

Lecturers' Perceptions of Computer-Assisted Language Learning (CALL) in Higher Education: A Survey of English Lecturers in Palangka Raya

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ABSTRACT

Lecturers' perceptions are crucial for CALL integration in higher education. This study examined lecturers' perceptions of CALL across six dimensions: general perception, competence, barriers, perceived benefits, students' readiness, and CALL tools in Palangka Raya, Indonesia. A survey involved 30 English lecturers from three universities selected through purposive sampling. Data were collected using an 18-item Likert questionnaire adapted from Ismail et al. (2010), with dimension scores ranging from 3–15. General Perception ($M=13.17$) and Perceived Benefits ($M=13.00$) were very high; Competence ($M=11.23$), Students' Readiness ($M=12.53$), and CALL Tools ($M=11.57$) were high; Barriers ($M=9.67$) were moderate. Quantitative data were analyzed and summarized descriptively, while open-ended responses highlighted unstable internet, inadequate facilities, etc. Descriptively, younger lecturers reported higher competence and CALL tool use, while older lecturers reported greater barriers. Overall, lecturers generally hold positive perceptions despite moderate barriers. Universities should invest in infrastructure and professional development to address barriers and support sustainable CALL implementation.

Keywords: *Computer-Assisted Language Learning, Lecturers' Perceptions, Higher Education, English Language Teaching, CALL.*

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INTRODUCTION

The rapid growth of information and communication technology (ICT) has brought critical changes in teachers and learning activities that appeal to teachers to apply technology in the classroom (García-Peñalvo, 2021). This has changed learning to more flexible, accessible, student-centered environments, which are responsive to the needs of 21st-century learning (Bond et al., 2020). In language education, technology has become an integral part of language teaching and learning, supporting learners' communication, collaboration, and digital skills (Lucas et al., 2021).

Computer-Assisted Language Learning (CALL) is one of the most noticeable methods of using technology in a language learning process (Beatty, 2019). The application of computers and digital technologies to support and improve the processes of language teaching and learning is known as CALL (Hubbard & Levy, 2016). As time has passed, CALL has evolved from systems that involved drills to more interactive and communicative ones that encourage learner autonomy and engagement (Godwin-Jones, 2018). It now encompasses various digital resources, including learning management systems, mobile applications, multimedia resources, and online communication platforms, making CALL a broader approach to technology-supported language pedagogy (Chapelle, 2019; Hockly, 2018).

The successful implementation of CALL in higher education largely depends on lecturers, who play a central role in designing and delivering technology-enhanced instruction (Tondeur et al., 2017). The perceptions of lecturers about CALL are important since they

determine the adoption and utilization of technology in the classroom based on beliefs, attitudes, and competencies (Teo, 2019). The Technology Acceptance Model (TAM) suggests that perceived usefulness and perceived ease of use have a strong influence on people's intention to use technology (Scherer et al., 2019). Thus, such perceptions will likely promote successful CALL integration, whereas negative ones can complicate its implementation (Ertmer & Ottenbreit-Leftwich, 2019). Beyond the availability of digital tools, technology integration is also influenced by lecturers' attitudes, technological competence, preparedness, and perceptions of the usefulness of technology (Howard et al., 2021). Therefore, examining lecturers' perceptions provides an important understanding of the conditions that may support or constrain CALL implementation in higher education.

Lecturers' technological and pedagogical competence is another important factor in CALL integration. Such competence involves technical skills, pedagogical knowledge, and designing technology-enhanced learning activities (Voogt et al., 2018). Lecturers who are more digitally competent are more inclined to implement CALL more successfully and imaginatively in the classroom (Bond et al., 2020). Nonetheless, incompetence and a deficit in confidence can be restraining factors to use CALL, which makes ongoing professional growth and training essential (Nikolopoulou, 2020). This relationship can also be understood through the Technological Pedagogical Content Knowledge (TPACK) perspective, which emphasizes that effective technology integration requires the combination of technological knowledge, pedagogical knowledge, and content knowledge. Thus, lecturers need not only technical skills but also the ability to select appropriate digital tools according to language-learning objectives and instructional needs (Lucas et al., 2021).

Although CALL offers various benefits, its implementation may also encounter technological, institutional, and individual barriers, including inadequate infrastructure, limited institutional support, insufficient training, time constraints, resistance to change, and lack of confidence (Ertmer & Ottenbreit-Leftwich, 2019; Scherer et al., 2019). At the same time, CALL can enhance students' motivation, engagement, learning outcomes, autonomy, and opportunities for digital communication and collaboration through interactive and multimedia-based learning (Godwin-Jones, 2018). However, its effectiveness also depends on students' readiness and digital literacy, as well as lecturers' ability to select and implement appropriate technologies (Voogt et al., 2018). Therefore, examining both the perceived benefits and barriers of CALL is important for understanding its sustainable implementation in higher education.

