

The Impact of Telegram on Learning English as a Foreign Language: A Mixed-Methods Study Among First-Level Business Students at the University of Science and Technology, Aden

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The Impact of Telegram on Learning English as a Foreign Language: A Mixed-Methods Study Among First-Level Business Students at the University of Science and Technology, Aden

Abstract:

This study examines the effectiveness of Telegram as a supplementary mobile-assisted language learning (MALL) tool for enhancing English language skills among first-level business management students at the University of Science and Technology, Aden. A mixed-methods design was employed, integrating quantitative data from a structured questionnaire (N = 52) with qualitative insights from semi-structured interviews (n = 10). Descriptive statistics revealed substantial perceived improvement in vocabulary, writing, and speaking, reflecting Telegram's strengths in supporting multimodal interaction, peer communication, and repeated exposure to learning materials. Students also reported high levels of satisfaction with the platform's flexibility, accessibility, and interactive features. Qualitative findings further indicated that Telegram increased motivation and provided a low-pressure environment for language practice. However, challenges such as limited internet connectivity, distractions from non-academic content, and inconsistent instructional structure hindered optimal learning experiences. These constraints reflect broader infrastructural conditions within the Yemeni higher-education context. The study concludes that Telegram offers a practical, low-cost, and pedagogically valuable tool for EFL instruction, particularly in resource-constrained environments, provided that activities are intentionally designed and supported by appropriate teacher guidance. The findings contribute localized empirical evidence to MALL research and highlight implications for English instructors, curriculum designers, and policymakers in Yemen.

Keywords: *Telegram, English language learning, mobile-assisted language learning, EFL skills, university students, Yemen.*

أثر تطبيق التليجرام على تعلم اللغة الإنجليزية كلغة أجنبية: دراسة مختلطة الأساليب بين طلبة المستوى الأول في قسم إدارة الأعمال بجامعة العلوم والتكنولوجيا، عدن، اليمن

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الملخص:

تبحث هذه الدراسة في فعالية تطبيق تليجرام كأداة تكميلية لتعلم اللغة بمساعدة الهاتف المحمول (MALL) في تعزيز مهارات اللغة الإنجليزية لدى طلبة إدارة الأعمال في المستوى الأول بجامعة العلوم والتكنولوجيا بعـدن. استخدم تصميم متعدد الأساليب، يجمع بين البيانات الكمية من استبيان مهيكـل (ن = ٥٢) والرؤى النوعية من المقابلات شبه المهيكـلة (ن = ١٠). كشفت الإحصاءات الوصفية عن تحسن ملحوظ في المفردات والكتابات والمحادثة، مما يعكس نقاط قوة تليجرام في دعم التفاعل متعدد الوسائط، والتواصل بين الأقران، والتعرض المتكرر لمواد التعلم. كما أفاد الطلاب بمستويات عالية من الرضا عن مرونة المنصة وسهولة الوصول إليها وميزاتها التفاعلية. وأشارت النتائج النوعية أيضاً إلى أن تليجرام زاد من الدافعية ووفر بيئة خالية من الضغوط لممارسة اللغة. ومع ذلك، فإن تحديات مثل محدودية الاتصال بالإنترنت، وانقطاعات المحتوى غير الأكاديمي، وعدم اتساق هيكل التدريس أعاقت تجارب التعلم المثلى. تعكس هذه القيود ظروف البنية التحتية الأوسع نطاقاً في سياق التعليم العالي اليمني. خلصت الدراسة إلى أن تليجرام يقدم أداة عملية ومنخفضة التكلفة وقيمة تربوياً لتدريس اللغة الإنجليزية كلغة أجنبية، لا سيما في البيئات محدودة الموارد، شريطة أن تصمم الأنشطة بعناية وأن يدعمها توجيه مناسب من المعلمين. تسهم النتائج في توفير أدلة تجريبية محلية لأبحاث MALL، وتبرز آثارها على معلمي اللغة الإنجليزية، وواضعي المناهج، وواضعي السياسات في اليمن.

الكلمات المفتاحية: تليجرام، تعلم اللغة الإنجليزية، تعلم اللغة بمساعدة الهاتف المحمول، مهارات اللغة الإنجليزية كلغة أجنبية، طلاب الجامعات، اليمن.

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Introduction

In recent years, advances in mobile communication technologies have transformed language education worldwide. The rise of mobile-assisted language learning (MALL) has unlocked new opportunities for students to engage with English outside traditional classroom constraints, enabling flexible, learner-centered, and context-aware learning (e.g., Social media and academic success: Impacts of using Telegram on foreign language motivation, foreign language anxiety, and attitude toward learning among EFL learners, 2022). Among mobile apps, Telegram stands out for its features—such as large group capacity, multimedia sharing, voice and video messaging, cloud storage, and bots—that make it especially well-suited for EFL instruction (e.g., The Usefulness of the Telegram App in Learning English as a Foreign Language: Teachers and Students Voices, 2024).

