705	0.1484	-.0121	0.463134
	Equal variances not assumed			1.272	175.902	0.205	0.1705	0.13403	-.094	0.435014
Challenges Faced	Equal variances assumed	41.97	0	-3.665	200	0	-0.5282	0.14413	-.8125	-0.244036
	Equal variances not assumed			-4.289	194.827	0	-0.5282	0.12315	-.7711	-0.285368
Overall Contribution to Language Learning	Equal variances assumed	9.599	0.002	0.651	200	0.516	0.09682	0.14873	-.01965	0.390102
	Equal variances not assumed			0.74	188.38	0.45	0.09682	0.12992	-.0353104	0.353104

variances are not assumed.	5	9	7	0.1595	96
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The independent samples t-test results in Table 5 revealed no statistically significant difference between males and females in their attitudes toward TELL tools ( $p = 0.91$ ). This indicates that both genders hold similar attitudes toward these tools. While Levene's test for equality of variances indicates unequal variances ( $p = 0.028$ ), this does not affect the non-significant result of the t-test. There is no significant difference between males and females in their perceptions of the benefits of TELL tools ( $p = 0.252$ ). This suggests that both genders perceive the benefits of using TELL tools similarly. Again, Levene's test shows unequal variances ( $p = 0.028$ ), but this does not influence the conclusion of non-significance.

A statistically significant difference is observed in the challenges males and females face when using TELL tools ( $p = 0.000$ ). Males report significantly more challenges compared to females. Levene's test indicates unequal variances ( $p = 0.000$ ), but the result's significance is unaffected. This finding suggests a notable gender difference, with males identifying more barriers in effectively utilizing TELL tools. The results show no significant difference between males and females in their perceptions of the overall contribution of TELL tools to language learning ( $p = 0.516$ ). Both genders agree on the role these tools play in enhancing language learning. While Levene's test indicates unequal variances ( $p = 0.002$ ), the t-test confirms the non-significance of the difference. The main takeaway from these results is that males and females share similar perceptions regarding attitudes, perceived benefits, and the contribution of TELL tools to language learning. However, a significant gender difference exists in the challenges faced, with males encountering more difficulties than females. This finding highlights the importance of effectively addressing gender-specific barriers in implementing TELL tools.

### 3.6 Cross-tabulation and Chi-Square Testing

**Table 6: Cross Tabulation for Involvement in ESL Education and Disadvantages of Using TELL Tools**

		What are the main disadvantages or challenges of using TELL tools in ESL classrooms?						Total
		Inability to cater to all learning styles	Lack of teacher training on using tools effectively	Limited access to devices or the internet	Other (please specify):	Over-reliance on technology, reducing face-to-face interaction	Technical issues (e.g., connectivity, software glitches)	
How long have you been involved in ESL education?	1-3 years	0	1	61	1	6	8	77
	4-6 years	0	1	22	0	4	8	35
	Less than 1 year	1	6	24	2	3	22	58
	More than 6 years	1	5	6	0	2	18	32
Total		2	13	113	3	15	56	202

The crosstab analysis in Table 6 shows that limited access to devices or the internet is the most reported challenge by 113 respondents, followed by technical issues like connectivity and software glitches, with 56 responses. Newer educators (less than 1 year or 1–3 years of experience) face these challenges more frequently, alongside a lack of training (6 responses for less than 1 year). Experienced educators (over 6 years) report fewer challenges but highlight technical issues (18 responses). The chi-square test confirms a significant relationship ( $p < .001$ ) between years of experience and the type of challenges reported, indicating that experience influences educators' perceptions of TELL-related barriers. These findings suggest the need for improved access, robust technical support, and targeted teacher training to address these challenges effectively.

**Table 7: Chi-Square Test**

	Value	df	Asymptotic significance (2-sided)
Pearson Chi-Square	54.158 <sup>a</sup>	15	.000
Likelihood Ratio	57.883	15	.000
N of Valid Cases	202		

a. 15 cells (62.5%) have been expected to count less than 5. The minimum expected count is .32.

Table 7 states the findings of the chi-square test and shows that the Pearson Chi-Square value is 54.158 with a p-value of .000. This indicates a statistically significant association between the years of experience in ESL education and the challenges reported. This suggests that the type and frequency of challenges vary depending on educators' experience levels.