Recent empirical studies have examined teachers' and instructors' perceptions of technology-supported language learning in different educational settings. Saidi & Afshari (2021) investigated EAP instructors' attitudes toward CALL implementation and identified technological and institutional conditions as important considerations. Meristo et al. (2022) examined foreign language teachers' perceptions of TPACK, virtual classroom activities, online self-efficacy, student engagement, and obstacles. Similarly, Timpe-Laughlin et al. (2022) examined teachers' perceptions of spoken dialogue technology for L2 speaking practice. These studies indicate that teachers' perceptions, competence, self-efficacy, and contextual conditions are important considerations in technology-supported language teaching.

However, research specifically examining English lecturers' perceptions of CALL in Indonesian higher education remains limited, particularly in Palangka Raya, Central Kalimantan. To the best of our knowledge, limited research has explicitly examined CALL perceptions among English lecturers in this region, particularly regarding their competencies, perceived challenges, perceived benefits, students' readiness, and digital tool usage. Therefore, the specific perceptions and experiences of English lecturers in this context remain insufficiently explored.

Previous research also suggests that personal and contextual factors may be associated with teachers' digital competence and technology integration (Lucas et al., 2021). However, relatively little attention has been given to age-related patterns in university lecturers' perceptions, competence, perceived benefits, and barriers related to CALL. Age may be

associated with technology self-efficacy, digital experience, and openness to pedagogical change (Prensky, 2001; Scherer et al., 2019). Nevertheless, age should not be assumed to determine technology acceptance or CALL competence. Therefore, this study includes age groups to descriptively examine patterns in lecturers' CALL perceptions across different age categories. Taken together, the literature suggests that CALL integration is influenced by lecturers' perceptions and competence, students' readiness, and institutional support (Howard et al., 2021; Tondeur et al., 2020). Examining these factors from lecturers' perspectives is therefore important for understanding CALL implementation in higher education.

This study contributes empirical evidence from the under-researched context of English higher education in Palangka Raya, Central Kalimantan, by descriptively examining lecturers' CALL perceptions across different age groups. The findings may help identify areas requiring professional development and institutional support. To address these gaps, this paper seeks to explore how lecturers perceive the use of CALL in teaching English. Specifically, the study is guided by the following research questions: (1) How do lecturers perceive the use of CALL in teaching English? (2) What are the lecturers' levels of competence in using CALL tools? (3) What advantages do lecturers perceive in integrating CALL into their teaching practices? (4) What challenges do lecturers encounter when using CALL? (5) What types of CALL tools are commonly used by lecturers in their instructional practices? and (6) How are lecturers' perceptions of CALL descriptively represented across different age groups?

In these questions, the primary aim of this study is to investigate and describe lecturers' perceptions and experiences regarding CALL integration in English language teaching. The objectives of the study are: first, to identify lecturers' overall perceptions; second, to examine their competencies; third, to analyse the perceived benefits; next, to explore the challenges faced by lecturers in implementing CALL; then, to identify the various CALL tools; and the last, to describe lecturers' perceptions of CALL across different age groups.

METHOD

Research Design

This study employed a quantitative descriptive survey design, supplemented by descriptive analysis of responses to two open-ended questions. The study was conducted to examine lecturers' perceptions of the use of Computer-Assisted Language Learning (CALL) in teaching English. A survey design was considered suitable because it enables researchers to gather information about participants' perceptions, attitudes, and experiences systematically (Creswell & Creswell, 2022). The quantitative component was used to describe lecturers' perceptions of CALL across six dimensions covering their general perceptions, lecturers' competence, perceived benefits, barriers, students' readiness, and CALL tools used in teaching (Fraenkel et al., 2019). The responses to the two open-ended questions were reviewed and summarized descriptively to provide supplementary information about the challenges faced by lecturers and their suggestions for improving CALL implementation.

