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Teachers' Challenges in Implementing Artificial Intelligence-Assisted Communicative English Learning in Indonesian Elementary Schools

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Abstract:
Implementing Communicative Language Teaching (CLT) in Indonesian elementary English as a Foreign Language (EFL) classrooms remains difficult because of limited exposure to English, low speaking confidence, and scarce resources. Artificial Intelligence (AI) offers new support, yet research has focused on learner outcomes, leaving teachers' practical challenges in communicative use unexamined. This exploratory qualitative study offers a teacher-centered account of the challenges elementary teachers encounter in implementing AI-assisted communicative English learning and the strategies they use to address them. Five English teachers and four students from three elementary schools in Pontianak, West Kalimantan, were purposively selected. Data from semi-structured interviews, fifteen classroom observations, and documentation were analyzed with the interactive model of Miles, Huberman, and Saldana. Participants perceived AI-assisted activities as linked to higher motivation, confidence, participation, and willingness to communicate; these reflect perceptions and observations, not measured gains in communicative competence. Teachers also reported difficulty selecting age-appropriate applications, limited digital literacy, inadequate infrastructure, unstable internet, financial constraints, and concern about overreliance on AI. They responded by adapting AI-generated materials, combining AI with collaborative communicative activities, giving continuous guidance, and treating AI as a complement to, not a substitute for, teaching. The findings are context-specific and not intended for generalization.

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Introduction (مقدمة)

Learning English as a Foreign Language (EFL) in Indonesian elementary schools continues to face challenges that affect classroom quality. Young learners generally have limited exposure to English outside school, low confidence in speaking, and few opportunities to use English for meaningful communication, and these problems are compounded by scarce learning resources and unequal access to educational technology (Daud, 2024; Mulis, 2023). As a result, instruction often remains teacher-centered and focused on vocabulary and grammar rather than authentic communication, which restricts the development of communicative competence (Hakim, 2022).

Communicative Language Teaching (CLT) is widely regarded as an effective approach for developing communicative competence because it promotes meaningful interaction and authentic language use (Astuti & Khoirurrosyid, 2023; Richards, 2006). Its implementation in Indonesia, however, is constrained by cultural, classroom, and resource-related factors (Hakim, 2022). Artificial Intelligence (AI) offers new possibilities through conversational chatbots, pronunciation tools, and adaptive platforms that can act as conversational partners and give immediate feedback (Belda-Medina & Calvo-Ferrer, 2022; Huang et al., 2022). Recent studies have examined AI-mediated speaking practice in relation to speaking performance, willingness to communicate (WTC), and speaking anxiety (Fathi et al., 2024; Wang et al., 2024; Zhang et al., 2024), and Fathi et al. (2024) reported that chatbot-mediated instruction improved learners' speaking skills and WTC.

CLT serves here as the pedagogical lens. Beyond grammar and vocabulary, it values meaningful language use, negotiation of meaning, and social interaction (Astuti & Khoirurrosyid, 2023; Richards, 2006), which in elementary classrooms means role-play, collaborative tasks, and language games supported by scaffolding, in a climate that lowers speaking anxiety and strengthens young learners' WTC (Amalia et al., 2024; Cheung, 2021). AI can support such activities as a conversational partner or pronunciation coach (Dizon, 2020; Hsu et al., 2023; Tram et al., 2024; Wan & Moorhouse, 2024), but it supports rather than replaces the teacher, who selects tools, evaluates AI-generated content, and guides responsible use (Holmes & Tuomi, 2022), and evidence on how conversational AI and teachers collaborate remains limited (Ji et al., 2023).