#### 4. Discussion

The results of this study provide important insights into the role of TELL tools in ESL classrooms. The subsequent sections critically evaluate the results in the context of existing literature, emphasising thematic dimensions such as pedagogical efficacy, learner engagement, barriers to implementation, contextual influences, and broader implications for practice and policy.

Demographic analysis indicates that more than half of the respondents are young adults (ages 18–24) and relatively new to ESL education, with 38.1% possessing 1–3 years of teaching experience and 28.7% under one year. This finding echoes previous studies that have indicated that younger educators and learners are more receptive to technology-enhanced language learning (TELL) tools because of their digital literacy skills (Shadiev et al., 2017). Alongside the gender distribution, with 66.3% being female respondents, it corroborates that women are the majority in the language teaching profession (García & Wei, 2021). A majority of 57.9% of the respondents have access to TELL tools, which points to the increasing technology integration in ESL classrooms. This supports similar findings by Warschauer (2020), highlighting the growing active role of digital tools in second-language acquisition.

The pedagogical value of TELL tools lies in fostering vocabulary acquisition and deepening listening comprehension (Goh & Vandergrift, 2021). Additionally, multimodal platforms and game-based applications give a better, cognitively richer experience through interacting and context-specific content (Esteban, 2024). However, the tools' limited efficacy in teaching grammatical structures diverges from the findings of Ramamuthie and Aziz (2022), which indicate that digital platforms can effectively support grammar acquisition under certain conditions. This inconsistency may stem from the absence of explicit rule-based instruction, which many TELL tools lack (Duong et al., 2021). Integrating hybrid approaches that combine traditional instructional methods with technology could address this limitation (Alam et al., 2022). The study also raises questions about the capability of TELL tools to facilitate complex language tasks such as writing and critical reading in addition to more mundane tasks. It stresses the importance of continuous refinement in the tool (Strobl et al., 2019).

This theme appears all through, and that is that TELL tools foster greater learner motivation and activity. Features like instant feedback, gamification, and interactive interfaces created stimulating learning environments for motivational dynamics in technology-mediated language learning (Anak Yunus & Hua, 2021). However, the data also revealed variations in engagement levels across age groups and proficiency tiers, suggesting that learner-specific customization is crucial. Younger learners, for instance, appeared more receptive to gamified content, whereas older students preferred tools that emphasized practical language application (Thuy & Hun, 2021). Moreover, though gamification did motivate the learners effectively, over-reliance on such features can dilute intrinsic learning goals (Chan & Lo, 2024). In this regard, educators should promote balanced use that fosters intrinsic motivation alongside extrinsic incentives. The thematic analysis indicates that ESL instruction primarily employs mobile applications, online platforms, and virtual classrooms. The prominent mobile applications Memrise and HelloTalk, resonate with previous works, drawing attention to MALL's accessibility and effectiveness (Kukulaska-Hulme & Viberg, 2018). Likewise, virtual classroom applications, Zoom and Google Meet show a move towards hybrid and remote learning models, supported by contemporary studies on post-pandemic education (Hodges et al., 2021). These advantages notwithstanding, barriers such as restricted grand access (55.9%) and technical challenges (27.7%) point toward digital inequalities, following Menberu (2024), who argues that digital access remains the most prominent barrier in technology-mediated education.

Despite their potential, TELL tools' integration faced several barriers, such as limited digital literacy among students and teachers (Christ et al., 2019). This finding supports Bakla's (2019) assertion that digital proficiency is a prerequisite for successfully adopting technology. Hennessy et al. (2022) enumerated that the institutional factors further exacerbated the effective implementation process because of inadequate ICT infrastructure, unavailability of devices, and lack of professional development programs. In this regard, Abedi and Ackah-Jnr (2023) suggested that Ertmer's (1999) first- and second-order barriers framework would help understand these challenges. First-order barriers, such as resource availability, intersect with second-order barriers, including teacher attitudes and beliefs about technology, that impede large-scale adoption (Chambers, 2019). These barriers demand coordinated efforts at the institutional and policy levels to ensure fair access and thorough capacity building.