Participants and Setting

This study was carried out at three universities in Palangka Raya, Indonesia, namely Universitas Palangka Raya (UPR), Universitas Islam Negeri Palangka Raya (UIN Palangka Raya), and Universitas Muhammadiyah Palangka Raya (UMPR), particularly within their English Education Study Programs. The participants were lecturers who taught English-related subjects in the selected universities. Purposive sampling was used to select participants who met the study criteria. The participants were selected because they were English lecturers who taught English-related subjects and whose teaching context was relevant to the use of educational technology and CALL in English language teaching. This method ensured that the selected participants were relevant to the research objectives (Etikan et al., 2016). A total of 30 lecturers provided responses that were included in the analysis. The participants were also categorized into age groups for descriptive comparison, consisting of 30–39, 40–49, and 50–59 years. Participant demographic information was limited to age and institutional affiliation

because these were the demographic variables included in the questionnaire. Teaching experience, academic qualifications, and years of experience using educational technology were not collected and therefore were not included in the analysis.

Instrument

The instrument used in this study was a questionnaire adapted from [Ismail et al. \(2010\)](#) and contextualized to the higher education context, particularly focusing on the use of Computer-Assisted Language Learning (CALL). The instrument was contextualized by modifying its wording, terminology, and educational setting for higher education. The demographic section collected information on participants' age and institutional affiliation. Age information was collected as a demographic variable. Participants were grouped into age categories (e.g., 30-39, 40-49, and 50-59) based on the distribution of the collected data to facilitate comparative analysis across age groups.

The questionnaire consisted of 18 closed-ended items measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) to capture participants' perceptions and attitudes (Likert, 1932). The items were divided into six dimensions: (1) general perceptions, (2) lecturers' competence, (3) barriers, (4) perceived benefits, (5) students' readiness, and (6) CALL tools. Each dimension consisted of three items.

In addition, two open-ended questions were included to obtain supplementary information about the challenges and suggestions related to CALL implementation. The questions were: (1) "What challenges do you face in using CALL?" and (2) "What suggestions do you have for improving CALL implementation?" The open-ended questions were included to complement the quantitative findings by providing additional descriptive information about the experiences and views reported by the lecturers.

Validity and Reliability

The questionnaire was adapted from the instrument developed by [Ismail et al. \(2010\)](#) and subsequently contextualized to the objectives and setting of the present study. The adaptation focused on the wording, educational context, CALL-related terminology, and relevance of the items to English lecturers in higher education. No formal expert validation or pilot testing was conducted before the questionnaire was administered. However, item validity was examined empirically using the Pearson product-moment correlation between each item score and the corresponding total score. An item was considered valid when the obtained *r*-value exceeded the critical *r*-value. Therefore, evidence supporting the content relevance of the instrument was based primarily on its adaptation from a previously developed instrument and the alignment of the adapted items with the dimensions and objectives of the present study.

The internal consistency of the questionnaire was assessed using Cronbach's alpha for each of the six dimensions. The reliability coefficients were .600 for general perception, .920 for lecturers' competence, .918 for barriers, .776 for perceived benefits, .814 for students' readiness, and .934 for CALL tools. The general perception dimension showed an alpha coefficient of .600, indicating relatively lower internal consistency than the other dimensions, whereas the other five dimensions demonstrated stronger internal consistency. These results indicate that the items within the dimensions generally showed acceptable to very strong internal consistency for the purposes of the descriptive analysis.

Data Collection Procedure

An online questionnaire carried out with Google Forms was used to collect the data. The participants were provided with the questionnaire link via a messaging platform. Before data collection, the study purpose was explained to the participants and they were assured that their answers would be kept confidential and would not have any other purposes than research. Participation in this study was optional, and the respondents were allowed to

complete the questionnaire at their own convenience. The collection of data was conducted over two weeks.

Data Analysis

The collected data were analysed using IBM SPSS Statistics Version 26. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were employed to summarize the lecturers' perceptions of CALL across the six dimensions examined in this study. The demographic analysis involved using frequency and percentage to describe the characteristics of the respondents, including their institutional affiliation and age groups. This provided an overview of the sample composition. For the perceptual dimensions, mean scores and standard deviations were calculated for each of the six variables. Each variable consisted of three items measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Therefore, the total score for each variable ranged from 3 to 15. The total scores were interpreted using the following criteria: 3.00–5.40 as very low, 5.41–7.80 as low, 7.81–10.20 as moderate, 10.21–12.60 as high, and 12.61–15.00 as very high. The interpretation criteria were based on the classification techniques commonly used in educational research (Sugiyono, 2017; Widoyoko, 2012). The standard deviation was used to indicate the variability of responses within each dimension, with a smaller *SD* indicating more consensus among respondents and a larger *SD* indicating greater diversity of opinions.

