

# Engaging Multilingual Learners Through Practical Applications of Computer-Assisted Language Learning

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## Abstract

In response to the growing demand for technology integration in multilingual education, this case study looks into the actual application of Computer-Assisted Language Learning (CALL) to support multilingual learners in an English Language Education Study Program in Indonesia. Purposeful sampling was used to choose 20 undergraduate students participating in an English Instructional Technology course. The study addresses two primary research questions: (1) How does the usage of CALL improve multilingual students' engagement in the course? (2) How do CALL tools and practices help multilingual learners strengthen their language skills in higher education settings? Data were gathered through classroom observations and semi-structured interviews. The findings showed that CALL increased these students' engagement, motivation, and participation through interactive and individualized learning experiences. Furthermore, CALL technologies enabled meaningful language practice and promoted digital literacy, thus contributing to overall language development. *Keywords:* multilingualism, CALL, language learning

## Introduction

Since technology has evolved rapidly in recent years, using digital tools in classroom contexts is not only helpful, but it is necessary. It is even more important to

have flexible and interesting ways to teach in multilingual settings where students come from a range of languages and cultural backgrounds (Coelho, 2004; Wu et al., 2021). Computer-Assisted Language Learning (CALL) is a promising way to improve language learning that uses multimedia tools, interactive platforms, and personalized learning environments (Chapelle, 2005; Levy, 1977; Soleimani, 2021; Stockwell, 2012). It is especially useful for teaching English as a second language, where it can help students get the help they need and improve their involvement and learning. Different levels of language proficiency, cultural differences, and not enough exposure to real-life language use are some of the problems that multilingual students often face in language classes. These problems can be worked on with CALL's tools and methods, which offer experiences that are immersive, flexible, and learner-centered. Language learners can interact with language in real time, get feedback right away, and practice alone or with others thanks to technology (Fischer, 2007; Hegelheimer & Tower, 2004). Because of this, CALL is a good way to encourage acceptance and help language learners from a variety of language backgrounds learn.

There is a rising focus on preparing future teachers in Indonesian universities, especially in English Language Education Study Programs, to incorporate technology into language instruction. More empirical evidence is required to back the adoption of CALL, and its practical uses are still limited in some institutions. The importance of English in today's academic and professional worlds makes it all the more urgent for language schools to embrace new approaches that cater to students' individual requirements while also reflecting current global trends. This study investigates how CALL can be used to engage multilingual learners in an English Instructional Technology course. It seeks to address two major issues: how CALL enhances student involvement and how it aids

language development. Given the significance of digital literacy for both learners and future educators, this study aims to provide insights into how CALL might be effectively used in classroom settings, particularly in countries such as Indonesia, where multilingualism is common.

### **Methods**

This study employed a qualitative case study approach to explore the practical application of CALL in engaging multilingual learners within a higher education context. A case study was chosen because it allows for an in-depth examination of a specific group, setting, and phenomenon within its real-life context (Fraenkel, 2022). Given the study's aim to understand how CALL strategies function in an actual instructional setting, the case study design was considered the most appropriate to capture rich, contextual insights from learners' experiences. This study involved 20 undergraduate students participating in the English Language Education Study Program at a university in Indonesia. The students were enrolled in the English Instructional Technology course during the semester in which the study was conducted. A purposive sampling method was employed to select participants directly engaged in CALL-based activities within their coursework. This sample approach was selected to guarantee that participants possessed pertinent experiences and interactions with the technology and practices being examined. In other words, the participants' experiences needed to be closely connected to the use of CALL strategies so that their insights would meaningfully contribute to the study's objectives.

Data were collected through interviews and observations. Observations were done in the classroom to record how engaged the students were, how they used the CALL tools, and how the classroom as a whole felt during CALL-based tasks. These observations showed how students reacted to and used different digital tools to help them

learn a language in real time. 10 students were also given semi-structured interviews to get more in-depth, reflective information about their own experiences with CALL. They were selected based on purposive sampling criteria, including language proficiency, motivation, and frequency of CALL use, to provide rich, varied insights into the phenomenon. The format of the interviews was flexible, so the researcher could dig deeper based on the participants' answers while still keeping the main focus on the study's goals. All of these ways together gave us a lot of rich, qualitative data that included both behaviors that could be seen and personal points of view. This helped the researcher get a better picture of how CALL affects multilingual learners as a whole.

