

The VIPCALL Model for Empowering Pre-Service English Teachers in Islamic Primary School

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Abstract

Islamic primary schools face a dual challenge, i.e. preserving religious pedagogical values while adapting to technology-enhanced learning. This study introduces a culturally based blended-learning model, VIPCALL: Visualization, Interactive, and Personalized Instruction through Collaborative and Assisted Language Learning, for teaching English at Madrasah Ibtidaiyah. The model was implemented during 17 Field Work Practice sessions from October to November 2024 and involved fourteen pre-service English teachers from seven Islamic elementary schools in West Java. Following a design-based research framework, data collection was made through observation, reflective journals, semi-structured interview sessions, students' questionnaires, and artifact analysis. Results indicate that VIPCALL significantly enhanced the creativity, digital literacy, and integration of Islamic values with interactive English learning of pre-service teachers. Students exhibited increased classroom engagement, improved mastery of vocabulary, and higher confidence to communicate in English. Quizizz, augmented-reality flashcards, activities based on Islamic stories, and games to learn vocabulary led to positive learning outcomes and proved adaptable to low-resource contexts. Overall, VIPCALL offers a scalable, culturally responsive pedagogical model grounded in the evidence that connects tradition and innovation, supports Sustainable Development Goal 4 (Quality Education), and offers practical guidance for teacher training and the use of technology in Islamic primary schools.

Keywords: *VIPCALL, blended learning, Madrasah Ibtidaiyah, pre-servis english teaacher, cultural responsive.*

Abstrak

Sekolah dasar Islam menghadapi tantangan ganda, yaitu melestarikan nilai-nilai pedagogis keagamaan sekaligus beradaptasi dengan pembelajaran yang didukung teknologi. Studi ini memperkenalkan model pembelajaran campuran berbasis budaya, VIPCALL—Visualization, Interactive, and Personalized Instruction through Collaborative and Assisted Language Learning—untuk pengajaran Bahasa Inggris di Madrasah Ibtidaiyah. Model ini diimplementasikan selama 17 sesi Praktik Kerja Lapangan (PPL) dari Oktober hingga November 2024 dan melibatkan empat belas calon guru Bahasa Inggris dari tujuh sekolah dasar Islam di Jawa Barat. Mengikuti kerangka penelitian berbasis desain, pengumpulan data dilakukan melalui observasi, jurnal reflektif, sesi wawancara semi-terstruktur, kuesioner siswa, dan analisis artefak. Hasil penelitian menunjukkan bahwa VIPCALL secara signifikan meningkatkan kreativitas, literasi digital, dan integrasi nilai-nilai Islam dengan pembelajaran Bahasa Inggris interaktif pada calon guru. Siswa menunjukkan peningkatan keterlibatan di kelas, peningkatan penguasaan kosakata, dan kepercayaan diri yang lebih tinggi untuk berkomunikasi dalam Bahasa Inggris. Quizizz, kartu flash augmented reality, aktivitas berbasis cerita Islami, dan permainan untuk mempelajari kosakata menghasilkan hasil pembelajaran yang positif dan terbukti dapat diadaptasi ke konteks dengan sumber daya terbatas. Secara keseluruhan, VIPCALL menawarkan model pedagogis yang terukur, responsif secara budaya, dan berlandaskan bukti yang menghubungkan tradisi dan inovasi, mendukung Tujuan Pembangunan Berkelanjutan 4 (Pendidikan Berkualitas), serta menawarkan panduan praktis untuk pelatihan guru dan penggunaan teknologi di pendidikan dasar Islam.

Kata kunci: *VIPCALL, blended learning, Madrasah Ibtidaiyah, calon guru bahasa Inggris, pedagogi responsif budaya.*

INTRODUCTION

English language education at the primary level stands out as a major priority in the 21st century. Globalization is picking up speed. People and ideas move faster than ever, and English has taken center stage as the world's shared language, especially in education, technology, and even the spread of religious knowledge (Rahimi & Oh, 2024). Starting English early really pays off. It helps kids build phonological awareness, boosts their confidence in communication, and sets the stage for strong language skills later in life (Anderson & Putman, 2020). That's why so many countries introduce English at the primary level, even in faith-based schools like Madrasah Ibtidaiyah (MI), which shape not just students' academics, but their moral and spiritual development as well (Asrori et al., 2025). All this points to an urgent need for English teaching models that are not only effective, but also culturally and contextually responsive for young learners.

Even so, teaching English at the primary level isn't smooth sailing. Young learners around the world face the same stubborn issues: low motivation, not enough authentic language input, and too little time devoted to English (Fan et al., 2020). In many classrooms, the approach is still textbook-heavy and teacher-centered, leaving few chances for real interaction, creativity, or meaningful conversation (Ismailov et al., 2021). It gets harder when teachers haven't had training specific to young learners, or when English feels like an afterthought, taught by non-specialists (Hamilton et al., 2024).

Things get even trickier in Islamic primary schools like Madrasah Ibtidaiyah in Indonesia and similar institutions elsewhere (Arif et al., 2025). These schools deal with the same obstacles as their secular counterparts, but they also wrestle with questions about how to blend English with their own curriculum, religious values, and culture (Fan et al., 2020). English often feels foreign, sometimes even secular and teachers have to make sure it fits with Islamic teachings and moral education (Abdelgalil, 2024). This balancing act isn't easy. Many English teachers at MI find themselves holding back, worried about overstepping cultural or ethical lines. This condition often results in instructional practices that prioritize safety and control, thereby constraining pedagogical innovation and reducing opportunities for meaningful and sustained learner engagement (Basit, 2021).