Regarding age-based comparisons, descriptive analyses across age groups were conducted to identify potential patterns in lecturers' perceptions, competencies, perceived benefits, and challenges related to CALL use. The age-group analysis was purely descriptive and was not intended to determine statistically significant differences between groups, as the sample size was not sufficient for inferential statistical testing. Lastly, the responses to the two open-ended questions were reviewed and summarized descriptively to provide supplementary information about the challenges faced by lecturers and their suggestions for improving CALL implementation. The responses were used to complement the quantitative findings rather than as a separate formal qualitative analysis.

FINDINGS AND DISCUSSION

Findings

This study was conducted at three universities in Palangka Raya. A total of 30 English lecturers participated in this study through purposive sampling. Descriptive statistics, including frequency, percentage, mean, and standard deviation, were used to summarize the lecturers' perceptions of CALL across the six dimensions examined in this study. The findings are presented in the following tables.

Table 1. Distribution of Respondents by Institution

Institution	Frequency	Percentage
Universitas Palangka Raya	19	63.3%
Universitas Muhammadiyah Palangka Raya	7	23.3%
Universitas Islam Negeri Palangka Raya	4	13.3%
Total	30	100.0%

As shown in Table 1, the majority of respondents were from Universitas Palangka Raya (UPR), accounting for 19 lecturers (63.3%). Meanwhile, 7 lecturers (23.3%) were from Universitas Muhammadiyah Palangka Raya (UMPR), and 4 lecturers (13.3%) were from Universitas Islam Negeri Palangka Raya (UIN Palangka Raya).

Furthermore, respondents were categorized into three age groups. As presented in Table 2, 15 lecturers (50.0%) were aged 30–39 years, 9 (30.0%) were aged 40–49 years, and 6

(20.0%) were aged 50–59 years, providing a descriptive basis for comparing CALL perceptions across age categories.

Table 2. Distribution of Respondents by Age

Age Group	Frequency	Percentage
30–39	15	50.0%
40–49	9	30.0%
50–59	6	20.0%
Total	30	100.0%

Before conducting the descriptive analysis, the validity and reliability of the questionnaire were examined to ensure that the instrument was appropriate for measuring lecturers' perceptions of CALL. The validity test results for the 18 questionnaire items are presented in Table 3.

Table 3. Result of Validity Test for Questionnaire Items

No	Indicator	Variable	<i>r</i> -Calculated	<i>r</i> -Table	Decision
1.	General Perception (V1)	V1.1	0.726	0.3061	Valid
		V1.2	0.765	0.3061	Valid
		V1.3	0.746	0.3061	Valid
2.	Lecturers' Competence (V2)	V2.1	0.965	0.3061	Valid
		V2.2	0.914	0.3061	Valid
		V2.3	0.913	0.3061	Valid
3.	Barriers (V3)	V3.1	0.944	0.3061	Valid
		V3.2	0.929	0.3061	Valid
		V3.3	0.909	0.3061	Valid
4.	Perceived Benefits (V4)	V4.1	0.880	0.3061	Valid
		V4.2	0.791	0.3061	Valid
		V4.3	0.827	0.3061	Valid
5.	Students' Readiness (V5)	V5.1	0.875	0.3061	Valid
		V5.2	0.878	0.3061	Valid
		V5.3	0.813	0.3061	Valid
6.	CALL Tools (V6)	V6.1	0.970	0.3061	Valid
		V6.2	0.894	0.3061	Valid
		V6.3	0.957	0.3061	Valid

An item validity test was conducted to examine whether each questionnaire item showed an acceptable correlation with the relevant construct. The test was conducted using data from 30 respondents. With a significance level of 5% and degrees of freedom (*df*) calculated as $n - 2 = 30 - 2 = 28$ and $\alpha = .05$, the critical value of the correlation coefficient (*r*-table) was 0.3061. All 18 items were valid, with *r*-count values ranging from 0.726 to 0.970, exceeding the critical value. Therefore, all items were retained for subsequent analysis.

Furthermore, the reliability test was conducted to examine the internal consistency of the questionnaire items within each dimension. Cronbach's Alpha was used to assess the internal consistency of the questionnaire. A Cronbach's Alpha coefficient of ≥ 0.60 was

considered an acceptable threshold, particularly for exploratory research and at the subscale level (Govindasamy & Cumming, 2024; Li et al., 2024).