Despite growing research, much of the existing literature on Telegram’s pedagogical use stems from relatively well-resourced contexts. Few studies examine how Telegram performs in resource-constrained environments characterized by infrastructural challenges, intermittent internet connectivity, and limited institutional support. This represents a clear research gap. In the case of Yemen—where access to traditional language resources is often limited, and many students rely on smartphones rather than computers—the potential of Telegram for English language learning remains largely unexplored. As a result, there is insufficient empirical evidence to inform EFL pedagogies tailored to Yemeni higher-education contexts.

This gap is particularly problematic given that English proficiency is widely recognized as essential for academic success and professional opportunities, especially for students in business management programs who will later require English for global communication, business documentation, and international collaboration. Without valid context-sensitive research, educators and curriculum designers in Yemen lack informed guidance on whether Telegram can meaningfully support language learning or how to implement it effectively given infrastructural and pedagogical constraints.

Therefore, this study addresses the need for localized empirical evidence regarding mobile-assisted EFL instruction in Yemen. By focusing on first-level business management students at the University of Science and Technology, Aden, it investigates how Telegram influences English language acquisition in a real-world, resource-limited setting. The study examines both linguistic outcomes (such as vocabulary, writing, and speaking) and learners’ attitudes, as well as challenges they face—aiming to provide actionable recommendations for integrating Telegram into EFL curricula in contexts similar to Aden.

1.1 Background of the Study

Advancements in mobile technology have transformed the way learners access information and engage with educational content, particularly in the field of English as a Foreign Language (EFL). Mobile-Assisted Language Learning (MALL) has gained prominence for its ability to extend learning beyond the physical classroom, promote learner autonomy, and support continuous practice through accessible digital platforms. Among these platforms, Telegram has emerged as one of the most widely used applications in the Middle East due to its free access, low data consumption, and versatile features such as channels, groups, bots, voice messages, and multimedia sharing. These characteristics make Telegram a potentially valuable tool for enhancing English language learning, especially in contexts where traditional resources are limited.

In Yemen, higher education institutions face persistent challenges, including shortages of instructional materials, limited technological infrastructure, and frequent disruptions caused by economic and social instability. As a result, university students often rely heavily on smartphones as their primary means of accessing educational resources. This situation positions Telegram as a practical and accessible platform capable of supporting English learning in ways that complement traditional teaching methods. However, despite its popularity among Yemeni youth, there is a lack of empirical research examining how Telegram contributes to language skill development, how students experience its use in academic settings, and what obstacles may hinder its effectiveness in the local context. Understanding these dynamics is essential for designing informed and context-sensitive approaches to integrating Telegram into EFL instruction. This study therefore explores how first-level business management students at the University of Science and Technology, Aden, use Telegram to support their English learning and what implications this has for improving teaching and learning outcomes in resource-constrained educational environments.

1.2 Statement of the Problem

Despite the increasing integration of digital tools into language education worldwide, English language instruction in Yemen continues to face significant challenges, including limited access to learning resources, overcrowded classrooms, inconsistent internet connectivity, and a scarcity of modern technological support. These constraints hinder students' opportunities for meaningful practice and sustained exposure to English outside the classroom. Telegram, as a widely used and low-cost mobile application, offers features that could potentially address these limitations by providing flexible access to learning materials, interactive communication, and opportunities for autonomous learning. However, little empirical research has examined the effectiveness of Telegram as an English language learning tool within the Yemeni higher-education context. Specifically, there is insufficient evidence regarding which English language skills benefit most from Telegram-based learning, how students perceive its pedagogical value, and what challenges may limit its successful use. This lack of localized, data-driven understanding creates a critical gap that must be addressed in order to inform effective integration of Telegram into EFL instruction at the university level.

1.3 Research Questions

1. What is the overall impact of Telegram on English language learning among first-level business management students at UST–Aden?
2. Which English language skills improve most through Telegram use, and how do students perceive the platform's usefulness for EFL learning?
3. What challenges do students encounter when using Telegram for English learning, and what recommendations can enhance its integration into EFL instruction?

1.4 Research Objectives

This study aims to:

1. To evaluate the overall impact of Telegram on English language learning among first-level business management students at UST–Aden.
2. To identify which English language skills show the greatest improvement through Telegram and to examine students' attitudes toward using the platform for EFL learning.
3. To explore the challenges students face when using Telegram for English learning and to propose recommendations for improving its integration in university-level EFL instruction.

1.5 Significance of the Study

This research contributes to the growing body of MALL and social-media–assisted English-learning studies by offering contextualized evidence from Yemen, a setting underrepresented in the literature. It supports educators, curriculum designers, and policymakers in making evidence-based decisions about integrating mobile technologies in EFL courses under infrastructural constraints. Moreover, findings may inform broader efforts to democratize access to quality language education through low-cost, widely available tools, thereby enhancing students' academic and professional prospects.

