Original Article

Effectiveness of Language Learning Apps in Developing English Macro Skills of College Students

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Abstract

This qualitative case study examined how college students perceived the contribution of language learning applications to English macro skill development in a Philippine private college context. The study took place at Iligan Medical Center College and involved ten purposively selected college students who actively used at least one language learning application as part of their English learning routine. Data came from semi-structured interviews and an open-ended questionnaire, with audio recorded interviews transcribed verbatim prior to analysis. Thematic analysis yielded four themes that map directly onto the macro skills: (1) speaking skill development through pronunciation practice and voice recording tools, (2) writing skill development through sentence construction, grammar exercises, and translation tasks, (3) reading skill development through exposure to varied text types and comprehension tasks, and (4) listening skill development through audio drills, dialogues, and listening comprehension tests. In aggregate, participants framed these applications as accessible environments for repetitive practice, immediate feedback, and self-paced skill refinement outside class. The findings support the view that mobile learning tools can extend opportunities for practice across macro skills, while also underscoring the need for rigorous program level integration and evaluation beyond self-report, especially when commercial applications shape learning routines.

Keywords: English proficiency, language learning apps, mobile learning, qualitative case study

1. Introduction

English proficiency functions as both an academic tool and a gatekeeping resource in higher education, where students must manage disciplinary reading loads, oral participation, written performance tasks, and comprehension of lectures and multimedia materials. Within this landscape, language learning applications have shifted from novelty tools into everyday learning companions. Students now encounter commercial platforms that offer structured drills, spaced repetition, corrective feedback, pronunciation guidance, and game like progression systems that encourage persistence. This rapid diffusion has reshaped how learners distribute practice across settings, time, and skill targets, particularly for students who seek additional support beyond classroom instruction.

Research in mobile-assisted language learning suggests that language applications can support measurable gains, but the strength of evidence differs by outcome, design rigor, and bias risk. A meta-analysis that compared mobile language learning applications with more traditional approaches reported a moderate to strong overall effect on second language achievement, while also noting substantial risk of bias and low quality evidence across many primary studies (Mihaylova et al., 2022). This combination of promising effects and uneven methodological strength makes local, context-sensitive inquiry valuable, especially in settings where app-based learning may substitute for or supplement structured language support.

Beyond general achievement, scholars have emphasized that app features align with specific mechanisms that plausibly support language development. Pronunciation practice and feedback channels can strengthen speaking performance by amplifying opportunities for rehearsal and self-monitoring. For example, empirical work reported pronunciation improvement after a mobile mediated peer feedback task, with qualitative evidence that participants used the app environment to sustain task focus and feedback exchange (Dai & Wu, 2022). In commercial applications, speaking support often appears through guided pronunciation models, speech capture, and immediate correction cues, features that learners interpret as practical scaffolds for oral accuracy.

Evidence also suggests that app-supported learning relates to reading and listening outcomes when learners complete sustained sequences of structured content. Studies of Duolingo learners have reported reading and listening proficiency outcomes aligned with beginning level course completion, which suggests that intensive app engagement can relate to receptive skill development (Jiang et al., 2021; Jiang et al., 2024). At the same time, the Duolingo research base also highlights the need to interpret outcomes carefully because learners self-select into app use, study intensity varies, and measures sometimes rely on external tests rather than classroom aligned assessments.

A second strand of literature focuses on design features that shape engagement, persistence, and perceived usefulness. A systematic review of Duolingo literature in Computer Assisted Language Learning synthesized research on gamification, platform

features, and learning effects, highlighting how streaks, points, feedback, and bite sized tasks can sustain participation while also raising questions about depth of processing and alignment with communicative needs (Shortt et al., 2023). Recent methodological commentary also calls attention to ethical and research design issues in studies that use commercial apps, including privacy, consent, and the need for transparent reporting and careful inference (Kessler et al., 2025). These concerns matter because commercial platforms can strongly influence what learners practice and what they believe counts as progress.

