

Original article

Effectiveness of Telegram in English Language Learning among Technical Students in Derna, Libya

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Abstract

This study, guided by the Technology Acceptance Model (TAM), investigates the effectiveness of Telegram Messenger as a tool for English language learning among 38 third-year computer science students at the College of Technical Sciences in Derna, Libya. A structured questionnaire was used to explore students' perceptions of the app's usefulness, ease of use, and their behavioral intention to adopt it for learning purposes. The findings show that while Telegram positively influenced students' reading and writing skills, it had a lesser impact on their speaking and listening skills. Statistical analysis revealed a strong positive correlation between perceived usefulness and behavioral intention to use the app. However, a significant negative correlation was found between perceived ease of use and both usefulness and behavioral intention. The results suggest that Telegram can serve as an effective supplementary tool for English as a Foreign Language (EFL) learners, particularly when its use is enhanced with interactive content and activities that target all four language skills.

Keywords: Telegram Features, Technology, English as a Foreign Language, Telegram App.

Introduction

English has become an essential global language, not only for communication but also for academic advancement and professional opportunities. For learners in developing countries, English proficiency is increasingly recognized as a key skill for success in education and employability [1]. Consequently, educators and researchers have turned to innovative teaching approaches, particularly technology-enhanced learning, to address students' needs in acquiring language skills effectively.

The integration of technology into language teaching has been widely reported to improve learners' motivation, autonomy, and skill acquisition [2]. Mobile-Assisted Language Learning (MALL) has attracted increasing attention because it allows students to access learning materials and practice English anytime and anywhere. Research confirms that MALL fosters learner engagement, supports different learning styles, and creates authentic learning opportunities [3].

Telegram, launched in 2013, has rapidly gained popularity as both a social networking and learning tool. Its unique features, such as group channels, file sharing, interactive quizzes, and cross-platform accessibility, make it suitable for educational purposes [4]. Studies have shown that Telegram supports vocabulary learning, reading comprehension, and writing proficiency, while also promoting collaboration among learners [5]. However, its impact on speaking and listening remains less developed, indicating a need for more targeted pedagogical strategies [6].

The Technology Acceptance Model (TAM), first introduced by Davis, provides a theoretical framework for evaluating learners' adoption of new technologies. According to TAM, two key factors, perceived usefulness and perceived ease of use, determine users' behavioral intention toward adopting a technology [7]. Applying TAM in language learning contexts helps researchers understand how students perceive educational applications such as Telegram and the extent to which these perceptions shape their willingness to integrate them into their studies. Education is the quantity of knowledge needed to accomplish tasks and objectives and to convert collected data into information that is both relevant and practical. It also signifies the ability and mindset that support creativity [8].

Despite the increasing number of international studies on Telegram, research in the Libyan context remains scarce. Libyan university students are frequent users of social media, yet the potential of these platforms in structured language learning has not been fully explored. This study, therefore, investigates Libyan technical students' perceptions of Telegram for English language learning, guided by the TAM framework, and examines its effectiveness in enhancing specific language skills.

The use of technology in language education has been extensively studied, with consistent evidence that it enhances learner engagement, autonomy, and collaboration [9]. Mobile devices have transformed the way students access and interact with learning materials, making Mobile-Assisted Language Learning (MALL) one of the most influential innovations in English language teaching. Studies demonstrate that MALL increases flexibility, provides authentic input, and fosters motivation in both formal and informal contexts [10].

Telegram has emerged as one of the most widely researched applications in MALL [11] found that Saudi university students perceived Telegram as an effective tool for enhancing vocabulary and overall English proficiency. Similarly, [12] reported that Telegram fostered engagement in EFL writing classes, while [13] showed its effectiveness in improving pronunciation among Iranian learners.

Other scholars emphasized Telegram's role in collaborative and interactive learning. [14] demonstrated that teachers could use Telegram for corrective feedback and lesson delivery. Likewise, [15] highlighted its usefulness in promoting mobile learning innovation, and [7,16] observed that its group features supported interaction and student engagement during remote learning.

Research also points to Telegram's positive impact on literacy skills. [17] confirmed its effectiveness in expanding learners' vocabulary, while [18] showed that even simple features like stickers can enhance vocabulary retention. Studies by [19] further indicated that Telegram-based instruction can lead to significant gains in speaking and writing compared with traditional methods.