Integrating AI into elementary classrooms is nevertheless not straightforward. Teachers must adopt new tools while coping with limits in qualified staff, resources, and exposure to English (Daud, 2024), so the value of AI depends on teachers' pedagogical practice as well as on the technology. Studies of Malaysian primary English teachers show the practical side: teachers valued AI for instant feedback, lower speaking anxiety, and lesson materials but reported unreliable internet, limited devices, inaccurate speech recognition for children's voices, insufficient training, and pupils' overreliance on AI (Hisham & Yunus, 2025; Ismail et al., 2025). These studies rely on teachers' reports, and research more broadly has concentrated on learning outcomes, learner psychology, or university students (Huang et al., 2022; Zhang, 2025). Little is known about how elementary teachers select AI tools, adapt AI-generated materials, manage communicative interaction, and prevent overreliance in daily lessons, particularly in Indonesia, or how their reported strategies compare with observed lessons and documentation.

This study therefore explores AI-assisted communicative English learning in Indonesian elementary EFL classrooms by investigating teachers' experiences, the challenges they encounter,

and the pedagogical strategies they employ. Using an exploratory qualitative approach, it addresses two research questions:

RQ1. What challenges do elementary school English teachers encounter in implementing AI-assisted communicative English learning in Indonesian EFL classrooms?

RQ2. What pedagogical strategies do teachers employ to address these challenges and to support AI-assisted communicative English learning?

The study contributes in three ways: a teacher-centered account of the practical challenges of AI-assisted communicative learning in elementary classrooms, rather than of learning outcomes or higher education; triangulation of teachers' and students' accounts with classroom observations and lesson documentation; and evidence from three Pontianak schools that differ in infrastructure and teacher readiness, informing professional development, curriculum implementation, and policy.

Method (منهج)

Research Design and Setting

This study used an exploratory qualitative design to understand teachers' experiences, perceptions, and practices in real classrooms, which suits complex and evolving phenomena such as technology integration in language teaching (Creswell & Poth, 2018). Rather than measuring the effectiveness of AI, it examined how teachers integrate AI into communicative English learning, the challenges they encounter, and the strategies they use. The study took place in three elementary schools in Pontianak, West Kalimantan: SD PLUS Gembala Baik, SD Gembala Baik 1, and SD Santa Monika. These schools were chosen because they had begun using AI-supported applications in English instruction while differing in infrastructure, teacher readiness, and students' digital literacy, capturing a range of implementation conditions.

Participants and Sampling

Purposive sampling was used because the study needed participants with direct experience of AI-assisted communicative teaching and sought depth of information rather than statistical representation (Creswell & Poth, 2018). Teacher participants met a single criterion: they taught English at the participating schools and had prior experience using AI in communicative (CLT-based) teaching. The five teachers (T1–T5) had between one and more than twenty years of experience. Four students (S1–S4) from Grades 4 to 6 who had taken part in AI-assisted activities taught by these teachers served as supporting participants, so that teachers' accounts could be compared with learners' own descriptions. The schools and the students' parents gave permission for the research. Table 1 summarizes participants' characteristics as reported in the interviews.

Table 1. Participant Characteristics

Participant	Role	Teaching Experience / Grade Taught	AI Media Used (self-reported)
T1	English Teacher	4 years; Grade 5 (Age 10–11)	ChatGPT, Gemini, Canva AI
T2	English Teacher	6 years; Grades 4 and 5 (Age 9–11)	Chatbot, speech-recognition app, generative AI (worksheets, interactive stories)

Participant	Role	Teaching Experience / Grade Taught	AI Media Used (self-reported)
T3	English Teacher	More than 20 years; Grade 5 (occasionally Grade 4) (Age 9–11)	Chatbot and basic generative AI tools; reported lower confidence and continued reliance on traditional methods alongside AI
T4	English Teacher	1 year; Grades 4 and 5 (Age 9–11)	Chatbot, speech-recognition app, generative AI (worksheets, quizzes, digital stories)
T5	English Teacher	3 years; Grades 4 and 6 (Age 9–12)	Chatbot, pronunciation app, generative AI (worksheets)
S1	Student Participant	Upper elementary	AI chatbot, translation app, YouTube videos
S2	Student Participant	Upper elementary	AI chatbot, pronunciation/speech app, AI-based interactive games
S3	Student Participant	Intermediate primary	Voice pronunciation application
S4	Student Participant	Senior primary	AI chatbot, interactive dictionary

Note. Participants are identified by codes. T3's profile is included to show a genuine range of confidence and AI adoption among teachers rather than uniform enthusiasm.