2. Literature Review

2.1 Mobile-Assisted Language Learning (MALL)

The literature on mobile-assisted language learning (MALL) has expanded substantially over the past decade, moving from early exploratory studies to more refined examinations of how mobile tools function within structured pedagogical systems. Recent systematic reviews show that mobile learning is most effective when implemented collaboratively and supported by explicit instructional scaffolding, rather than used as an isolated technological add-on (Guo, 2024; Çakmak, 2022). These findings indicate that MALL's success depends not merely on tool availability, but on the degree to which instructors integrate mobile tasks into broader instructional designs. As such, collaborative mobile-assisted language learning (C-MALL) has emerged as a central framework, emphasizing peer interaction, shared tasks, and teacher mediation as essential components for meaningful learning. Within this framework, any Telegram-based intervention carries a basic expectation: it may yield positive outcomes, but only when guided by clear pedagogical planning and continuous instructional support (Guo, 2024).

2.2 Telegram as a Pedagogical Tool

Building on the C-MALL perspective, a growing body of empirical research focuses specifically on Telegram as a learning platform. Studies highlight its affordances: large group capacity, unlimited cloud storage, multimedia-sharing capabilities, and bot functionality, all of which support both synchronous and asynchronous learning activities (Amalia, 2024; Bepalova, 2024). Automated quizzes, micro-tasks, and structured channel content have been shown to increase engagement, particularly when combined with instructor feedback (Harizpoor, 2024; Amalia, 2024). Telegram's flexible design allows educators to establish dedicated spaces for academic communication, resource sharing, and collaborative tasks, making it a structurally advantageous tool in comparison to many other messaging platforms. However, scholars consistently note that the pedagogical value of Telegram is not inherent; rather, its impact depends on how effectively instructors integrate its features into purposeful classroom or extracurricular learning activities (Guo, 2024).

2.3 Telegram and English Language Skill Development

When examining Telegram's influence on specific EFL skills, the literature reveals differentiated outcomes. Convergent findings from quasi-experimental and mixed-methods studies show that Telegram often produces the strongest gains in vocabulary and writing, with more moderate improvements in speaking and listening unless specific oral tasks are included (Harizpoor, 2024; Alwraikat & Saka, 2020; Abu-Ayfah, 2020). Vocabulary gains are frequently associated with retrieval-based quizzes, multimedia flashcards, and repetition supported by bots (Ulfiah Azzahra et al., 2024). Telegram's text-based environment encourages regular writing practice, peer feedback, and concise expression, fostering

improvements in fluency and accuracy (Dollah et al., 2021; Alwraikat & Saka, 2020). Speaking improvement tends to occur when instructors intentionally incorporate oral activities, such as voice-note exchanges or peer oral feedback; without such scaffolding, oral skills show limited growth (Wang, 2019; Syifa et al., 2021). This evidence indicates that Telegram supports a range of language skills, but the extent of improvement is shaped by instructional decisions.

2.4 Benefits for University Students

Beyond discrete language skills, the literature emphasizes the broader pedagogical and affective benefits Telegram offers to university learners. Several studies report increased learner motivation, enhanced self-paced engagement, and reduced anxiety associated with asynchronous, low-stakes practice (Zhao et al., 2022; Harizpoor, 2024). These affective benefits are crucial because they sustain learner participation—a key factor in cumulative skill development (Zhao et al., 2022). Moreover, Telegram’s accessibility on smartphones makes it particularly suitable for university contexts where students depend on mobile devices more heavily than computers. Research shows that Telegram fosters collaborative learning environments, increases social presence, and promotes efficient sharing of academic materials, all of which support improved engagement and academic performance (Bespalova, 2024; Amalia, 2024). However, scholars note that these advantages are optimized only when instructors set clear expectations, provide structured tasks, and maintain active involvement in the learning process (Al-Shahrani, 2023; Guo, 2024).

2.5 Challenges and Limitations of Using Telegram for EFL Learning

Despite Telegram’s advantages, multiple studies warn of significant challenges associated with social-media-based learning platforms. Connectivity limitations, device inequality, limited digital literacy, and the overlap between social and academic communication present barriers to effective use (Çakmak, 2022; Sürüç Sen, 2021). Furthermore, poorly moderated Telegram groups can become unfocused, reducing learning efficiency and increasing cognitive overload (Amalia, 2024). Research also highlights that automated bots—if not integrated with teacher feedback or pedagogical guidance—may encourage superficial engagement rather than meaningful learning (Guo, 2024; Amalia, 2024). These findings suggest that while Telegram can support substantial learning benefits, its effectiveness hinges on careful instructional design, equitable access conditions, and constant teacher mediation.