Table 4. Results of the Reliability Test

Variable	Cronbach's Alpha	Reliability Threshold	Decision
General Perception (V1)	0.600	≥ 0.60	Reliable
Lecturers' Competence (V2)	0.920	≥ 0.60	Reliable
Barriers (V3)	0.918	≥ 0.60	Reliable
Perceived Benefits (V4)	0.776	≥ 0.60	Reliable
Students' Readiness (V5)	0.814	≥ 0.60	Reliable
CALL Tools (V6)	0.934	≥ 0.60	Reliable

The results indicate that all six dimensions met the reliability criterion. The general perception dimension obtained a Cronbach's Alpha of 0.600, which met the minimum acceptable threshold of ≥ 0.60 . The lecturers' competence dimension showed a high reliability coefficient of 0.920, while the barriers dimension obtained 0.918. The perceived benefits, students' readiness, and CALL tools dimensions obtained Cronbach's Alpha values of 0.776, 0.814, and 0.934, respectively.

Although all dimensions met the minimum reliability criterion, the general perception dimension showed the lowest Cronbach's Alpha coefficient ($\alpha = 0.600$). This value was exactly at the predefined threshold and therefore indicates acceptable but relatively low internal consistency compared with the other dimensions. This result may be related to the limited number of items in the dimension, as each variable consisted of only three items. Future studies may consider adding more items to the general perception dimension to improve its internal consistency.

Table 5 presents the descriptive statistics of lecturers' perceptions of CALL across the six dimensions. Overall, the findings indicate that lecturers held positive perceptions toward the implementation of Computer-Assisted Language Learning (CALL), with general perception and perceived benefits falling within the very high category, while competence, students' readiness, and CALL tools were categorized as high. The barriers dimension was categorized as moderate.

Table 5. Descriptive Statistics of Lecturers' Perceptions of CALL

Variable	No. of Items	Score Range	Observed Min-Max	Mean	SD	Interpretation
General Perception	3	3-15	11-15	13.17	1.147	Very High
Lecturers' Competence	3	3-15	7-15	11.23	2.176	High
Barriers	3	3-15	6-14	9.67	2.510	Moderate
Perceived Benefits	3	3-15	11-15	13.00	1.313	Very High
Students' Readiness	3	3-15	9-15	12.53	1.525	High
CALL Tools	3	3-15	7-15	11.57	2.373	High

The interpretation of the mean scores was based on the scoring criteria described in the method section. General perception ($M=13.17$) and perceived benefits ($M=13.00$) fell within the 12.61–15.00 interval and were therefore categorized as very high. Lecturers' competence ($M=11.23$), students' readiness ($M=12.53$), and CALL tools ($M=11.57$) fell within the 10.21–

12.60 interval and were categorized as high. Meanwhile, barriers ($M=9.67$) fell within the 7.81–10.20 interval and were categorized as moderate.

The general perception achieved the highest overall mean score ($M=13.17$, $SD=1.147$), indicating that lecturers strongly recognized the importance of CALL in English language teaching. Perceived benefits also obtained a very high mean score ($M=13.00$, $SD=1.313$), demonstrating that lecturers perceived CALL as beneficial for teaching effectiveness, classroom interaction, and students' learning experiences. These findings indicate that lecturers generally recognized both the importance and pedagogical benefits of CALL.

Although general perception and perceived benefits were categorized as very high, lecturers' competence obtained a lower mean score ($M=11.23$, $SD=2.176$), although it remained within the high category. This difference suggests that recognizing the value of CALL does not necessarily mean that lecturers possess the same level of technological competence. The relatively larger standard deviation also indicates variation in lecturers' digital competence and confidence.

The students' readiness dimension obtained a high mean score ($M=12.53$, $SD=1.525$), indicating that lecturers generally perceived students as reasonably prepared to engage with technology-supported language learning. Similarly, CALL tools obtained a high mean score ($M=11.57$, $SD=2.373$), indicating that lecturers reported relatively high use of digital technologies in their teaching. However, the relatively larger standard deviation for CALL tools indicates differences in lecturers' experiences and frequency of technology use.

Although barriers had the lowest overall mean ($M=9.67$, $SD=2.510$), the score remained within the moderate category, indicating that lecturers still experienced several practical challenges despite their generally positive perceptions of CALL. These challenges included unstable internet connectivity, limited technological facilities, technical problems, students' digital readiness, and the time required to prepare technology-supported activities.