Data Collection

Data were collected over seven days (4–6 and 8–11 June 2026) through semi-structured interviews, classroom observations, and documentation. All five teachers and four students were interviewed. Interview guides covered teachers' use of AI in communicative activities, the difficulties they met, and their responses, and students' use of and feelings about AI; interviews were audio-recorded with consent and transcribed verbatim by the researcher. Each teacher was observed in three one-hour lessons (fifteen lessons in total) to see how AI was integrated and how students responded. Observations were non-participant, with field notes on the AI activity used, interaction patterns, scaffolding and supervision, and technical problems. Lesson plans, teaching materials, and examples of AI-assisted activities were collected to check how AI use was planned and how generated content was adapted. Using several sources allowed methodological triangulation (Creswell & Poth, 2018). AI use was teacher-facing (preparing worksheets, quizzes, simplified texts, and stories) or student-facing (chatbot question-and-answer and role-play, pronunciation applications, and digital stories), and student-facing use was always under direct teacher supervision.

Data Analysis and Trustworthiness

Data were analyzed with the interactive model of Miles, Huberman, and Saldana (2014): data condensation, data display, and conclusion drawing and verification. Statements were open-coded line by line, grouped into categories (e.g., "selecting AI applications," "adapting materials," "internet instability"), and organized into themes through matrices that compared participants and data sources and exposed divergent cases such as T3's lower confidence. Because coding was carried out by a single researcher, consistency was supported by reflective notes, returns to the raw transcripts whenever a theme was revised, comparison of codes across participants and sources in the matrices, retained divergent cases, and an audit trail of recordings, transcripts, and coding decisions. Themes were then interpreted against the CLT principles introduced above. Trustworthiness followed the criteria of credibility, transferability, dependability, and confirmability (Ahmed, 2024). Triangulation and member checking

supported credibility; a detailed description of the context supported transferability; the audit trail supported dependability; and grounding themes in participants' statements while retaining divergent cases supported confirmability.

Ethical Considerations

Permission was obtained from each school, and informed parental consent and the children's own assent were obtained for the four student participants. Participation was voluntary, with the right to withdraw at any time. Recordings and transcripts were kept confidential, and participants are identified only by codes (T1–T5, S1–S4). Teachers confirmed that all student-facing AI activities were supervised and age-appropriate.

Results (نتائج)

Interviews, observations, and documentation produced five themes: Theme 1 describes perceptions of AI-assisted learning, Themes 2 to 4 address RQ1 (challenges), and Theme 5 addresses RQ2 (strategies). Quotations carry participant codes and data sources, and each theme is checked against observation and documentation evidence.

Theme 1. Perceived Enhancement of Students' Motivation and Willingness to Communicate

Teachers and students perceived AI as contributing positively to motivation and willingness to communicate in English. Teachers consistently described a more engaging classroom in which chatbots, pronunciation tools, and interactive platforms gave immediate feedback and built confidence before students spoke in front of the class.

> *"Very helpful in making students more actively engaged, motivated to participate in learning" (T1, Interview)*

> *"Most students are enthusiastic because it feels like playing, not formal studying. They are braver to try speaking" (T2, Interview)*

Students described similar experiences: AI helped them practice pronunciation, expand vocabulary, and speak with less anxiety because repeated practice carried no fear of mistakes.

> *"I am braver to speak because AI doesn't get angry if I make a mistake" (S2, Interview)*

Observations supported these reports: students were actively involved in pronunciation practice, vocabulary activities, and simple conversations, and lesson plans showed that teachers deliberately integrated AI into communicative activities. The sources converge on engagement, while confidence rests mainly on self-reports. Because there was no pre-post measurement, these findings indicate perceived and observed engagement, not demonstrated gains in communicative competence.