Meanwhile, technology keeps rewriting the rules for education everywhere. Digital literacy, new ways of learning, and tech-savvy teaching aren't optional anymore, they're essential skills for both teachers and students (You & Yu, 2025). In language learning, digital tools, think educational games, augmented reality, interactive platforms—really do make a difference. They help kids pick up new vocabulary, stay motivated, work together, and stay engaged (Hasumi & Chiu, 2024). But in Islamic primary schools, tech integration remains patchy. There's not always enough infrastructure, teachers often lack the right training, and some worry that digital tools might clash with religious or cultural values (Muzakkir et al., 2024).

Most research on blended and tech-enhanced language learning focuses on mainstream primary schools, or on older students in secondary and higher education (A. Kumar et al., 2021). These studies offer solid insights into what digital tools can do, but they usually skip over the unique social and religious context of Islamic schooling (D. Zou et al., 2022). Plus, most existing models focus on language skills and academic outcomes, barely touching on how to weave in values, moral education, or faith-based identity, the heart of MI education (Rahimi & Oh, 2024). This gap makes one thing clear: we need new, context-aware models that bring together language learning, technology, and Islamic values in ways that actually work for these schools.

English language education at the primary level stands out as a major priority in the 21st century. Globalization is picking up speed. People and ideas move faster than ever, and English has taken center stage as the world's shared language, especially in education, technology, and even the spread of religious knowledge (Pavlick, 2023). Starting English early really pays off. It helps kids build phonological awareness, boosts their confidence in communication, and sets the stage for strong language skills later in life (Jia & Hew, 2021). That's why so many countries introduce English at the primary level, even in faith-based schools like Madrasah Ibtidaiyah (MI), which shape not just students' academics, but their moral and spiritual development as well (Asrori et al., 2025). All this points to an urgent need for English teaching models that are not only effective, but also culturally and contextually responsive for young learners.

Even so, teaching English at the primary level isn't smooth sailing. Young learners around the world face the same stubborn issues: low motivation, not enough authentic language input, and too little time devoted to English (Nikolov & Mihaljević Djigunović, 2023). In many classrooms, the approach is still textbook-heavy and teacher-centred, leaving few chances for real interaction, creativity, or meaningful conversation (Vu et al.,

2022). It gets harder when teachers haven't had training specific to young learners, or when English feels like an afterthought, taught by non-specialists (Arif et al., 2025).

Things get even trickier in Islamic primary schools like Madrasah Ibtidaiyah in Indonesia and similar institutions elsewhere. These schools deal with the same obstacles as their secular counterparts, but they also wrestle with questions about how to blend English with their own curriculum, religious values, and culture (Akram et al., 2022). English often feels foreign, sometimes even secular and teachers have to make sure it fits with Islamic teachings and moral education (Abdelgalil, 2024). This balancing act isn't easy. Many English teachers at MI find themselves holding back, worried about overstepping cultural or ethical lines. The result? Safe, cautious teaching that rarely sparks innovation or deep engagement (Basit, 2021).

Meanwhile, technology keeps rewriting the rules for education everywhere. Digital literacy, new ways of learning, and tech-savvy teaching aren't optional anymore, they're essential skills for both teachers and students (Su & Zou, 2022). In language learning, digital tools, think educational games, augmented reality, interactive platforms, really do make a difference. They help kids pick up new vocabulary, stay motivated, work together, and stay engaged (Takona, 2024). But in Islamic primary schools, tech integration remains patchy. There's not always enough infrastructure, teachers often lack the right training, and some worry that digital tools might clash with religious or cultural values (Ismailov et al., 2021).

Most research on blended and tech-enhanced language learning focuses on mainstream primary schools, or on older students in secondary and higher education (Zulkflee et al., 2022). These studies offer solid insights into what digital tools can do, but they usually skip over the unique social and religious context of Islamic schooling (Haleem et al., 2022). Plus, most existing models focus on language skills and academic outcomes, barely touching on how to weave in values, moral education, or faith-based identity, the heart of MI education (Haleem et al., 2022). This gap makes one thing clear: we need new, context-aware models that bring together language learning, technology, and Islamic values in ways that actually work for these schools.

METHODS

This study developed, implemented, and refined the VIPCALL model for English teaching in Madrasah Ibtidaiyah using the Design-Based Research (DBR) methodology. DBR was used because it enables researchers to design and study pedagogical innovations in the authentic classroom setting where theory, practice, and refinement are dynamically iterative (McKenney, 2018). This approach is especially suited to contexts where cultural responsiveness, technological integration, and teacher development need to align; hence, it positions VIPCALL as a model that is both practically grounded and theoretically generative.

The research design was informed by four DBR stages as proposed by McKenney & Reeves (2021). First, there was the context and needs analysis that identified challenges related to English teaching, digital readiness, and religious-cultural integration within Islamic schools. Secondly, the second stage focused on the design of VIPCALL lesson plans and digital media, the integration of Islamic narratives, and multimodal learning tools. The

third stage entailed implementation and iterative testing across seventeen PPL sessions, where pre-service teachers tried out the model while researchers gathered feedback for refinement. The fourth and last stage is that of reflection and documentation, where empirical insights were synthesized to further strengthen the model and provide implications for teacher education and the policy of Islamic schools. VIPCALL is introduced not only as an online learning tool but also as a culturally responsive blended-learning framework, specifically designed to empower pre-service teachers while supporting English learning in faith-based primary schools—an area in which empirical models remain limited.