Table 6. Descriptive Comparison of CALL Perceptions Across Age Groups (Values are presented as *Mean* (Standard Deviation). N = total number of respondents)

CALL Dimension	30–39 Years ($n=15$)	40–49 Years ($n=9$)	50–59 Years ($n=6$)	Total ($N=30$)
General Perception	13.73 (0.884)	12.78 (1.202)	12.33 (1.033)	13.17 (1.147)
Lecturers' Competence	12.87 (1.356)	10.33 (1.414)	8.50 (0.837)	11.23 (2.176)
Barriers	7.60 (1.242)	11.11 (1.537)	12.67 (1.033)	9.67 (2.510)
Perceived Benefits	13.80 (1.014)	12.44 (1.236)	11.83 (0.753)	13.00 (1.313)
Students' Readiness	13.53 (1.060)	11.89 (1.269)	11.00 (1.095)	12.53 (1.525)
CALL Tools	13.40 (1.183)	10.44 (1.667)	8.67 (1.366)	11.57 (2.373)

Table 6 presents the descriptive comparison of lecturers' perceptions of CALL across three age groups: 30–39, 40–49, and 50–59 years. Overall, lecturers aged 30–39 years reported higher mean scores on most positive CALL dimensions, including general perception ($M=13.73$), lecturers' competence ($M=12.87$), perceived benefits ($M=13.80$), students' readiness ($M=13.53$), and CALL tools ($M=13.40$). In contrast, the 50–59 age group reported lower scores on these dimensions, particularly competence ($M=8.50$) and CALL tools ($M=8.67$). The barriers dimension showed the opposite pattern, increasing from $M=7.60$ among lecturers aged 30–39 to $M=12.67$ among those aged 50–59, indicating greater perceived barriers among the older group.

These descriptive patterns suggest that younger lecturers in the present sample tended to report greater competence and more positive perceptions toward CALL, while older lecturers tended to experience more barriers. This pattern is consistent with previous research suggesting that age and individual characteristics may be associated with technology adoption and digital competence (Scherer et al., 2019; Lucas et al., 2021). However, these findings remain descriptive and should not be interpreted as statistically significant differences or evidence

that age causes differences in CALL perceptions, as no inferential statistical test was conducted.

The open-ended responses were descriptively categorized into recurring themes. Four dominant themes emerged from the lecturers' responses regarding the challenges of and suggestions for improving CALL implementation. The quotations presented below are taken directly from the participants' responses to the open-ended questions.

Challenges in Implementing CALL

Technological Infrastructure

The most frequently reported challenge involved technological infrastructure. Respondents highlighted unstable internet connections, limited internet access, and inadequate access to digital devices as barriers that interrupted CALL implementation. For example, one respondent stated, *"Unstable internet connection often interrupts online learning activities"* (R3). Another respondent mentioned, *"Limited internet access in campus often makes it difficult to fully implemented"* (R6). The issue of access to devices was also identified, as one lecturer reported *"Lack of access to adequate devices among students"* (R9). These responses indicate that infrastructure reliability, including stable connectivity and access to appropriate devices, is an important prerequisite for consistent CALL implementation. Even when lecturers are willing to use CALL, unstable connectivity and limited access to devices may interrupt learning activities and reduce the consistency of technology integration.

Digital Readiness

Another recurring theme concerned students' digital readiness. Lecturers reported differences in students' digital literacy skills and concerns regarding students' use of AI when completing assignments. One respondent stated, *"Some students have limited digital literacy skills"* (R10). Another lecturer reported that *"Students copy paste answers and use AI"* (R1). A further concern was expressed by a respondent who explained, *"some students use CALL to work for their assignment, sometimes these students do not understand what they write for their assignment because they tend to give all of their assignments to be done by AI"* (R12). These responses suggest that successful CALL implementation depends not only on students' ability to use digital technologies but also on their responsible and meaningful use of AI and CALL tools for learning. Limited digital literacy and excessive reliance on AI may reduce the effectiveness of technology-supported learning when students use digital tools without actively engaging with the learning content.

Institutional Support

Several lecturers emphasized insufficient institutional support, particularly in relation to facilities, infrastructure, and support for CALL implementation. One respondent described the challenge as *"Insufficient ecosystem (including facilities and infrastructure) in the university"* (R2). Similarly, another lecturer stated, *"The government should support CALL in T and L process"* (R5). These responses indicate that lecturers perceive institutional support as an important factor in creating an environment that enables effective CALL implementation. CALL implementation cannot depend solely on individual lecturers. Adequate institutional facilities, infrastructure, and technical support are necessary to create conditions in which lecturers can use CALL consistently.

Technical Issues and Time Constraints

Other reported challenges included technical problems, difficulties in handling applications, and the time required to prepare CALL-based activities. One respondent stated, *"Technical problems frequently occur during lessons"* (R4), while another identified *"Network"* and *"Handling the apps"* as challenges (R5). Time constraints were also mentioned, with one lecturer reporting, *"Limited time and hard to design and prepare in the beginning"* (R6). Another respondent explained that CALL can be *"Time-consuming in building and application in the teaching activities"*

(R7). These responses show that the implementation of CALL may require additional preparation time and technical familiarity from lecturers. Therefore, lecturers' positive attitudes toward CALL may not automatically translate into frequent or effective classroom use when technical and workload-related constraints remain.