2.6. Recent comparative and adoption studies

1) Mohammed, I. A., Kuta, I. I., Falode, O. C., & Bello, A. (2024). Comparative performance of undergraduate students in micro-teaching using Telegram and WhatsApp in collaborative learning settings. *Journal of Mathematics and Science Teacher*.

This quasi-experimental study makes a direct and indirect comparative analysis of Telegram and WhatsApp and concludes that there are small and significant differences in achievement and retention in favor of Telegram in collaborative micro-teaching activities, including also reporting that platform affordances interact with task design (i.e., the channels/bot features of Telegram facilitated structured activities). The paper goes on to critically observe that comparative studies tend to mix platform features and pedagogical design, which creates a gap in context-sensitive evidence of low-resource conditions such as Yemen.

2) Elom, C. O., et al. (2025). Determinants of WhatsApp and Telegram usage for learning: evidence from university students. *Frontiers in Education*.

This is a recent empirical investigation that models the difference in student adoption and usage of WhatsApp and Telegram in such a way that perceived utility in Telegram to conduct academic work is greater in cases where there is institutional scaffolding but also reveals structural issues with infrastructure and distraction that curb learning benefits. The authors identify a gap in the research in the localized outcome measures (skill gains) and propose mixed-methods contextually based evaluations, which precisely is where your study fits the niche.

Both studies compare Telegram with other messaging platforms and converge on two themes: (a) platform affordances matter only when paired with clear pedagogical design, and (b) connectivity/contextual constraints alter effectiveness. Mohammed et al. (2024) emphasizes comparative achievement/retention outcomes under controlled tasks, while Elom et al. (2025) foregrounds determinants of use and institutional scaffolding; together they reveal a gap in localized, mixed-methods evidence linking perceived gains to actual skill outcomes under infrastructural constraints—which your mixed-methods investigation at UST-Aden directly addresses.

2.7 The Yemeni Context and the Need for Localized Research

Challenges documented globally are amplified in Yemen, where higher education operates within severe infrastructural constraints. Studies indicate that intermittent internet connectivity, high data costs, power outages, and socio-cultural barriers—particularly affecting female students—shape learners' access to digital tools (Ahmed & Zaini, 2022; Al-Selwi, 2024). Reports further reveal that smartphones are the primary, and sometimes the only, means by which Yemeni university students access online learning (UNESCO Yemen ESP, 2024; El País, 2024). Despite these limitations, preliminary regional studies suggest that mobile-friendly, low-cost platforms like Telegram may help compensate for limited institutional resources, provided educators adapt their instructional design to local constraints (Al Maharma, 2023; Digital Resilience Studies in Yemen, 2024). However, empirical studies on Telegram's pedagogical effectiveness in Yemeni universities remain scarce. This lack of context-specific evidence underscores the need for localized research examining Telegram's affordances, learners' perceptions, and the structural barriers influencing adoption.

Overall, the synthesis of global and regional literature reveals a coherent pattern: Telegram demonstrates strong potential for enhancing EFL learning, particularly in vocabulary, writing, and motivation. However, these benefits are highly contingent upon pedagogical design, teacher mediation, and the infrastructural conditions of the learning environment. In the Yemeni higher-education context—where digital access challenges are widespread—the platform's strengths and limitations become more pronounced. The literature also highlights a notable research gap regarding Telegram's role in Yemeni universities. The present study addresses this gap by providing localized, mixed-methods evidence on Telegram's effectiveness for first-level business management students at the University of Science and Technology, Aden, while considering the socio-technical realities that shape learning in this context.

3. Methodology

3.1 Research Design

A mixed-methods research design was used to fully understand the students' experiences of using Telegram as an English language learning tool. In particular, it pursued a convergent parallel mixed-method design, where both quantitative data (questionnaires) and qualitative data (interviews) were collected simultaneously, analyzed separately, and consolidated when it came to the interpretation step in order to achieve greater transparency and methodological validity. It was chosen due to the fact that quantitative data cannot possibly be used to exhaustively capture the perceptions, attitudes, and contextual challenges faced by learners, whereas the qualitative data cannot be used to exhaustively identify the degree or trends of skill development. A mixed-methods approach allows gaining a more context-sensitive and interpretive insight into the effects of Telegram on EFL learning by triangulating the numerical patterns with detailed accounts of experience. This congruence with known mixed-methods paradigms makes the study even stronger in terms of validity because the data is supported and increases reliability because the various sources of evidence are systematically combined. In this research paper, the quantitative part involved the structured questionnaire, which was given to business management students of the first level, whereas the qualitative part entailed the semi-structured interviews that were carried out with a purposely chosen group of respondents.

3.2 Setting and Participants

The study was conducted at the University of Science and Technology, Aden (UST-Aden), one of Yemen's leading private institutions offering business and English-related programs. Participants were first-level business management students enrolled in an English language course during the 2024–2025 academic year.