The implementation followed the DBR cycle across four major phases (Burr & Degotardi, 2024). Pre-implementation involved preparing the pre-service teachers through workshops on the principles of VIPCALL, the operation of the digital tool, and culturally responsive lesson design. At this stage, they designed lesson plans that integrated AR flashcards, interactive games, Islamic story-based vocabulary tasks, and Quizizz quizzes. The implementations were done during 17 sessions of FWP in October-November 2024. Every session involved the five pillars of VIPCALL: visualization, interactivity, personalization, collaboration, and assisted language learning. The activities included telling stories in groups, pronunciation games, vocabulary challenges, AR-enhanced recognition, and song-based learning designed for Islamic themes. Researchers observed classes, documented interactions, and monitored the implementation of VIPCALL components. Iteration and refinement then took place continuously throughout the PPL period. Modifications in pacing, selection of material, and activity sequencing were informed by the continuous feedback from mentor teachers, classroom observations, and reflective journals (Ahearn, 2024). In this iterative process, the model adapted to technological limitations, class size variations, and students' cultural expectations (Dritsas & Trigka, 2025).

The participants consisted of three groups with different educational roles: the first group consisted of fourteen pre-service English teachers, S1–S14, from a state Islamic university; the students had completed their coursework in language pedagogy and educational technology. They were assigned to seven different *Madrasah Ibtidaiyah* (MI1–MI7) placed across rural West Java, enabling the testing of the model under various infrastructural and socio-cultural contexts. The second group consisted of Grade 4-6 pupils, about 25 at each school, aged 9–12 years. These learners represented varied levels of English proficiency and classroom behaviors to further enrich insight into VIPCALL's applicability for a broad range of learning profiles. A third group of seven mentor teachers, which included school principals, monitored daily teaching, observed implementation fidelity, and offered evaluative feedback. Their input helped ensure the model was consistent with the culture of the school and the instructional expectations (See et al., 2022).

This study's use of various data collection techniques ensured methodological triangulation and increased the trustworthiness of findings, such as lesson plans and media, observation checklists, reflective journals, learning artifacts, interviews, and questionnaires. The combination of lesson plans, observation checklists, reflective journals, learning artifacts, interviews, and questionnaires was used in this study to capture the process and outcomes of implementing the VIPCALL model. These together evaluated teacher creativity and growth, classroom delivery quality, and student engagement and learning, besides addressing the usability, cultural alignment, and sustainability of the model in Islamic

school contexts (Adera, 2025). All instruments underwent expert validation and a pilot test involving three ELT specialists, with strong consistency: Cohen's $\kappa = 0.89$.

To address the concerns of the reviewers, this study used specific and detailed indicators to assess both teacher empowerment and student engagement. Table 1 presents the operational indicators.

Table 1. Indicators for Measuring Teacher and Student Improvement

Construct	Indicators	Measurement Method
Teacher Empowerment	Creativity in lesson design; digital tool competency; responsiveness to student needs	Rubric scoring; observation frequency; journal coding
Active Participation	Rising hands; volunteering answers; group work involvement; quiz attempts; speaking turns	Frequency counts per session; observation checklist
Engagement	Attention, enthusiasm, interaction, emotional responses	Field notes; video-based reflection; affective ratings
Learning Outcomes	Vocabulary mastery; pronunciation accuracy; task completion quality	Pre-post quiz scores; artefact analysis; rubric rating

Teacher empowerment, student participation, engagement, and learning outcomes were measured by clearly defined indicators through rubrics, observation frequencies, field notes, quizzes, and artefact analysis (Possaghi & Papavlasopoulou, 2025). Such combined methods presented a holistic picture of how VIPCALL influenced the teaching practices, student behaviors, and overall language learning performance in the classroom. This section helps clarify how "active participation" was measured: the observers measured frequencies of hand-raising, initiations of responses, participation in group tasks, and the number of speaking turns per learner (Diaz et al., 2024). Field notes captured qualitative descriptions of student behaviour, such as "enthusiasm, reluctance, or peer interactions" (Huang et al., 2025).

A mixed-method approach was employed to analyse the data (Taherdoost, 2022). Quantitative data included quiz scores and survey responses; these were analysed using descriptive statistics to gauge learning gains and trends in engagement. Qualitative data were obtained through interviews, reflective journals, and observation notes and analysed with thematic coding, comprising systematic categorization and pattern identification and triangulation to ensure analytical rigor. Figure 1 shows an overview of the qualitative analysis workflow, depicting how data moved from collection to coding and thematic interpretation.

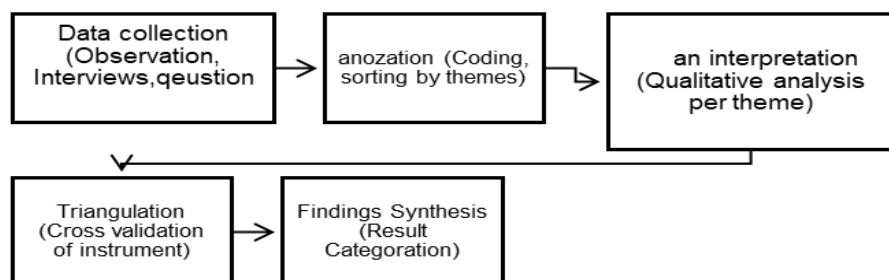


Figure 1. The Data Analysis Workflow

To enhance transparency, Table 2 summarizes the sources and analytical techniques used.

Table 2. Data Sources and Analysis Methods

Data Source	Type	Analysis Technique
Classroom Observations	Qualitative	Thematic coding; frequency mapping
Reflective Journals	Qualitative	Narrative analysis; interpretive coding
Student Work Samples	Mixed	Descriptive statistics; rubric-based scoring
Interviews	Qualitative	Code clustering; thematic analysis
Lesson Plans & Media	Qualitative	Content analysis for model alignment

This study used multiple data sources, including observations, journals, interviews, student work, and lesson documents to capture both the processes and outcomes of implementing VIPCALL (Tundreng et al., 2025). Nii Laryeafo and Ogbewe (2023) said that ethical approval was obtained from the university's institutional review board. Informed consent forms were signed by all participants. Anonymity was ensured by using coded identifiers (S1-S14; MI1-MI7). Data were secured, used solely for research purposes, and analyzed under ethical guidelines for mixed-method research.