Although lecturers demonstrated positive attitudes toward CALL, effective implementation remained influenced by infrastructure, institutional support, students' digital competence, technical issues, and preparation time. The responses also highlighted concerns about students' responsible use of AI. Thus, the main challenge was not lecturers' rejection of CALL, but the conditions required for its consistent and meaningful implementation.

Suggestions for Improving CALL Implementation

Regarding suggestions, lecturers consistently recommended improving campus internet infrastructure, providing sufficient technological facilities, and increasing access to digital devices. One respondent suggested, *"Improve campus internet infrastructure and provide backup networks"* (R3). Another recommended *"Good internet access and sufficient tools for students and teachers to use"* (R6). In addition, a lecturer suggested *"Provide more computer labs and lending programs for devices"* (R8). Respondents also emphasized the importance of institutional and technical support. One lecturer recommended *"Establish technical support services for lecturers and students"* (R4). Another suggested *"The provision of sufficient ecosystem (including facilities and infrastructure) in the university"* (R2).

In addition, lecturers highlighted the importance of improving classroom management and instructional practices when using CALL. One respondent suggested, *"Provide clear instructions, align with learning objectives, encourage students' collaboration"* (R1). Another stated that improvement could be achieved through *"how educators manage their classroom using CALL"*, supported by *"self-efforts of said educators and support from the institutions where they teach"* (R7). These responses indicate that effective CALL implementation depends not only on technological facilities but also on lecturers' ability to integrate technology appropriately into teaching and learning activities.

These recommendations indicate that successful CALL implementation requires institutional commitment in addition to positive lecturer perceptions. The open-ended responses particularly emphasize three important areas for improvement: adequate technological infrastructure and access, institutional and technical support, and lecturers' pedagogical management of CALL. At the same time, the concerns regarding students' digital literacy and reliance on AI suggest a need for clearer guidance on the responsible and purposeful use of technology in language learning.

Discussion

The present study found that English lecturers generally held positive perceptions toward CALL implementation, with the highest mean scores found in general perception and perceived benefits. This finding supports previous research emphasizing the pedagogical value of CALL and technology-supported language learning. Godwin-Jones (2018) highlighted the benefits of CALL through digital and interactive technologies, while Lai (2015) reported that technology-supported learning can enhance students' motivation, engagement, and learning outcomes. Bond et al. (2020) further emphasized that digital technology contributes to more flexible and student-centered learning environments. The present findings therefore strengthen previous evidence that CALL can be viewed positively when lecturers recognize its pedagogical usefulness.

An important finding of the present study is the distinction between lecturers' positive perception of CALL and their level of competence. Although lecturers reported very positive perceptions and perceived benefits, competence was comparatively lower, suggesting that positive attitudes do not necessarily correspond to equal levels of technological competence. The relatively higher standard deviation for competence ($SD=2.176$) also indicates variation in lecturers' technological abilities and confidence. Successful CALL integration therefore

requires sufficient technological and pedagogical competence, as emphasized by [Howard et al. \(2021\)](#), [Voogt et al. \(2018\)](#), and [Bond et al. \(2020\)](#). The open-ended responses further support this finding, as some lecturers reported difficulties in handling applications and limited time for designing and preparing CALL-based activities.

Another important finding concerns the barriers encountered during CALL implementation. Although lecturers viewed CALL positively, the open-ended responses revealed persistent challenges related to internet connectivity, limited facilities and digital devices, technical problems, students' digital readiness, and the time required to prepare CALL-based activities. These findings are consistent with previous research. [Ertmer & Ottenbreit-Leftwich \(2019\)](#) identified technological infrastructure, institutional support, training, and time constraints as important barriers to technology integration, while [Tondeur et al. \(2017\)](#) also emphasized that the successful adoption of educational technology depends on appropriate conditions and support. Therefore, the barriers reported by lecturers in Palangka Raya reflect broader challenges in educational technology integration, while the specific emphasis on unstable internet connectivity and limited access to devices reflects the local institutional context.

An additional issue emerging from the open-ended responses was students' use of AI and CALL tools when completing assignments. Some lecturers expressed concern that students may rely excessively on AI without fully understanding the content they submit. While previous CALL research has emphasized access to technology, technological competence, digital literacy, and infrastructure, the present study shows that lecturers are also concerned about students' excessive reliance on AI when completing assignments without fully understanding the content. This finding adds a contemporary dimension to CALL research by showing that effective technology integration increasingly requires not only access and competence but also guidance on the responsible and purposeful use of emerging AI technologies in language learning. This concern is also related to the previous discussion by [Voogt et al. \(2018\)](#), who emphasized the importance of students' readiness and digital literacy in the effectiveness of technology integration.