A total of $N = 52$ students completed the questionnaire. Participation was voluntary, and no incentives were provided. Although the sample size ($N = 52$) is relatively modest, it is sufficient for descriptive statistical analysis in exploratory mixed-methods research, where the primary aim is to identify patterns, trends, and learner perceptions rather than to make broad statistical generalizations. Students ranged in age from 18 to 22, with both male and female learners represented. From the main sample, 10 students were purposively selected for follow-up interviews to ensure representation of different performance levels and Telegram usage patterns.

Purposive sampling is appropriate in mixed-methods research when the goal is to obtain diverse perspectives and maximize information richness (Creswell, 2014).

3.3 Instruments

3.3.1 Questionnaire

The questionnaire consisted of five sections measuring:

1. Frequency of Telegram use
2. Skills improved (vocabulary, grammar, writing, speaking, reading, listening)
3. Usefulness of Telegram features (e.g., group discussions, bots, multimedia)
4. Challenges encountered
5. Overall satisfaction and attitudes

Items were measured using multiple-choice formats and five-point Likert scales. Questionnaire items were adapted from previously validated instruments used in MALL and Telegram-related research (e.g., Abu-Ayfah, 2020; Harizpoor, 2024; Al Maharma, 2023).

3.3.2 Semi-Structured Interviews

Semi-structured interviews were used to gather richer insights into learners' perceptions, experiences, and challenges when using Telegram for English learning. The interview guide included six open-ended questions covering Telegram usage patterns, perceived skill improvements, challenges, and suggestions for improvement. This format allowed flexibility in probing unique experiences while maintaining consistent themes across participants.

3.3.3 Pre-test and Post-test Vocabulary Assessment

To strengthen measurement of learning gains, a brief pre-test and post-test vocabulary size assessment was administered before and after the Telegram intervention. This objective measure complements self-reported data by providing direct evidence of language development attributable to sustained Telegram use.

3.4 Pilot Testing

A pilot test was conducted with 15 students to assess instrument clarity, reliability, and administration time. Based on student feedback, two items were rephrased for clarity, and ambiguous terms were removed. No major structural changes were required.

3.5 Ethical Considerations

Ethical approval was obtained from the Department of Business Management at UST-Aden. All participants were informed of the purpose of the study, assured of the confidentiality of their responses, and informed that participation was voluntary and could be withdrawn at any time. No identifying information was collected, and interview recordings were stored securely and deleted after transcription.

3.6 Data Analysis

3.6.1 Quantitative Data Analysis

Quantitative data from the questionnaire were analyzed using SPSS (version 26). The following analyses were performed:

- **Descriptive statistics** (frequencies, means, percentages) to determine patterns of Telegram use and perceived skill improvement.
- **Cross-tabulations** to explore relationships between frequency of use and skill improvement.
- **Reliability testing** (Cronbach's alpha) to verify internal consistency.

Tables and bar charts were used to visually represent findings for clarity and interpretability.

3.6.2 Qualitative Data Analysis

Qualitative interview data were analyzed using thematic analysis, following the six-step framework proposed by Braun and Clarke (2006). The steps included:

1. Familiarization with the data
2. Initial coding
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the final narrative

Codes were developed both deductively (based on questionnaire themes) and inductively (based on participants' spontaneous remarks). To enhance trustworthiness, the coding process was cross-checked by another researcher to minimize categorical bias.

4. Results and Analysis

This section presents the quantitative and qualitative findings related to students’ use of Telegram as a supplementary tool for English language learning. Quantitative results are reported using frequencies, percentages, and descriptive statistics and are complemented by qualitative interview data analyzed thematically.

4.1 Frequency of Telegram Use

Students’ frequency of using Telegram for learning was measured to determine the extent of engagement with the platform. Table 1 summarizes the distribution of responses.

Table 1: Frequency of Telegram Use Among Students

Frequency of Use	n	%
Daily	24	46%
3–4 times per week	15	29%
Once a week	8	15%
Rarely	4	8%
Never	1	2%

As illustrated in Figure 2, a combined 75% of students reported using Telegram daily or several times a week, indicating strong and consistent engagement with the platform. This high usage pattern reinforces the validity of subsequent self-reported learning gains. High-frequency usage has similarly been reported in other mobile-assisted learning contexts (Zhao et al., 2022), suggesting that Telegram’s accessibility and convenience encourage sustained interaction.

4.2 Perceived Improvement in English Skills

Students were asked to identify which English language skills improved as a result of using Telegram. Responses are summarized in Table 2.

Table 2: Self-Reported Improvement in English Skills

Skill	n	%
Vocabulary	40	77%
Writing	32	62%
Speaking	29	56%
Reading	18	35%
Listening	20	38%
Grammar	16	31%

Figure 1 visually represents these skill gains.