RESULTS

This section looks at what the study found about the three main research questions. Using data from classroom observations, student assessments, teachers' reflections, field notes, and mentor feedback, I'll show how the VIPCALL model strengthens pre-service teachers, gets students more involved, and improves English learning. At the same time, I'll touch on the challenges that come up in Madrasah Ibtidaiyah. The discussion draws on recent scholarship on technology-enhanced language learning, culturally responsive teaching, and teacher development (Daly-Smith et al., 2021).

The data point to a clear boost in pre-service teachers' skills, creativity, and digital fluency after 17 sessions with VIPCALL. Table 3 shows steady growth, especially in teachers' confidence with digital tools, creative lesson planning, and a shift toward student-centred teaching. This fits with earlier research showing that hands-on, multimodal teaching helps teachers become more adaptable and innovative (Zein et al., 2020). The results also back up the idea that real growth in professional skills comes from repeated practice, not just one-off workshops (Ćirić Ognjenović, G., 2024).

Table 3. Teacher Candidate Empowerment Across Implementation Stages

Indicator	Early Phase (Meetings 1–3)	Mid Phase (Meetings 8–10)	Final Phase (Meetings 15–17)
Confidence in using digital tools	3 of 14 teachers	10 of 14 teachers	13 of 14 teachers
Creativity in designing activities	2 of 14 teachers	8 of 14 teachers	14 of 14 teachers
Student-centered teaching orientation	4 of 14 teachers	9 of 14 teachers	14 of 14 teachers

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Teachers' own reflections drive this point home. One wrote, "I feel more able to create interactive materials now." That kind of comment shows a jump in confidence and a sense of ownership, echoing findings by Yu & Wang (2025), who argued that working directly with digital tools gives teachers the confidence to experiment in class. Notably, these teachers managed to weave Islamic values into their digital lessons, proving that creativity with technology can go hand in hand with cultural and religious priorities. That's important, since earlier studies worried that digital innovation might clash with the values of religious schools (Rahimi & Oh, 2024).

Table 4. Student Engagement Before and During VIPCALL Implementation

Engagement Aspect	Pre-VIPCALL (%)	During VIPCALL (%)
Active participation (hand-raising, volunteering)	45%	85%
Voluntary responses	30%	78%
On-task behavior	58%	89%

One of the most striking shifts was the move from teacher-led to student-centred classrooms. By the end, every pre-service teacher led collaborative activities, games, and communication tasks. This transformation shows that technology, when paired with reflection, does more than just deliver content; it sparks real change in teaching practices (Al- et al., 2023). In Madrasah Ibtidaiyah, where English lessons have traditionally relied on rote memorization and tight control, this is a big deal (Anwar et al., 2020).

The second main finding is about how VIPCALL affected student engagement. Table 4 shows clear jumps in participation, voluntary responses, and students staying on task. This lines up with global research highlighting how interactive and gamified classrooms boost young students' focus, motivation, and willingness to participate (Zou et al., 2025). VIPCALL's visual and interactive features, think AR flashcards or Quizizz competitions, turned the classroom into a lively, engaging space.

During observations, students who used to hang back started volunteering answers and working with classmates much more. That fits with (Esteban, 2024) pointed that gamified learning helps kids feel less anxious and more open to speaking up. Plus, weaving in storytelling and local values made the lessons resonate with students' backgrounds, which reinforces how important it is to use culturally familiar content to keep students engaged (Yip & Xu, 2024; Daly-Smith et al., 2021). In Islamic primary schools, where character education matters deeply, this cultural connection seems to give classroom activities an extra motivational boost.

The engagement results back up sociocultural theories of language learning, those that say real progress happens through interaction, meaningful participation, and context (Abbasi et al., 2024). VIPCALL's design didn't just hand students' tasks; it gave them space to work

together, sort out meaning, practice pronunciation, and build sentences as a group. Instead of repeating what's already known, this research pushes things forward. It shows you can bring technology-driven collaboration into faith-based primary classrooms and still respect the school's core values. Engagement is one thing, but the gains in English learning go further. Table 5 tells the story: students picked up a lot more vocabulary, got better at building sentences, and spoke up more often. These findings match earlier studies, when kids get multimodal input and lots of hands-on practice, their vocabulary sticks, and they actually use the language (Wang et al., 2021b). The vocabulary scores jumped by 28 points, which points to the power of visual cues and real-life practice, especially for younger students (Norrie et al., 2024).

Table 5. Summary of Student Learning Outcomes

Learning Indicator	Pre-Test Average	Post-Test Average	Improvement
Vocabulary mastery	58	86	+28 points
Sentence formation task	52	80	+28 points
Average speaking turns per student	1.3	3.7	+185%

The bump in how often kids spoke matters a lot in primary EFL classrooms, where kids usually don't get enough chances to use English out loud. VIPCALL wove speaking tasks into games, stories, and group activities. That wasn't just fun, it lowered students' anxiety about making mistakes and made them more willing to take risks (Hossain, 2024a). Other researchers have said the same: when you create a supportive, low-pressure space, children are more likely to join in and talk (Sparks, 2021). Another key piece is the way Islamic stories and familiar moral themes were woven into lessons. When language tasks draw on what's meaningful in students' lives, they pay more attention and remember more (Müller & Mildenberger, 2021). Students connected with the material both cognitively and emotionally. This study makes the case for culturally responsive blended learning and moves beyond the usual focus on secular schools (Hossain, 2024b).