Nevertheless, limitations remain. Several studies observed that while Telegram effectively improves reading and writing, its contribution to listening and speaking skills is less significant [20]. These findings suggest the need for more creative instructional strategies that integrate Telegram's multimedia features to address all four language skills comprehensively. In summary, the literature demonstrates that Telegram is a promising tool in English language education, offering opportunities for vocabulary development, reading comprehension, writing practice, and collaborative learning. However, there is limited evidence from Libya, where English learners face unique challenges and where research on digital learning tools remains underdeveloped. This study, therefore, addresses this gap by examining Libyan students' experiences with Telegram through the lens of the Technology Acceptance Model. Bottom of Form

This study investigates Libyan technical students' perceptions of using Telegram as a tool for learning English as a Foreign Language (EFL). It focuses on how students feel about Telegram's usefulness, its impact on their learning experience, and how it might support their efforts to improve language proficiency. The research is framed by the Technology Acceptance Model (TAM), which examines perceived usefulness, ease of use, and behavioral intention. By applying this model, the study aims to understand the factors that influence students' willingness to adopt Telegram in their academic routines.

The research questions guiding the study explore students' emotional and practical responses to Telegram, its effect on their English language development, and strategies that could help learners enhance their proficiency. These questions are designed to uncover both the benefits and limitations of using Telegram in educational settings. The study builds on previous work, including research that has demonstrated Telegram's potential in teaching and learning contexts, suggesting that it may serve as a valuable platform for communication, collaboration, and engagement.

Ultimately, the study seeks to contribute to the broader conversation on mobile-assisted language learning by offering insights specific to the Libyan technical education context. It aims to inform educators and curriculum designers about the role of digital platforms in language acquisition and to propose ways in which Telegram can be effectively integrated into EFL instruction to support student success.

Methods

Study Design

This study investigates the use of Telegram as a tool for English language learning, as recommended by recent research. Given the growing global importance of English as a means of communication, it is essential to motivate learners to engage with the language. The study explores both the accessibility of Telegram and its role in fostering student motivation. Mobile phones emerged as the primary devices used by students to read short texts, highlighting their relevance in digital learning environments. According to [4], Telegram proved particularly effective in enhancing students' writing performance, creating an engaging and enjoyable learning atmosphere, and stimulating their desire to learn.

Participants

The research took place in the College of Technical Sciences, during the third-year students' computer science class. The sample was comprised of 38 students, 9 males and 19 females, who were matched for age, location, and occupation. These resemblances worked to the researcher's advantage when he employed them to teach English. This group was using Telegram as a channel of learning and teaching English. All participants were from the same department and at the same level. Also known as stratification, strata are created based on common characteristics or features of members, such as wealth or educational level [13]. All students ranged in age from 17 to 20 years. The homogeneity of sampling units in any population is measured by their degree of homogeneity. According to [9], if all elements of a data set, such as individuals, cells, or characteristics, are comparable to each other, then the data set is homogeneous (Table 1).

Table 1. Gender-wise distribution

Gender	Frequency	Percent
Male	9	50%
Female	29	50%

Data Collection Instrument

This study used a questionnaire to collect the necessary data to achieve the study objectives and answer the research questions. This tool allowed for easy collection, sorting, display, and analysis of data. The

questionnaire consisted of two parts. In the first part, participants were asked to provide some demographic information, including gender, age, and academic year. The second part included questions regarding the extent of their benefit from using Telegram, students' desire for it, and its ease of use. It was distributed to 38 male and female students at the College of Technical Sciences (Derna).

Reliability & Validity

Both face validity and reliability were evaluated to guarantee the validity and caliber of the study tool. An academic specialist with more than 15 years of expertise in educational technology verified face validity by examining the questionnaire's structure and content to make sure it was pertinent to the goals of the study. In terms of internal consistency, the "Perceived Usefulness" dimension exhibited good reliability according to Cronbach's alpha, whereas the "Behavioral Intention" dimension showed significantly lower reliability, maybe because of the small number of items employed. Despite this, students' opinions regarding utilizing Telegram are still significantly influenced by the behavioral intention dimension, which makes the study's findings useful but should be interpreted cautiously.

Data Analysis

Data analysis was conducted using SPSS software. As researchers examined the research questions used descriptive statistical methods to evaluate the students' responses collected via the survey. Accept the ignorant students' responses collected via the survey. Based on the TAM framework, the questionnaire was structured, coded, and analyzed accordingly. This study uses the Technology Acceptance Model (TAM), created by Davis, as its analytical basis, building on the theoretical framework previously mentioned. Three fundamental characteristics are identified by the model: behavioral intention, perceived utility, and perceived ease of use. However, this construct was excluded from the statistical analysis since there was insufficient information on perceived ease of use, as it was only represented by one item in the questionnaire. Thus, the two dimensions, perceived utility and behavioral intention, were the focus of the current study and were fully reflected and examined in the findings.