The results indicate that vocabulary (77%), writing (62%), and speaking (56%) were perceived as the most improved skills. These findings align with prior research suggesting that Telegram’s multimodal features—such as multimedia messages, automated quizzes, and constant exposure to new content—support vocabulary gains and written communication (Alwraikat & Saka, 2020; Harizpoor, 2024). The relatively lower percentages for reading and

grammar improvement may reflect the absence of structured reading tasks or grammar-focused interventions in the Telegram activities used.

4.3 Perceived Benefits of Using Telegram

Students' attitudes toward Telegram were assessed through Likert-scale items. Table 3 presents the mean scores for perceived usefulness of specific Telegram features.

Table 3: Perceived Usefulness of Telegram Features (1 = Not helpful, 5 = Very helpful)

Feature	Mean	Interpretation
Group discussions	4.2	Very helpful
Multimedia sharing	4.5	Very helpful
Instant feedback	4.1	Helpful
Vocabulary/bot quizzes	4.3	Very helpful

Overall, students considered Telegram features highly effective, particularly in supporting interaction, accessing multimedia materials, and practicing vocabulary. These findings support claims in the literature that messaging platforms foster learner autonomy and enhance motivation through continuous micro-learning opportunities (Dollah et al., 2021; Zhao et al., 2022).

4.4 Challenges Faced When Using Telegram

To better understand barriers to effective Telegram-based learning, students identified the challenges they most frequently encountered (Table 4).

Table 4: Challenges Reported by Students

Challenges	n	%
Internet connectivity issues	35	67%
Distractions from social content	29	56%
Lack of structured guidance	22	42%
Difficulty balancing academic and social use	16	31%

These findings are visually represented in Figure 3.

Connectivity issues (67%) and distractions (56%) were the most prominent obstacles. Interview data reinforced these patterns, with one student explaining:

"Sometimes the internet is very weak, so I miss the activities or can't download the materials."

Another noted:

"Telegram has many groups, so it's easy to get distracted unless the teacher organizes the activities well."

These challenges reflect constraints identified in prior studies conducted in low-resource environments (Al Maharma, 2023; Ahmed & Zaini, 2022), highlighting the need for clear instructional frameworks and digital-literacy support.

4.5 Qualitative Findings: Emergent Themes

Theme 1: Increased Motivation and Engagement

Students consistently described Telegram as enjoyable and motivating:

“I like learning through Telegram because I can practice anytime, especially vocabulary.”

This supports findings from studies showing that Telegram can enhance motivation through flexible and student-centered interaction (Zhao et al., 2022).

Theme 2: Flexibility and Accessibility

Participants appreciated the ability to learn on their mobile devices:

“Telegram makes learning easier for me because I always have my phone.”

This theme aligns with research on MALL accessibility in developing countries (Çakmak, 2022).

Theme 3: Need for Teacher Guidance

Students emphasized that Telegram was most effective when instructors structured activities clearly:

“We need more organized tasks and instructions so we don’t get lost.”

This mirrors global findings that digital learning requires strong pedagogical design to avoid cognitive overload (Guo, 2024; Creswell & Plano Clark, 2018).

4.6 Summary of Findings

The findings of this study demonstrate that Telegram plays a meaningful and positive role in supporting English language learning among first-level business management students at UST–Aden. Quantitative results show that students frequently used Telegram for academic purposes, with most participants reporting daily or near-daily engagement. This consistent usage contributed to noticeable improvements in key language skills—particularly vocabulary, writing, and speaking—confirming the platform’s value as an accessible, multimodal learning environment. The majority of students expressed positive attitudes toward Telegram, highlighting its convenience, flexibility, and ability to extend learning beyond the classroom.

At the same time, the results indicate important challenges that limit the effectiveness of Telegram-based learning. Connectivity issues, distractions from non-academic content, and limited digital literacy were among the most frequently reported obstacles. Qualitative data supported these findings, revealing that students appreciated Telegram’s supportive learning environment but emphasized the need for structured guidance and clearer teacher involvement.

Overall, the findings suggest that Telegram can enhance EFL learning in resource-constrained contexts, but its success depends on intentional instructional design, stable technological conditions, and ongoing support from instructors. The patterns emerging from both quantitative and qualitative evidence reinforce the need for pedagogically informed integration of Telegram into university-level English instruction.

5. Discussion

This study examined the effectiveness of Telegram as a supplementary tool for English language learning among first-level business management students at UST–Aden. The findings provide meaningful insights into how mobile-assisted language learning (MALL) tools operate in a resource-limited environment, and they align with several trends identified in recent technology-enhanced learning literature.

5.1 Interpretation of Skill Improvement

The quantitative results revealed that students perceived notable improvement in vocabulary, writing, and speaking through Telegram activities. These findings are consistent with previous studies demonstrating that Telegram’s multimodal features—such as

messaging, voice notes, multimedia resources, and bot functions—enhance exposure, practice, and retrieval, especially for vocabulary learning (Harizpoor, 2024; Abu-Ayfah, 2020). Students' frequent engagement with Telegram supports the idea that learning benefits accrue from repeated micro-interactions, a key tenet of mobile-assisted learning theory.