Table 6. Challenges During VIPCALL Implementation

Challenge	Description	Adaptation Strategy
Limited internet connectivity	Occasional disruptions, especially in MI5 and MI7	Use offline AR media, printed cards, and pre-downloaded videos
Classroom overexcitement	Students excessively excited by digital games	Establish class rules, structured group roles, pacing adjustments
Cultural alignment	Some songs/videos not suitable for Islamic context	Replace with Islamic story media and value-aligned vocabulary

Even with these successes, bringing VIPCALL into classrooms wasn't always smooth. Table 6 lays out the main challenges: spotty internet, students getting overly excited, and the need to keep everything in line with local culture. These aren't unique schools in developing regions face the same roadblocks with technology. Teachers had to stay on their toes and be ready to switch between online and offline activities, showing why flexible, hybrid approaches matter. Classroom overexcitement, particularly during game-

based activities, required careful classroom management and structured routines. Tekir (2025) emphasizes that while gamification enhances motivation, it must be accompanied by clear rules and pacing to prevent cognitive overload and behavioural disruption. The adaptation strategies employed by pre-service teachers in this study, such as role assignment and activity sequencing, demonstrate growing pedagogical maturity and align with best practices in interactive learning design (Philippe et al., 2020).

Cultural alignment stands out as a real challenge, especially for Islamic schools trying to select digital content that fits their values. Teachers often find global media at odds with local religious norms, so they end up modifying or replacing a lot of materials. (Chekour et al., 2024) argued the same thing, teachers have to actively shape these resources, not just use them as they are. Here, VIPCALL's flexibility really shines. Its design lets teachers tweak and refine content through each DBR cycle, adapting as they go (McKenney & Reeves, 2021).

Looking at the bigger picture, these findings show what makes VIPCALL unique. It's not just another blended learning model or a new tech tool. VIPCALL weaves together visualization, interactivity, personalization, and cultural responsiveness into one clear approach (Abdelgalil, 2024). It works in the classroom, sure, but it also helps teachers grow professionally, giving them space and structure to reflect and practice. This answers a gap that earlier research pointed out about pre-service teacher education (Tondeur et al., 2024).

Still, there are some real-world hurdles. VIPCALL relies on decent tech infrastructure, ongoing mentoring, and a steady supply of materials that fit the cultural context. Adapting digital resources takes time and effort, and schools need institutional support here, shared repositories and systems designed for Islamic education would help a lot (Syafii et al., 2022). These challenges set the stage for future research, like testing how scalable the model is and tracking teacher and student growth over time. All in all, VIPCALL shows real promise both in theory and in practice. It deepens our understanding of culturally responsive blended learning in faith-based settings (Española & Ouano, 2024). On the ground, it's a practical, research-backed way to boost English teaching and learning in Madrasah Ibtidaiyah (Basit, 2021). With the right infrastructure and professional support, VIPCALL could work well in other similar educational contexts too.

Let's look at how these findings fit with the three research questions and where they stand in the wider conversation on technology-enhanced language learning, teacher development, and culturally responsive teaching in both primary and Islamic education (Nigar & Kostogriz, 2024). Instead of just repeating numbers, this section digs into why the VIPCALL model actually worked in practice, what that means for real classrooms, and where it ran into limits at Madrasah Ibtidaiyah.

The first question asked how VIPCALL empowered pre-service English teachers during their practicum. The answer is clear: VIPCALL made a real difference. Teachers grew more confident in their teaching, got more creative, and improved their digital skills, especially because VIPCALL kept them actively involved through visualization, interactive lessons, and personalized approaches. This lines up with earlier studies showing that teachers develop digital pedagogy best when they practice it in real classrooms, not just in theory or coursework (Ehiyazaryan-White, 2025). The Design-Based Research cycles built

into VIPCALL gave these teachers room to experiment, reflect, and adjust their strategies, which supported steady professional growth (Tinoca et al., 2022).

One key change stood out: teachers moved from a teacher-centered approach to a more student-centered one. That's a big deal in Madrasah Ibtidaiyah, where teachers usually stick to directing the class, focusing on memorization, and relying heavily on textbooks (Rönnberg et al., 2021), VIPCALL changed that. By bringing in group work, interactive games, and structured conversations, it helped teachers rethink what their role could be. This supports what Ismailov et al. (2021) and Asudani et al. (2023) have said technology only transforms education when it reshapes how teachers think about teaching, not just when they add gadgets to old routines.

But there's more. Teacher empowerment here wasn't just about mastering tech. It also meant becoming more culturally and morally attuned in their teaching. These pre-service teachers learned to weave Islamic values into English lessons: using stories, value-driven vocabulary, and digital media that matched their ethical framework (Romero-Ivanova et al., 2021). This tackles a long-standing worry in Islamic education, where some see technology as clashing with religious identity (Akram et al., 2022). The findings here push back on that idea. With the right instructional model, digital pedagogy can reflect and enrich cultural identity, not threaten it (Li et al., 2021).

The second research question digs into how VIPCALL shapes students' engagement, participation, and learning habits. Results show clear and meaningful gains across behavioral, cognitive, and affective engagement. These findings line up with earlier work pointing out just how motivating interactive, multimodal learning can be for young language learners (Takona, 2024). When teachers used visual-rich lessons and game-like activities, students who used to sit back started taking part, even those who often kept quiet before (Abdul Ghani et al., 2022).

Looking at this through a sociocultural lens, it makes sense. VIPCALL's design leans heavily on collaboration and support students work together, solve problems as a group, and get real-time help practicing their speaking. It all echoes sociocultural theories, which stress that learning happens best when it's social, shared, and meaningful (Hill & Smith, 2023). The takeaway: young learners thrive when they're in environments where language comes alive through real interaction and context (Sigurjónsdóttir & Nowenstein, 2021).