Results and Discussions

This section presents a detailed analysis of the data collected from the 38 participants, focusing on key metrics related to the use and perceived effectiveness of Telegram.

Frequency of Using Telegram for Educational Purposes

Most students (52.6%) reported using Telegram for educational purposes 3-4 times per week, indicating a moderate but consistent level of engagement. A smaller portion (28.9%) used it more frequently (4-6 times weekly), while 15.8% used it more than 6 times, and only 2.6% used it less than once per week (Table 2).

Table 2. Frequency of Using Telegram for Educational Purposes

Answers	Frequency	Percentage
Less than once	1	%2.6
3-4 times	20	%52.6
4-6 times	11	%28.9
More than 6 times	6	%15.8

Perceived Usefulness

The mean score for the overall evaluation of Telegram's use in English learning was high, at 4.16, reflecting a strong positive perception among students. The lowest mean score (1.58) was associated with the weekly frequency of use, suggesting that while students value the platform, their engagement is not yet intensive. The low standard deviation of 0.1359 indicates consistent responses across participants.

Table 3: Perceived Usefulness

Statement Text	Mean	Std. Deviation
How many times did you use Telegram for educational purposes (such as reviewing lessons, solving homework, and educational discussions) per week?	1.5789	.79293
Have you noticed an improvement in your English level after using Telegram in lessons?	2.1053	.55941.
Which of the following skills have you noticed an improvement in after using Telegram?	1.6486	.91943.
What is your benefit from the educational materials and discussions that take place via Telegram?	2.2368	.78617.
In general, how do you evaluate the experience of using Telegram in teaching English?	4.1579	.85507.

Behavioral Intention

The average score for behavioral intention was 1.25, with a relatively low score for prior use of Telegram before its introduction in the course (0.92). This suggests that most students were not regular users for educational purposes beforehand. The standard deviation of 0.27 indicates some variability in usage patterns. As the following (Table 4).

Table 4: Behavioral Intention

Statement Text	Mean	Std. Deviation
Were you using Telegram before it was used in teaching English?	.9211	0.27328
How many times did you use Telegram for educational purposes (such as reviewing lessons, solving homework, and educational discussions) per week?	1.5789	79293.0

Correlation Between the Three Dimensions

The mean score for prior use of Telegram before it was introduced in the English learning context was relatively low (0.92), showing that most students were not regular users beforehand. Weekly usage for educational purposes averaged 1.58 times, reflecting limited engagement. The standard deviation (0.27) suggests variability in usage patterns across students. The overall mean score for behavioral intention is 1.25, indicating a generally low level of pre-existing habit or inclination towards using Telegram educationally (Table 5). A strong positive correlation was found between perceived usefulness and behavioral intention ($r = 0.632$, $p < 0.01$). This means that the more students found Telegram useful, the more they intended to use it. A significant negative correlation was observed between perceived ease of use and both perceived usefulness ($r = -0.745$) and behavioral intention ($r = -0.566$).

Table 5: Correlation Between the Three Dimensions

Correlations	Perceived usefulness	Behavioral intention	Perceived Ease of use
Pearson Correlation	1	.632**	-.745**
Sig. (2-tailed)		.000	.000
N	38	38	38
Pearson Correlation	.632**	1	-.566**
Sig. (2-tailed)	.000		.000
N	38	38	38
Pearson Correlation	-.745**	-.566**	1
Sig. (2-tailed)	.000	.000	
N	38	38	38

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

The difference in academic achievement levels before and after using Telegram.

Reading was identified as the most improved skill by 56.8% of students. Writing skills followed with 29.7% of responses, while listening (5.4%) and speaking (8.1%) showed significantly less improvement (Figure 1).

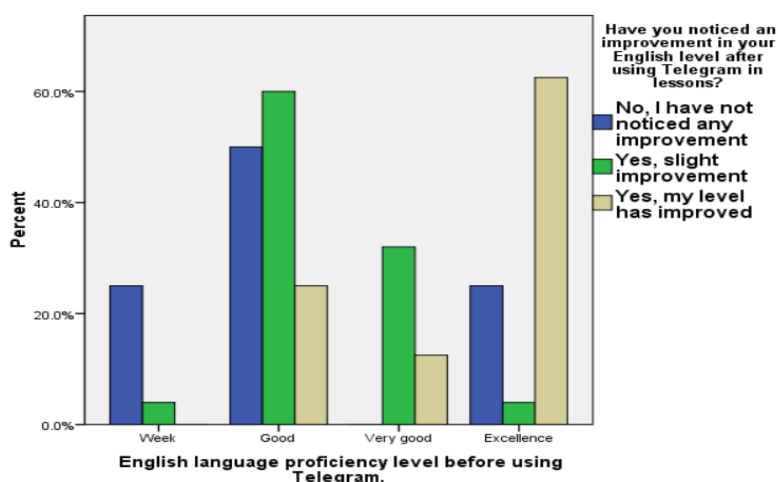


Figure 1. Illustrates the difference in academic achievement levels before and after using Telegram.