Thematic analysis was used to code the qualitative data and find themes and patterns (Braun & Clarke, 2006) connected to student involvement and language development. Before beginning to code, classify, and generate themes, familiarization readings of the data were conducted to ensure a deep understanding of participants' responses. In order to fully comprehend the content and context, this approach required reading the gathered data, such as observation notes and interview transcripts, many times. During this familiarization phase, the researcher immersed themselves in the experiences of the participants and started recording initial concepts or trends that were noteworthy. After gaining enough familiarity with the data, significant segments that represented elements of student engagement and language development were labeled in order to do systematic coding. A thorough understanding of how CALL techniques affected learning outcomes was eventually provided by grouping and refining these codes to create more general themes that reflected recurrent ideas or connections.

## **Findings and Discussion**

The findings and discussion presented in this section are organized around the two main research questions that guided this study.

### ***Enhancing Multilingual Learners' Engagement Through CALL Integration***

This section shows the results of two classroom observations that looked at how CALL makes multilingual students interested in a course, regarding what the researcher had monitored during the classroom observation. Furthermore, the interview also highlighted the same finding. The observations were conducted during two CALL-based class sessions, concentrating on students' conduct, engagement, and interaction with digital learning resources. The researcher wrote down important engagement metrics, including active involvement, motivation, peer collaboration, and time on task. Tables 1 and 2 summarize the observed behaviors, activities, and outcomes related to multilingual learners' engagement during CALL-based lessons.

**Table 1***Classroom Observation Result (Phase 1)*

<b>Engagement Indicator</b>	<b>Observed Behavior</b>	<b>Notes/Examples</b>	<b>Interpretation</b>
<b>Active Involvement</b>	Most students participated in completing a digital vocabulary game.	13 out of 20 students completed the activity without prompting.	High engagement due to gamified, interactive content.
<b>Motivation</b>	Students showed interest and asked questions about extra features in the app.	Several students explored options like challenge mode and avatars.	Students were motivated by the tool's interactive features.
<b>Peer Collaboration</b>	Students worked in pairs to complete tasks on a shared device.	Many pairs discussed word meanings and corrected each other's mistakes.	CALL encouraged communication and cooperative learning.
<b>Time-on-Task</b>	Most students stayed focused throughout the 60-minute task duration.	Minimal off-task behavior observed; only 5 students occasionally disengaged.	Task design and digital format sustained learner attention.

**Table 2***Classroom Observation Result (Phase 2)*

<b>Engagement Indicator</b>	<b>Observed Behavior</b>	<b>Notes/Examples</b>	<b>Interpretation</b>
<b>Active Involvement</b>	All students participated in a grammar-based interactive quiz using a learning platform.	20 out of 20 students submitted responses and actively tracked their scores.	Competitive elements and instant feedback increased engagement.
<b>Motivation</b>	Students expressed enjoyment and eagerness to improve their scores.	Several students asked to redo the quiz for better results.	The instant feedback loop helped boost motivation.
<b>Peer Collaboration</b>	Informal peer support emerged during difficult questions.	Students explained rules to each other without being prompted by the instructor.	Students took initiative in helping peers, showing community learning.
<b>Time-on-Task</b>	All students remained focused for the entire session.	No notable distractions; students concentrated on the digital activities.	High engagement sustained through structured and interactive digital content.

The results of the classroom observations show that using CALL in the English Instructional Technology course makes students interested in the material. The lively engagement seen during the CALL-based exercises shows that digital tools make learning dynamic and stimulating. This reinforces prior studies emphasizing the significance of multimedia and gamified content in maintaining student engagement and enhancing their propensity to participate (Bouchrika et al., 2021). The observed peer collaboration indicates that CALL promotes communication and cooperative learning,

which are vital elements in multilingual classrooms. Moreover, students often interacted with one another while using digital platforms, helping each other learn by working together to tackle language problems. The collaborative setting promoted the exchange of ideas, the negotiation of meaning, and peer scaffolding (Joannidou et al., 2010), all of which are crucial for language acquisition, particularly in linguistically varied contexts.