Culture mattered here, too. The kids responded well to English tasks that included Islamic stories, moral themes, and visuals that felt familiar. This isn't just a nice touch, it's a motivator. Daly-Smith et al. (2021) argued that culturally responsive teaching keeps kids engaged because it affirms who they are and why what they're learning matters. Unlike many studies from secular settings, this research shows that engagement in Islamic primary schools jumps when new tech fits with school values instead of clashing with them (Rahimi & Oh, 2024).

VIPCALL didn't just get students participating more, it also boosted their English skills, especially vocabulary, sentence building, and how often they spoke up. These improvements match what other researchers have found: when young learners get information in lots of ways seeing it, hearing it, moving with it, they remember words better and start using them sooner (Yip & Xu, 2024). The interactive, repetitive tasks seemed to strengthen the link between forms and meanings, which is key at this stage (Bellini, 2022).

One result stands out: students spoke up a lot more often. In primary EFL classrooms, kids usually don't get much chance to practice speaking (Duran et al., 2021). VIPCALL changed that by wrapping speaking in playful, low-pressure activities. Students felt less anxious and more willing to try. This fits with research by Nikolov and Mihaljević Djigunović (2023), who highlight the power of supportive, emotionally safe classrooms for encouraging kids to speak. The cultural side played a role in learning outcomes too (Hossain, 2024b). When English phrases linked back to familiar moral stories, students caught on faster and remembered more. Kulmanova et al. (2022) argue that language learning works best in religious settings when you blend linguistic goals with value education, not treat them as separate tracks.

The third question looked at what got in the way of VIPCALL working smoothly. Despite the big wins, there were real hurdles: spotty internet, classrooms getting a bit too rowdy during games, and some digital materials not quite fitting the local culture (Bizami et al., 2023). These problems echo what other technology-in-education studies have found, especially in schools with fewer resources (You & Yu, 2025). When the internet drops, teachers need blended approaches that don't fall apart offline.

Excitement in class is great, but too much can lead to chaos. Gamification walks a fine line, if it's not well planned, it can overwhelm or distract students (Tekir, 2025). Teachers coped by assigning roles and pacing activities, showing growing skill at balancing engagement with discipline. This underlines why classroom management needs to be front and center in digital teaching training (Morshedian et al., 2023). The struggle to keep digital content culturally aligned is a reminder that technology isn't neutral. Teachers often had to tweak or swap out materials, backing up the argument from (Thornhill-Miller et al., 2023): real cultural responsiveness means teachers stay actively involved, not just passive users of whatever pops up online.

CONCLUSION

The model, therefore, constitutes a very important pedagogic innovation in English teaching at *Madrasah Ibtidaiyah* that is culturally located, integrated with technology, and pedagogically coherent, supporting teacher development and student learning. Its five elements: visualization, interactivity, personalization, collaboration, and active learning, not only improved the confidence, creativity, and digital competence of pre-service teachers but also ensured meaningful improvements in students' engagement, motivation, and linguistic performance. The iterative DBR approach allowed continuous refinement of the model, showing that even culturally responsive digital pedagogy can be fitted into resource-poor Islamic school contexts. The results further underlined the novelty of VIPCALL's integration of Islamic values with multimodal learning tools, thus filling the gap that has been missing within faith-based digital pedagogies. However, the model's implementation also revealed practical limitations: infrastructural constraints, continuous mentoring, and careful selection or customization of culturally appropriate media, which must be reckoned with in future scaling. Despite these challenges, VIPCALL provides a promising, flexible blueprint guiding teacher training, curriculum development, and policy initiatives with which to enhance digital literacy and language learning in Islamic primary education. Further research will apply it with larger cohorts, study its long-term learning impact, and

create a repository of Islamic-aligned digital resources that can further support its sustainable implementation.

REFERENCES

Abbasi, M., Ghamoushi, M., & Mohammadi Zenouzagh, Z. (2024). EFL learners' engagement in online learning context: development and validation of potential measurement inventory. *Universal Access in the Information Society*, 23(3), 1467–1481. <https://doi.org/10.21043/qijis.v7i1.4809>

Abdelgalil, R. (2024). The Impact of Artificial Intelligence on the Life of New Muslims in Learning Settings: Challenges and Opportunities. *Business Sustainability with Artificial Intelligence (AI): Challenges and Opportunities: Volume 1*, 3–14. https://doi.org/10.1007/978-3-031-71526-6_1

Abdul Ghani, A. S., Abdul Rahim, A. F., Yusoff, M. S. B., & Hadie, S. N. H. (2022). Developing an interactive PBL environment via persuasive gamify elements: a scoping review. *Research and Practice in Technology Enhanced Learning*, 17(1). <https://doi.org/10.1186/s41039-022-00193-z>

Akram, H., Abdelrady, A. H., Al-Adwan, A. S., & Ramzan, M. (2022). Teachers' Perceptions of Technology Integration in Teaching-Learning Practices: A Systematic Review. *Frontiers in Psychology*, 13(June), 1–9. <https://doi.org/10.3389/fpsyg.2022.920317>

Al-, M. A., Mostafa, S., Garry, A.-E., Tan, W.-H., & Ooi, K.-B. (2023). *Current and Future Trends on Intelligent Technology Adoption* (Vol. 1128). <https://link.springer.com/10.1007/978-3-031-48397-4>

Anderson, S. E., & Putman, R. S. (2020). Special Education Teachers' Experience, Confidence, Beliefs, and Knowledge About Integrating Technology. *Journal of Special Education Technology*, 35(1), 37–50. <https://doi.org/10.1177/0162643419836409>

Anwar, K., Asari, S., Husniah, R., & Asmara, C. H. (2020). Students' Perceptions of Collaborative Team Teaching and Student Achievement Motivation. *International Journal of Instruction*, 14(1), 325–344. <https://doi.org/10.29333/IJI.2021.14119A>