Skills Improved After Using the Telegram Application

Around 29% of students rated their performance as "very good" after using Telegram, and 50% as "good". Approximately 25% reported their performance as "excellent". These results indicate that most students noticed a clear improvement in their English proficiency (Figure 2):

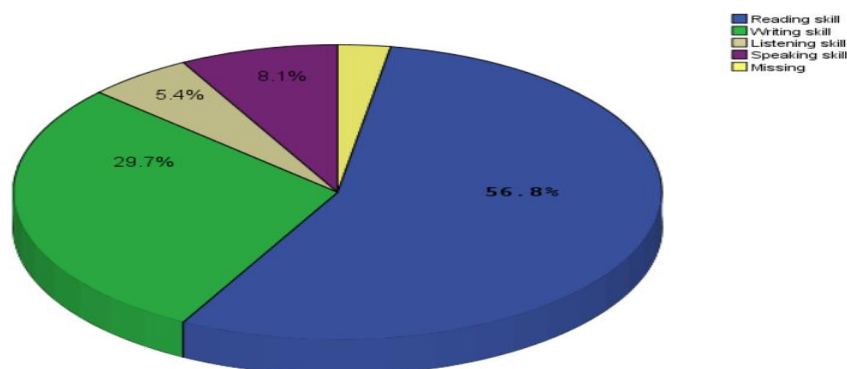


Figure 2. Skills Improved After Using the Telegram Application

Discussion

The results of this study provide valuable insights into the adoption and effectiveness of Telegram as a language learning tool within the Libyan context, largely supporting the Technology Acceptance Model (TAM). The strong positive correlation between perceived usefulness and behavioral intention directly aligns with the core principles of TAM. This finding reinforces the idea that for a digital tool to be successfully integrated into an educational setting, students must first perceive it as beneficial and relevant to their learning goals. The high mean score for perceived usefulness (4.16) further confirms this, indicating that students recognized Telegram's value in their English language acquisition.

The data highlights Telegram's particular strength in improving literacy skills, with reading being the most improved skill (56.8%). This finding is consistent with previous research on the topic. However, the less pronounced improvement in speaking and listening skills (5.4% and 8.1%, respectively) points to a key limitation of the platform as it is currently used. This result mirrors findings from other studies [22], suggesting that educators need to develop more creative, media-rich pedagogical strategies to fully leverage the app's multimedia capabilities for developing oral and auditory skills.

The most intriguing finding is the significant negative correlation between perceived ease of use and both perceived usefulness and behavioral intention. A possible interpretation of this unexpected result is that students may perceive the platform as "too easy" or simplistic, which could diminish its perceived value as a serious learning tool. This suggests that a certain level of complexity and challenge, perhaps through more advanced interactive features, is necessary to motivate learners and enhance their perception of the tool's utility.

In summary, while Telegram is generally well-received and considered beneficial for English language learning, its full potential remains untapped. With strategic content enhancements, regular task integration, and a specific emphasis on underdeveloped skills like speaking and listening, Telegram could become a more comprehensive tool for digital language education.

Limitations

The limitations were that it was limited to a bachelor's degree in the computer science department, and the third-year English language course was taught in the Computer Science College of Technical Sciences. Derna/ Libya. Researchers could go further by considering the opinions and experiences of other academics to obtain a thorough grasp of the situation and how various elements interact or cause issues for one another.

Conclusion

The influence of using Telegram as an additional digital tool for teaching English to EFL students at the College of Technical Sciences in Derna/ Libya, was investigated in this study. The findings show that students responded favorably to Telegram and that it helped them become more proficient in language, especially in reading and writing. The platform's usability and capacity to boost motivation and engagement were praised by most participants. [23] evaluated the effectiveness of using the program for teaching writing in a second language. The study group that utilized the Telegram app, according to the results, outperformed the control group. There is a need for participatory, media-rich activities, as the study also found low usage frequency and no discernible increase in speaking and listening abilities. Additionally, the drop in earlier Telegram usage for educational reasons emphasizes how crucial directed input and methodical incorporation into the learning process.

Conflict of interest. Nil

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