Additionally, students were motivated to use CALL tools because they were interested and excited about them, especially when they could customize their learning experience or get feedback right away. This motivation is essential for language acquisition, since motivated learners typically dedicate greater time and effort to practicing the target language (Hassan et al., 2020; Muhammadin & Herda, 2024). The enhanced time-on-task reported during CALL sessions supports this, indicating that technology-mediated tasks can diminish distractions and sustain learners' focus.

The utilization of CALL instruments enhanced and contextualized language development practice. Multimedia tools and interactive quizzes afforded learners the opportunity to utilize vocabulary and grammar in engaging ways, potentially enhancing comprehension and retention. These findings resonate with the constructivist perspective on language acquisition, wherein learners actively build knowledge through interaction and reflection (Vygotsky, 1978). Furthermore, CALL's instantaneous feedback system enabled learners to recognize and rectify errors in real-time, thereby fostering self-regulated learning and autonomy. Notwithstanding these favorable results, it is crucial to acknowledge certain limits.

### ***Supporting Language Development Through CALL Tools and Strategies***

The second research question is concerned with the investigation of the ways in which CALL tools and strategies facilitate the language development of multilingual learners in a higher education environment. The following findings are some excerpts from students' interviews (P1, P7, P18, and P20). P1-P20 are codes for participants 1-20.

“Surely, technology makes learning English more accessible because I can practice happily and seriously in the classroom. My classmates helped me when I was confused about something.” (P1)

“I love the way of learning the topic with a laptop and technology tools. Using apps with videos and audio helps me improve my listening, and mmmmm, and pronunciation skills by hearing real native speakers.” (P7)

“Interactive quizzes and games keep me motivated and make grammar practice less boring.” (P18)

“What I like most is how the app gives me feedback right away. It shows my mistakes straight away, so I know what to work on and don't keep making the same errors.” (P20)

The participants' reflections highlight the positive impact of CALL on making English language learning more accessible and engaging. As P1 noted, technology

creates an environment where learners can practice both “happily and seriously,” supported not only by digital tools but also by peer collaboration. This combination of technology and social interaction aligns with Vygotsky’s social constructivist theory (1978), emphasizing the importance of interaction in language acquisition. Additionally, P7’s comment about using apps with videos and audio underscores how multimedia resources in CALL provide authentic language input, helping learners improve their listening and pronunciation skills by exposing them to native speaker models. This exposure is crucial for multilingual learners who may have limited opportunities to hear and practice real-life English outside the classroom (Hegelheimer & Tower, 2004). Additionally, the utilization of interactive quizzes and games, as noted by P18, functions as a motivating factor that enhances the enjoyment of grammar studies, which are frequently perceived as tedious. A dynamic and stimulating learning environment is fostered by the gamified components of CALL (Soleimani, 2021; Stockwell, 2012), which promote sustained learner engagement. Another fundamental advantage of CALL is the provision of timely corrective information that promotes self-awareness and autonomous learning, as evidenced by P20’s appreciation of immediate feedback. This immediate feedback cycle allows learners to promptly identify and rectify their errors, thereby reducing the fossilization of errors and promoting continuous language development. Collectively, these observations illustrate the efficacy of CALL strategies and tools in fostering the English proficiency of these multilingual learners by providing personalized, interactive, and motivating opportunities.

### **Conclusion**

This case study illustrates that CALL significantly enhances the engagement and linguistic development of multilingual learners in higher education. The incorporation of CALL tools provides learners with flexible, dynamic, and engaging opportunities to

practice English abilities, according to their varied linguistic origins. Prompt feedback, multimedia materials, and gamified exercises were successful in enhancing these learners' motivation, self-regulation, and communication competence. Furthermore, the collaborative elements facilitated by CALL enhanced the learning experience by fostering peer engagement and social support. These findings underscore how integrating CALL into English language education programs may support the needs of multilingual students.. This study contains limitations that must be recognized. The limited sample size and concentration on a singular institution may restrict the applicability of the findings to wider groups. Furthermore, data were gathered during only two observation sessions, which may not adequately reflect the long-term effects of CALL on language development.

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