Arif, M., Abd Aziz, M. K. N., & Ma'arif, M. A. (2025). A Recent Study on Islamic Religious Education Teachers' Competencies in the Digital Age: A Systematic Literature Review. *Journal of Education and Learning (EduLearn)*, 19(2), 587–596. <https://doi.org/10.11591/edulearn.v19i2.21311>

Asrori, M., Asy'arie, B. F., Akhirudin, Yusup Sofian, G., Syakir Hidayat, A. F., Suja, A., & Roibin. (2025). Islamic educational and cultural values in Indonesian puppetry art: a systematic literature review. *Cogent Education*, 12(1), 2490445. <https://doi.org/10.1080/2331186x.2025.2490445>

Asudani, D. S., Nagwani, N. K., & Singh, P. (2023). Impact of word embedding models on text analytics in deep learning environment: a review. *Artificial Intelligence Review*, 56(9), 10345–10425. <https://doi.org/10.1007/s10462-023-10419-1>

Basit, A. (2021). Rethinking the Quality Culture of Indonesian Madrasa in the Global Era. *International Journal of Social Science and Religion (IJSSR)*. <https://doi.org/10.53639/ijssr.v2i3.40>

Bellini, M. (2022). Interactive digital narratives as complex expressive means. *Frontiers in Virtual Reality*, 3, 854960. <https://doi.org/10.3389/frvir.2022.854960>

Bizami, N. A., Tasir, Z., & Kew, S. N. (2023). Innovative pedagogical principles and

technological tools capabilities for immersive blended learning: a systematic literature review. *Education and Information Technologies*, 28(2), 1373–1425. <https://doi.org/10.1007/s10639-022-11243-w>

Chekour, M., El Morabit, N., Benqassou, I., Lechhab, A., El-Hars, F., & Hafid, M. M. (2024). Integrating Blended Learning in Teacher Training: A Comprehensive Review. *2024 Mediterranean Smart Cities Conference (MSCC)*, 1–4. <https://doi.org/10.1109/mscc62288.2024.10697052>

Ćirić Ognjenović, G. (2024). The Relationship Between Multiple Intelligences and Success in Learning English as A Foreign Language. *Facta Universitatis, Series: Teaching, Learning and Teacher Education*, 013. <https://doi.org/10.22190/futlte240126003c>

Daly-Smith, A., Morris, J. L., Norris, E., Williams, T. L., Archbold, V., Kallio, J., Tammelin, T. H., Singh, A., Mota, J., & von Seelen, J. (2021). Behaviours that prompt primary school teachers to adopt and implement physically active learning: a meta synthesis of qualitative evidence. *International Journal of Behavioral Nutrition and Physical Activity*, 18(1), 151. <https://doi.org/10.1186/s12966-021-01221-9>

Diaz, P., Hrastinski, S., & Norström, P. (2024). How teacher educators use response systems—an interview study. *Interactive Learning Environments*, 32(7), 3652–3664. <https://doi.org/10.1080/10494820.2023.2187423>

Duran, C., Aktay, E. G., & Kuru, O. (2021). Improving the speaking skill of primary school students instructed in a multigrade class through cartoons. *Participatory Educational Research*, 8(4), 44–63. <https://doi.org/10.17275/per.21.78.8.4>

Ehiyazaryan-White, E. (2025). Exploring opportunities for dialogic teaching within the genre pedagogy teaching and learning cycle in primary classrooms. *Language and Education*, 1–21. <https://doi.org/10.1080/09500782.2025.2504462>

Espaňola, R., & Jerome A. Ouano. (2024). Understanding Motivation Loss and Behavioral Disengagement of Tertiary Students in Flexible Learning: A Self-Determination Theory Perspective. *Malaysian Journal of Learning and Instruction*, 21(1), 217–247. <https://doi.org/10.32890/mjli2024.21.1.8>

Esteban, A. J. (2024). Theories, Principles, and Game Elements that Support Digital Game-Based Language Learning (DGBLL): A Systematic Review. *International Journal of Learning, Teaching and Educational Research*, 23(3), 1–22. <https://doi.org/10.26803/ijlter.23.3.1>

Fan, M., Antle, A. N., & Warren, J. L. (2020). Augmented Reality for Early Language Learning: A Systematic Review of Augmented Reality Application Design, Instructional Strategies, and Evaluation Outcomes. *Journal of Educational Computing Research*, 58(6), 1059–1100. <https://doi.org/10.1177/0735633120927489>

Haleem, A., Javaid, M., Qadri, M. A., & Suman, R. (2022). Understanding the role of digital technologies in education: A review. *Sustainable Operations and Computers*, 3(May), 275–285. <https://doi.org/10.1016/j.susoc.2022.05.004>

Hamilton, C., Schulz, J., Chalmers, H., & Murphy, V. A. (2024). Investigating the substantive linguistic effects of using songs for teaching second or foreign languages to preschool, primary and secondary school learners: A systematic review of intervention research. *System*, 124, 103350. <https://doi.org/https://doi.org/10.1016/j.system.2024.103350>

Hasumi, T., & Chiu, M. S. (2024). Technology-enhanced language learning in English language education: Performance analysis, core publications, and emerging trends.