Theme 2. Challenges in Selecting Appropriate AI Applications

Selecting suitable applications was a major challenge. Many tools were designed for general users, and their language, content, or usability did not fit elementary students, so teachers had to evaluate and adapt AI-generated material before using it.

> *"Not all applications are child-friendly. I have to choose ones that are simple, safe, and age-appropriate" (T2, Interview)*

> *"Students with weak basic ability sometimes find it difficult to follow conversations with the chatbot, so they need more intensive assistance" (T2, Interview)*

Teachers reported reviewing, simplifying, and modifying AI output whose vocabulary or sentence structures exceeded students' proficiency. Observations showed that AI-generated content was rarely used unmodified: teachers simplified instructions, adjusted vocabulary, chose relevant examples, and guided activities step by step. Interviews and observations thus converge, and weaker students' difficulty qualifies Theme 1: AI-assisted practice was not equally accessible to all learners.

Theme 3. Teachers' Digital Literacy and Professional Readiness

All teachers held positive attitudes toward AI but described their skills as still developing; most had learned through self-exploration, online resources, and colleagues rather than formal training. Confidence was not uniform: T3, the most senior teacher, reported comparatively lower confidence and a preference for familiar methods.

> *"I am still lacking confidence. I am more comfortable with the traditional way" (T3, Interview)*

T3 also hoped for special training for senior teachers. Teachers spent extra time exploring applications, writing effective prompts, and checking AI-generated content for accuracy and suitability. Observations showed them remaining actively involved, monitoring AI responses, clarifying vocabulary, and correcting inaccurate output. Digital literacy in practice thus included prompting, judging, and correcting output, and T3's divergent case shows that these demands weighed differently across career stages.

Theme 4. Technological and Financial Constraints

Unstable internet connections frequently disrupted AI-assisted lessons, and limited computers, tablets, or smartphones forced students to share devices, which reduced individual speaking practice. Teachers relied mainly on free applications because subscription-based platforms were beyond the schools' means.

> *"The main challenge is limited devices, internet connection, and readiness to master the technology, especially in schools with unstable internet access and limited devices" (T2, Interview)*

Observations and documentation confirmed that teachers adjusted lessons to the available resources and used AI as a supplementary rather than primary tool so that all students could participate. Constraints thus shaped pedagogy directly: shared devices limited individual speaking practice with AI.

Theme 5. Teachers' Strategies for AI-Assisted Communicative English Learning

Teachers used AI as a complementary tool: selecting appropriate applications, adapting generated materials to students' proficiency, and embedding AI in communicative activities aligned with lesson objectives.

> *"I prepare offline activities as backup, use devices in turns, and choose simple applications" (T2, Interview)*

Teachers were also attentive to the risk of overreliance on AI-generated responses. T5 described deliberately balancing AI with direct interaction.

> *"I always emphasize that AI is only a tool, not a replacement for the teacher… I still accompany the students so they don't only depend on technology" (T5, Interview)*

Observations confirmed that teachers combined AI with pair work, group discussion, role-play, and oral presentations, using AI to stimulate authentic communication rather than replace teacher–student or student–student interaction. Together with the adjustments under Theme 4, these strategies correspond to Themes 2 to 4: adaptation answers unsuitable content, backups and rotation answer infrastructure, and continuous guidance answers weaker learners and dependence.

Read together, Themes 2 to 4 describe the conditions, Theme 5 the teachers' responses, and Theme 1 the perceived result; tensions such as weaker learners' difficulty and T3's lower confidence are retained as divergent cases.