The correlation and reliability analysis further strengthens the positive perception of TELL tools. The finding that there is a high correlation between attitudes towards TELL and perceived benefits ( $r = 0.590$ ,  $p < 0.01$ ) provides evidence that user perception significantly affects technology adoption labeled as education (Davis, 1989), while a high number with apparent reliability coefficients (Cronbach's Alpha = 0.83) strengthens this finding and leads one to believe that TELL tools actualize to help ameliorate language learning. However, the gender differences in the challenges faced by male respondents ( $p = 0.000$ ) raise questions concerning the differential experiences with technology situation, reiterated by Lozano and Izquierdo (2019), who remarked that gender differences according to the acceptance of technology were noted. The results call for tailor-made interventions to tackle accessibility issues and enhance the usability of TELL tools in the ESL learning process.

The study findings emphasize that contextual and cultural factors play an important role in shaping the adoption and effectiveness of TELL tools (Zhi et al., 2024). More frequent levels of tool integration were observed in classrooms that emphasized collaborative learning and active participation (Hamadi et al., 2022). This partly supports Kukulaska-Hulme and Morgana's (2021) argument that localized pedagogical strategies are key to successful technology use. However, some settings dominated by traditional teacher-centered approaches inhibited TELL tools' transformative potential. Cultural attitudes toward technology and language learning also impacted the receptiveness of both teachers and students (Lee, 2022). The need for culturally responsive design and implementation strategies is thereby underscored.

## 5. Challenges and Unintended Consequences

The integration of TELL tools also posed problems related to technological distractions and reduced interpersonal communication opportunities. Teachers were worried that students' over-reliance on digital tools would devalue the development of critical thinking and collaboration skills (García-Gómez, 2022). These unanticipated effects align with Aziz and Kashinathan (2021), who warned against overreliance on extrinsic motivators. The problem of digital equity also presented a critical challenge, with the economically disadvantaged having limited access to devices and stable internet connectivity (Tate & Warschauer, 2022). Such inequities threaten to widen the existing educational inequalities, thus demanding targeted interventions that promote inclusive access. The findings of this study point to the need for a balanced approach to technology integration in ESL education. Policymakers should focus on investments in digital infrastructure and capacity-building initiatives for educators. Professional development programs must be geared toward equipping teachers with the skills to effectively blend technology with pedagogical strategies, focusing on fostering critical thinking and language competencies. More specifically, the design of TELL tools should accommodate the curriculum to be flexible to meet different needs in language ability, such as grammar, writing, and critical thinking. Institutional policies must define appropriate and ethical use of technology, including controls on screen time and data collection. This research opens up multiple avenues for further study. Longitudinal studies are required to evaluate the continued influence of TELL tools on language retention, performance, and learner autonomy. The study of innovative applications of digital platforms for teaching grammar and syntax still requires critical exploration. Further research explores the relationship between teacher attitudes, institutional readiness, and technology adoption, which can offer insights into optimizing implementation strategies. Equitable access and culturally responsive design studies will address the digital divide and further increase the inclusiveness and effectiveness of TELL tools.

## 6. Conclusion

These findings reflect the TELL tools' capability of changing the ESL classroom with students' increased participation, improved language, and flexible, personal learning options. The students prefer grammar and vocabulary apps the most. Mobile apps and online sites are crucial tools in language learning. Despite these advantages, the challenges identified encompass restricted access to technology, technical problems, and navigation issues, which could be related to infrastructure development and instructor training. Furthermore, innovative digital storytelling and speech recognition tools may unveil diversified ESL teaching practices. In a nutshell, TELL tools have worked well as supplements to traditional techniques, but only if the means for their introduction have been accompanied by strategic enhancements to accessibility and usability. Therefore, the study recommends that stakeholders facilitate improvement in accessibility through subsidized access programs and expanded digital infrastructure, both devices and the internet. Teachers require enhanced technical training and pedagogical preparation that tackles gaps in those aspects, alongside developing localized content for varying proficiency levels of users that better addresses usability and relevance issues. Thus, learning can be facilitated more effectively using a multi-tool approach, in which virtual classrooms can be appropriately complemented with mobile applications. Finally, recognizing TELL gains through seminars and workshops can expand the adoption of tools and improve commitment among students and teachers.

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