While quantitative research clarifies broad trends, qualitative inquiry remains essential for understanding how learners interpret app use and how they connect app features to skill development. In many higher education contexts, especially outside major research intensive universities, students rely heavily on self-directed strategies and informal learning tools. A qualitative case study can therefore clarify which app features learners consider most helpful for speaking, writing, reading, and listening, and how these perceptions align with or diverge from existing research. In this study, the guiding question asked how language learning applications help improve learners' English macro skills.

2. Methodology

This study utilized a qualitative case study design to explore students' perceptions of language learning applications and their purported contribution to English macro skills. Conducted at Iligan Medical Center College, where English serves as the primary medium of instruction, the research employed a purposive sampling strategy to select ten currently enrolled students. These participants were chosen based on their active use of English language learning applications and their willingness to participate, a sample size designed to support the in-depth exploration and contextual explanation characteristic of qualitative inquiry (Creswell & Poth, 2018).

Data collection centered on semi-structured interviews, which were tailored to elicit detailed accounts of user experiences and perceived changes across listening, speaking, reading, and writing skills. To accommodate participants who preferred written expression, open-ended questionnaires were utilized to gather additional narratives, ensuring a wide range of experiences was captured without sacrificing the study's focus. Interviews were conducted either online or face-to-face based on participant availability, and sessions were audio-recorded with permission to preserve the verbal record. Following transcription, researchers returned the documents to participants for member checking to verify completeness and prevent misrepresentation of meaning.

Analytic procedures adhered to the principles of thematic analysis to support the systematic interpretation of patterned meaning. The researchers immersed themselves in the dataset to generate initial codes regarding application usage and perceived effects on specific skills. These codes were subsequently clustered into

candidate themes that reflected shared patterns across the sample. To ensure trustworthiness, the researchers utilized peer debriefing and member checking, confirming that the thematic structure reflected participant intent rather than analyst preference. Throughout the study, ethical standards were upheld through informed consent, the right to withdraw without penalty, and strict confidentiality protections via anonymized reporting.

3. Results

Thematic analysis produced four themes that describe how participants linked language learning applications to English macro skills. The themes align with speaking, writing, reading, and listening, and participant statements emphasized specific app features that supported practice, feedback, and comprehension.

Theme 1: Speaking Skill Development

Participants associated speaking improvement with pronunciation practice and tools that permit self-monitoring through voice recording. They pointed to structured pronunciation guidance and repeated rehearsal as central supports. They mentioned:

> *"Apps help speaking by letting us practice pronunciation." (P1)*
> *"Speaking skills are developed through voice recording features." (P2)*
> *"Pronunciation guides in apps help improve speaking." (P3)*

Theme 2: Writing Skill Development

Participants framed writing development as an outcome of frequent sentence-level practice embedded in app tasks. They emphasized sentence construction, translation prompts, and writing challenges as mechanisms that sharpen written output. They stated:

> *"Sentence construction tasks improve writing." (P4)*
> *"Writing is sharpened by translating and writing sentences." (P5)*
> *"Grammar exercises and essay writing challenges help writing." (P6)*

Theme 3: Reading Skill Development

Participants linked reading improvement to app-based exposure to varied text types and described reading lessons, instructions, and text diversity as supports that aid comprehension and navigation of different materials. They verbalized:

> *"Understanding different types of texts enhances reading." (P8)*
> *"Reading lessons and instructions help." (P9)*

Theme 4: Listening Skill Development

Participants associated listening development with audio-based tasks and listening comprehension tests. They emphasized repeated exposure to spoken input through structured app activities. They shared:

"Listening comprehension improves through listening." (P7)
"Listening improves with audio drills and exercises." (P10)

4. Discussion

This study clarifies how college students interpret the role of language learning applications in skill development, with perceptions that align closely with feature-driven learning opportunities. Across themes, participants identified cross-cutting mechanisms: repeated practice, immediate feedback, and flexible access. These mechanisms match wider evidence that mobile language applications can support second language achievement relative to traditional approaches, although existing evidence varies in quality and bias risk (Mihaylova et al., 2022). The present findings add context-level detail by specifying which in-app affordances students associate with each macro skill.