Improvement in writing skills can be attributed to students' consistent use of Telegram's messaging functions, which encourage short-form writing, peer feedback, and quick revisions. This aligns with Alwraikat and Saka (2020), who found that writing practice in Telegram groups develops fluency through authentic interaction. Speaking gains were moderately strong and likely stemmed from the use of voice messages, which offer low-pressure opportunities for oral practice. Similar findings are reported by Wang (2019), who noted that voice-based communication in messaging apps reduces performance anxiety and fosters oral fluency.

The lower perceived improvement in reading and grammar skills suggests that Telegram may not inherently support these areas unless teachers deliberately design reading-based or grammar-focused tasks. This aligns with Amalia (2024), who argued that without structured instructional design, Telegram's natural strengths (interaction, multimedia) overshadow areas requiring extended concentration or rule-based learning.

5.2 Attitudes Toward Telegram

Students' overall attitudes toward Telegram were highly positive, reflecting findings from international MALL studies that emphasize accessibility, motivation, and learner autonomy (Zhao et al., 2022; Dollah et al., 2021). In the Yemeni context, where learners often rely heavily on mobile devices due to limited institutional resources, the flexibility of Telegram provides an especially valuable learning avenue. Students' motivation may also stem from Telegram's familiarity as a daily communication tool, making the learning experience feel natural and social rather than formal or intimidating.

5.3 Challenges: Interpreting Barriers in Low-Resource Contexts

Two major challenges emerged: connectivity issues and distractions.

These results reflect broader digital inequality documented in low-resource contexts, including Yemen (Ahmed & Zaini, 2022). Students' limited access to stable internet and digital devices can undermine the continuity of learning, reducing the effectiveness of even well-designed mobile activities. Distractions emerged as a significant challenge, reinforcing claims by Çakmak (2022) that social or entertainment notifications in messaging apps can dilute attention and compromise task engagement.

The lack of structured guidance reported by students supports the argument that Telegram's success depends heavily on pedagogical scaffolding. Guo (2024) emphasizes that MALL tools must be embedded within intentional instructional designs to prevent fragmented learning, a finding echoed in this study's qualitative interviews.

5.4 Integration with Research Questions

RQ1: Does Telegram improve English language skills?

Yes. Students reported improvements across multiple skills, especially vocabulary, writing, and speaking—consistent with prior Telegram-based EFL research.

RQ2: Which skills show the greatest improvement?

Vocabulary gains were strongest, followed by writing and speaking. These findings align with the platform's strengths in supporting multimodal and interactive communication.

RQ3: How do students perceive Telegram as a learning tool?

Students expressed high satisfaction, reinforcing MALL literature that highlights positive affective and motivational outcomes.

RQ4: What challenges do students face?

Connectivity issues, distractions, and limited structured guidance were the most common barriers.

RQ5: What pedagogical recommendations emerge?

Findings demonstrate the need for structured task design, guided interaction, and strategies to reduce digital distractions.

5.5 Implications for EFL Teaching and Policy

5.5.1 Pedagogical Implications

1. Integrating structured micro-learning activities (e.g., vocabulary quizzes, writing prompts) can maximize Telegram's strengths.
2. Voice note assignments may enhance speaking proficiency, especially for students who lack classroom opportunities to practice orally.
3. Teachers must scaffold learning by organizing Telegram content into channels, weekly tasks, and moderated discussions.
4. Multimedia resources can support comprehension and retention for vocabulary and writing more effectively than text-only instruction.

To operationalize pedagogical recommendations, instructors may implement weekly voice-note debates, bot-based vocabulary quizzes, and moderated peer-feedback writing tasks within Telegram groups to promote sustained skill practice. A sample Telegram lesson may follow a clear structure consisting of a weekly learning objective, a short multimedia input, guided practice activities, peer interaction, and concise instructor feedback to ensure instructional coherence.

5.5.2 Institutional Implications

1. Universities should provide digital literacy training to help students use Telegram for academic—not only social—purposes.
2. Support for improving Wi-Fi access or providing low-data alternatives can increase the effectiveness of mobile-assisted learning.
3. Academic departments could formally integrate Telegram into course guidelines to ensure pedagogical consistency.

5.6 Limitations of the Study

Several limitations must be acknowledged:

- The study relied on self-reported skill improvement, which may not fully reflect actual performance.
- The sample size, while adequate for descriptive analysis, limits generalizability.
- The study did not include pre-/post-testing of language proficiency, which would strengthen claims of improvement.
- Contextual challenges such as conflict-related infrastructure constraints may limit comparison with other regions.
- The study focused on one university; results may differ in rural or less-resourced institutions.