One of the research gaps identified in the introduction was the limited evidence regarding lecturers' perceptions of CALL in higher education institutions located in developing regions, particularly Palangka Raya. Previous literature has largely discussed technology integration more generally, while relatively limited attention has been given to lecturers' perceptions of CALL in Indonesian higher education and specifically in Palangka Raya. The present findings therefore complement previous studies such as [Bond et al. \(2020\)](#), [Howard et al. \(2021\)](#), and [García-Peñalvo \(2021\)](#) by providing empirical evidence from a specific higher education context in Palangka Raya. The findings demonstrate that lecturers in this context generally perceive CALL positively while simultaneously facing practical constraints related to infrastructure, technical support, and students' digital readiness. Rather than showing resistance toward technology, the responses indicate that lecturers are interested in implementing CALL but require adequate institutional conditions to support its effective use.

Another contribution of this study lies in its descriptive comparison of lecturers across different age groups. Descriptively, younger lecturers tended to show higher scores in some dimensions, particularly competence and CALL tools, while older lecturers tended to report greater barriers. This pattern is related to previous findings by [Scherer et al. \(2019\)](#), who reported that individual characteristics can influence teachers' acceptance and use of educational technology. Similarly, [Lucas et al. \(2021\)](#) found that personal characteristics are associated with teachers' digital competence and technology integration. However, the present study does not establish a statistically significant relationship between age and CALL perceptions because the analysis was descriptive. Therefore, these patterns should be considered as descriptive tendencies rather than evidence of age-based differences.

This study has several limitations that should be considered when interpreting the findings. First, the relatively small sample size of 30 lecturers limits the generalizability of the

findings, particularly for descriptive comparisons across age groups where the number of participants in each group ranged from 6 to 15 lecturers. Second, the distribution of respondents across institutions was not equal, with 63.3% of respondents coming from Universitas Palangka Raya, 23.3% from Universitas Muhammadiyah Palangka Raya, and 13.3% from Universitas Islam Negeri Palangka Raya. Therefore, the findings may reflect the conditions of Universitas Palangka Raya more strongly than those of the other institutions. Third, the study employed descriptive analysis and therefore could not determine causal relationships or statistically significant differences between age groups or institutions. Future research should involve a larger and more balanced sample and employ inferential statistical analyses to examine differences and relationships among relevant variables.

The findings of this study have several practical implications for higher education institutions in Palangka Raya. First, institutional decision-makers need to improve internet infrastructure and provide adequate technological facilities and digital devices, particularly because unstable connectivity and limited access to devices were repeatedly identified by lecturers as challenges. Second, universities should provide continuous professional development and technical training to strengthen lecturers' competence and confidence in using CALL. Third, lecturers need to develop pedagogical strategies that encourage meaningful use of CALL and provide clear guidance regarding responsible use of AI in completing assignments. Finally, institutional technical support should be strengthened to assist lecturers and students when technical problems occur during CALL-based learning activities. These recommendations are consistent with Ertmer & Ottenbreit-Leftwich (2019) and Howard et al. (2021), who emphasized the importance of institutional support, infrastructure, training, and appropriate pedagogical preparation in facilitating technology integration. Therefore, the findings of the present study reinforce previous research suggesting that successful CALL implementation depends not only on lecturers' positive attitudes but also on institutional readiness and adequate support systems.

CONCLUSIONS

Based on the findings, this study concludes that English lecturers in higher education institutions in Palangka Raya generally had positive perceptions of CALL despite moderate implementation barriers. General perception ($M=13.17$) and perceived benefits ($M=13.00$) were categorized as very high, while lecturer competence ($M=11.23$), student readiness ($M=12.53$), and CALL tools ($M=11.57$) were high. Barriers ($M=9.67$) were moderate, mainly involving unstable internet connectivity, limited facilities and devices, technical problems, students' digital readiness, and preparation time. Open-ended responses also indicated concerns about students' digital readiness and excessive AI reliance, emphasizing responsible technology use. Descriptively, younger lecturers tended to report higher competence and CALL tool scores, whereas older lecturers reported higher barrier scores. However, these differences cannot be considered statistically significant because no inferential analysis was conducted. Universities should improve infrastructure, provide technical support, and offer continuous professional development while promoting digital literacy and responsible AI use. Future research should involve larger, geographically diverse samples and inferential or observational methods to improve generalizability.

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