Regarding speaking skills, students emphasized pronunciation practice and voice recording. These perceptions fit with empirical evidence that mobile-mediated environments can support pronunciation improvement when tasks invite rehearsal, feedback exchange, and sustained engagement. Mobile-assisted peer feedback contributed to measurable pronunciation gains and revealed interactional processes that help learners persist with oral practice (Dai & Wu, 2022; Pregoner, 2025). Although the present study did not measure pronunciation outcomes directly, participant accounts suggest that commercial application features may simulate some of the practice conditions that research has associated with improvement, particularly when learners repeatedly compare their output with models and adjust accordingly.

In terms of writing, participants highlighted sentence construction, grammar correction, and translation tasks. These features resemble micro-production cycles that provide frequent opportunities for form-focused practice. From a skills perspective, such tasks can strengthen accuracy at the sentence level, particularly when feedback appears immediately and practice occurs consistently. This aligns with broader discussions in app research that emphasize feedback and structured tasks as key drivers of perceived learning value, while also cautioning that writing development requires progression beyond isolated sentence production toward discourse-level planning and audience-aware composition. A systematic review of Duolingo literature notes that commercial apps often foreground bite-sized tasks and gamified repetition, which can sustain engagement but may not guarantee deeper communicative writing competence

unless educators align app tasks with course-level writing demands (Shortt et al., 2023). In this study, students described benefits that center on foundational writing control, which suggests practical value for accuracy-oriented practice, especially for learners who need additional reinforcement outside class.

For reading and listening, students pointed to exposure, comprehension tasks, and repeated aural input as primary supports. This pattern corresponds to research that reports receptive skill outcomes among learners who complete structured app sequences. For example, studies of Duolingo learners have reported reading and listening proficiency outcomes associated with course completion, indicating that sustained engagement can relate to measurable receptive skill levels (Jiang et al., 2021; Jiang et al., 2024; Retherford et al., 2025). The present qualitative findings complement that work by showing that learners themselves interpret reading and listening growth as a product of consistent contact with text and audio materials that apps deliver in manageable units.

These implications extend beyond the individual learner. Commercial applications now function as de facto curriculum supplements, yet research design and ethics discussions emphasize the need for careful evaluation, transparency, and responsible integration, especially when commercial platforms shape learner data and study conditions (Kessler et al., 2025; Pregoner et al., 2024). In practical terms, educators and program leaders can treat apps as structured practice environments that support macro skill routines, while also setting clear expectations about what apps can and cannot develop. Guided integration can connect app practice with classroom tasks, for example by pairing pronunciation drills with oral presentations, sentence-level grammar tasks with paragraph writing, or listening drills with note-taking and discussion.

The study also has limitations that shape interpretation. First, the evidence reflects self-report perceptions rather than performance-based measures, so perceived improvement may not match objective gains. Second, the small purposive sample supports depth but limits transferability across institutions or student groups. Third, app type, intensity of use, and prior proficiency likely vary across participants, which can shape perceptions and outcomes. These limitations suggest value in mixed-methods follow-up that pairs qualitative insight with standardized or curriculum-aligned assessment and detailed app use analytics.

5. Conclusion

College students in this qualitative case study perceived language learning applications as effective supports for English macro skills, with clear feature to skill links that emerged across speaking, writing, reading, and listening. Participants associated speaking improvement with pronunciation models and voice recording, writing improvement with sentence construction, grammar tasks, and translation activities, reading improvement with exposure to varied texts and comprehension lessons, and listening improvement with audio drills and comprehension tests. These

findings support the view that mobile applications can extend practice opportunities beyond class through repetition, feedback, and flexible access. For higher education contexts where students adopt commercial apps as informal learning infrastructure, program level guidance can help align app based practice with course outcomes and promote more comprehensive skill development. Future research should pair learner perception with objective measures of performance and detailed characterization of app use patterns to clarify when perceived benefits translate into measurable proficiency gains.

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Conflict of Interest Statement

The authors declare no conflict of interest.

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