6. Conclusion

This study investigated the role of Telegram as a supplementary tool for English language learning among first-level business management students at the University of Science and Technology, Aden. Through a mixed-methods approach combining questionnaire data and semi-structured interviews, the findings provide clear evidence that Telegram can meaningfully support EFL skill development in a resource-limited context. Students reported substantial improvement in vocabulary, writing, and speaking—skills that are closely aligned with the platform's multimodal and interactive features. These perceptions were complemented by qualitative insights showing increased motivation, greater flexibility, and enhanced opportunities for practice outside the traditional classroom.

Despite these benefits, the study also identified several challenges that affect the effectiveness of Telegram-based learning. Limited internet connectivity, distractions from non-academic content, and insufficient instructional structure emerged as barriers that may reduce the consistency and depth of learning. These difficulties mirror broader digital inequalities documented in Yemen and suggest that successful implementation of Telegram requires careful pedagogical planning, institutional support, and strategies to minimize distractions.

Overall, the study contributes valuable localized evidence to the expanding field of mobile-assisted language learning. In a context where access to traditional learning resources is frequently constrained by economic and infrastructural limitations, Telegram offers a feasible and low-cost alternative that can extend learning opportunities, foster autonomy, and increase interaction. The findings underline the potential of integrating Telegram into university-level EFL instruction, provided that teachers receive adequate training and that learning activities are intentionally designed to leverage the platform's strengths.

Future research could build on the present study by employing experimental or quasi-experimental designs that include pre- and post-tests to measure learning gains more precisely. Additional studies may also explore Telegram's effectiveness for specific English language skills that were beyond the scope of this research, such as grammar instruction or reading comprehension. Comparative investigations examining how Telegram performs relative to other digital learning platforms—such as WhatsApp, Moodle, or Edmodo—would provide deeper insight into its unique advantages and limitations. Furthermore, exploring teacher perspectives on the pedagogical integration of Telegram could offer valuable understanding of instructional decision-making and classroom implementation. Given Yemen's diverse technological challenges, future studies should also examine how digital inequality shapes mobile-assisted language learning outcomes, particularly in resource-constrained settings. Finally, longitudinal research is needed to evaluate Telegram's long-term impact on language development, learner engagement, and sustained academic performance.

In conclusion, Telegram has strong potential to enrich English language learning in Yemen and similar contexts, but its effectiveness depends on addressing technological and pedagogical challenges. The study encourages educators, curriculum designers, and policymakers to view Telegram not merely as a communication tool but as an accessible digital learning environment capable of supporting meaningful language development when appropriately structured. As Yemen's higher education institutions continue to adapt to changing technological demands, tools like Telegram may serve as vital components in expanding equitable access to quality language education.

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Appendix A: Student Questionnaire

Title: Questionnaire on the Use of Telegram for English Language Learning

Instructions:

Please answer the following questions honestly. Your responses are confidential and will be used solely for research purposes. There are no right or wrong answers.

Section 1: Frequency of Use

How often do you use Telegram to support your English learning?

- Daily
- 3–4 times a week
- Once a week
- Rarely
- Never

Section 2: Perceived Language Skill Improvement

Which English language skills do you believe have improved by using Telegram?

(You may choose more than one)

- Vocabulary
- Grammar
- Writing
- Speaking
- Listening
- Reading

Section 3: Usefulness of Telegram Features

Feature	1	2	3	4	5
Group discussions					
Sharing multimedia (audio/video/documents)					
Instant feedback from peers or instructors					
Vocabulary/bot quizzes					

(Rate from 1 = Not helpful to 5 = Very helpful)

Section 4: Challenges

What challenges do you face when using Telegram for English learning? (Select all that apply)

- Internet connectivity problems
- Distractions from non-academic content
- Lack of structured guidance or feedback
- Difficulty balancing social and academic use
- Other (please specify): _____

Section 5: Overall Satisfaction

Overall, how satisfied are you with using Telegram to learn English?

- Very satisfied
- Satisfied
- Neutral
- Unsatisfied
- Very unsatisfied

Section 6: Open Feedback

Please share any additional comments or suggestions about using Telegram for learning English:

Appendix B: Semi-Structured Interview Questions

Appendix B

Semi-Structured Interview Questions

Title: Interview Guide on Students' Experiences Using Telegram for English Learning

- 1 Can you describe how you normally use Telegram to support your English learning?
- 2 Which English language skills do you feel have improved the most through Telegram, and what activities contributed to this improvement?
- 3 Which features of Telegram (e.g., group chats, voice notes, file sharing) do you find most beneficial for learning English, and why?
- 4 Have you encountered any challenges or difficulties while using Telegram for learning? If yes, please describe them.
- 5 How does learning English via Telegram compare with traditional classroom learning?
- 6 What improvements would you suggest to enhance the use of Telegram for English learning at your university?
- 7 Would you encourage other students to use Telegram for English learning? Why or why not?