Discussion (مناقشة)

Perceived Engagement and Communicative Practice

From participants' perspective, AI created low-pressure opportunities for the meaningful practice that CLT requires (Astuti & Khoirurrosyid, 2023; Richards, 2006). Reports of greater motivation and confidence are consistent with studies linking AI-mediated practice to speaking skills, WTC, and lower speaking anxiety (Fathi et al., 2024; Ismail et al., 2025; Zhang et al., 2024), and a student's remark that AI "doesn't get angry" suggests that practice without fear of judgment may ease the fear of mistakes. Yet the study observed engagement without measuring proficiency, and weaker learners struggled to follow chatbot conversations, in line with Jeon's (2024) finding that young learners experience chatbot affordances differently. Engagement is thus a plausible condition for communication, not proof of learning.

Preserving Interaction, Supervision, and Dependence

CLT also values negotiation of meaning and interaction among learners (Richards, 2006), and teachers' strategies show how AI was kept from displacing it: AI supplied practice, pronunciation support, and feedback, after which students moved into pair work, group discussion, role-play, and oral presentations. AI thus functioned as a scaffold for human interaction, consistent with the view that it supports rather than replaces the teacher (Holmes & Tuomi, 2022); Tai and Chen (2024) likewise studied individual and paired chatbot interactions, suggesting that grouping around AI is itself a pedagogical choice. Supervision protected learners from errors they may be unable to detect, and teachers' insistence that AI is only a tool reflects an awareness of overreliance also reported in Malaysian primary classrooms (Hisham & Yunus, 2025; Ismail et al., 2025). Supervision, however, depends on teacher time and may be hard to sustain with shared devices, and the study cannot assess dependence itself because students' independent use was not observed.

Age-Appropriate Applications, Teacher Readiness, and Infrastructure

Because many applications were designed for general users, teachers acted as filters, checking language, content, and usability and rarely using AI output unmodified. This shows what responsibility for selecting tools and evaluating AI-generated content (Holmes & Tuomi, 2022) demands in practice: preparation time, judgment about proficiency, and skill in prompting and correcting. Readiness was uneven: although all teachers were positive, most had learned through self-exploration, and T3's lower confidence suggests that readiness depends on experience and support, consistent with reports of insufficient training (Hisham & Yunus, 2025) and of shortages of qualified teachers and resources in Indonesia (Daud, 2024). Unstable internet,

scarce devices, and free applications kept AI supplementary, and offline backups and device rotation were adaptations to conditions that institutions could ease. Implications, to be tested in further research, include practice-based training in selecting, adapting, and supervising AI, guidelines on suitable applications and supervision, and investment in connectivity and devices.

Conclusion (خاتمة)

This study explored AI-assisted communicative English learning in three Indonesian elementary EFL classrooms by examining teachers' challenges and strategies. In the perception of participating teachers and students, AI can support CLT by contributing to motivation, confidence, classroom participation, and willingness to communicate, but this benefit depended on teachers' pedagogical competence, digital literacy, and ability to adapt AI-generated materials to young learners. The main challenges were selecting appropriate applications, limited digital literacy (varying with career stage), inadequate infrastructure, unstable internet, financial constraints, and concern about overreliance on AI. Teachers addressed them by selecting suitable tools, adapting materials, integrating AI into communicative activities, and providing continuous guidance, which underlines their pivotal role in keeping AI a pedagogical resource rather than a substitute for teaching.

Several limitations apply. The sample was small and purposive (five teachers and four students in three schools in one city), so the findings should not be generalized to all Indonesian elementary classrooms. Data collection lasted only seven days and relied mainly on self-reports, so claims about motivation, confidence, and communication reflect perceptions and classroom observation rather than measured learning gains. Coding was done by one researcher without independent inter-coder checking, although triangulation and member checking supported credibility.

Schools should provide ongoing, practice-based professional development on selecting, adapting, and supervising AI for young learners, with particular attention to more experienced teachers, and should adopt guidelines on age-appropriate applications and supervised use; institutions and policymakers should improve infrastructure and access to reliable AI resources. Future research should involve more diverse contexts, larger samples, longer observation periods, and independent or longitudinal measures of communicative competence, learner autonomy, and critical thinking.

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