Cogent Education, 11(1). <https://doi.org/10.1080/2331186X.2024.2346044>

Hill, J., & Smith, K. (2023). Visions of blended learning: identifying the challenges and opportunities in shaping institutional approaches to blended learning in higher education. *Technology, Pedagogy and Education*, 32(3), 289–303. <https://doi.org/10.1080/1475939X.2023.2176916>

Hossain, K. I. (2024a). Literature-based language learning: Challenges, and opportunities for English learners. *Ampersand*, 13(October), 100201. <https://doi.org/10.1016/j.amper.2024.100201>

Hossain, K. I. (2024b). Reviewing the role of culture in English language learning: Challenges and opportunities for educators. *Social Sciences and Humanities Open*, 9(August 2023), 100781. <https://doi.org/10.1016/j.ssaho.2023.100781>

Huang, F., Ge, X., Li, Y., & Tang, Z. (2025). Unveiling unwillingness to communicate among EFL learners in flipped learning: an ecological perspective. *Innovation in Language Learning and Teaching*, 1–15. <https://doi.org/10.1080/17501229.2025.2458638>

Ismailov, M., Chiu, T. K. F., Dearden, J., Yamamoto, Y., & Djalilova, N. (2021). Challenges to internationalisation of university programmes: A systematic thematic synthesis of qualitative research on learner-centred English Medium Instruction (EMI) pedagogy. *Sustainability*, 13(22), 12642. <https://doi.org/10.3390/su132212642>

Jia, C., & Hew, K. F. (2021). Toward a set of design principles for decoding training: A systematic review of studies of English as a foreign/second language listening education. *Educational Research Review*, 33(April), 100392. <https://doi.org/10.1016/j.edurev.2021.100392>

Kulmanova, Z. B., Zhirenov, S. A., Mashinbayeva, G. A., Orynbayeva, D. G., Abitova, Z. S., & Babaeva, K. S. (2022). Reflection of the religious worldview in language. *International Journal of Society, Culture & Language*, 10(3), 31–43. <https://doi.org/10.55491/2411-6076-2023-1-125-132>

Kumar, A., Krishnamurthi, R., Bhatia, S., Kaushik, K., Ahuja, N. J., Nayyar, A., & Masud, M. (2021). Blended learning tools and practices: A comprehensive analysis. *Ieee Access*, 9, 85151–85197. <https://doi.org/10.1109/access.2021.3085844>

Li, J., Brar, A., & Roihan, N. (2021). The use of digital technology to enhance language and literacy skills for Indigenous people: A systematic literature review. *Computers and Education Open*, 2(April), 100035. <https://doi.org/10.1016/j.caeo.2021.100035>

McKenney, S., & Reeves, T. C. (2021). Educational design research: Portraying, conducting, and enhancing productive scholarship. *Medical Education*, 55(1), 82–92. <https://doi.org/10.1111/medu.14280>

Morshedian, M., Ghanizadeh, A., & Mirzaee, S. (2023). Smart Classroom Management: How Does It Influence EFL Learners' Anxiety, Engagement, and Language Achievement. *Mextesol Journal*, 47(2), n2. <https://doi.org/10.5539/elt.v16n12p58>

Müller, C., & Mildenberger, T. (2021). Facilitating flexible learning by replacing classroom time with an online learning environment: A systematic review of blended learning in higher education. *Educational Research Review*, 34(April), 100394. <https://doi.org/10.1016/j.edurev.2021.100394>

Muzakkir, Hussin, Z., & Razak, R. A. (2024). Teachers' beliefs towards character education curriculum in primary school: a systematic literature review. *Education 3-13*, 52(8), 1178–1192. <https://doi.org/10.1080/03004279.2022.2142478>

Nigar, N., & Kostogriz, A. (2024). Navigating affective and sensory fluidity in plurilingual and intercultural pedagogies in English language and literacy classrooms. *Australian Journal of Language and Literacy*, 47(3), 379–401. <https://doi.org/10.1007/s44020-024-00068-4>

Nii Laryeafo, M., & Ogbewe, O. C. (2023). Ethical consideration dilemma: systematic review of ethics in qualitative data collection through interviews. *Journal of Ethics in Entrepreneurship and Technology*, 3(2), 94–110. <https://doi.org/10.1108/JEET-09-2022-0014>

Nikolov, M., & Mihaljević Djigunović, J. (2023). Studies on pre-primary learners of foreign languages, their teachers, and parents: A critical overview of publications between 2000 and 2022. *Language Teaching*, 56(4), 451–477. <https://doi.org/10.1017/S0261444823000095>

Norrie, C. S., Deckers, S. R. J. M., Radstaake, M., & van Balkom, H. (2024). A Narrative Review of the Sociotechnical Landscape and Potential of Computer-Assisted Dynamic Assessment for Children with Communication Support Needs. *Multimodal Technologies and Interaction*, 8(5). <https://doi.org/10.3390/mti8050038>

Pavlick, E. (2023). Symbols and grounding in large language models. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences*, 381(2251). <https://doi.org/10.1098/rsta.2022.0041>

Philippe, S., Souchet, A. D., Lameras, P., Petridis, P., Caporal, J., Coldeboeuf, G., & Duzan, H. (2020). Multimodal teaching, learning and training in virtual reality: a review and case study. *Virtual Reality and Intelligent Hardware*, 2(5), 421–442. <https://doi.org/10.1016/j.vrih.2020.07.008>

Possaghi, I., & Papavlasopoulou, S. (2025). Technologically-rich computational activities in K–12 education: a systematic review of constructivist and constructionist interventions. *Behaviour & Information Technology*, 1–40. <https://doi.org/10.1080/0144929X.2025.2513569>

Rahimi, R. A., & Oh, G. S. (2024). Rethinking the role of educators in the 21st century: navigating globalization, technology, and pandemics. *Journal of Marketing Analytics*, 12(2), 182–197. <https://doi.org/10.1057/s41270-024-00303-4>

Romero-Ivanova, C. L., Cook, P., & Faurote, G. (2021). Digital stories, material transformations: reflections of education students in a pre-teacher program. *English Teaching: Practice & Critique*, 20(2), 245–260. <https://doi.org/10.1108/etpc-07-2020-0066>

Rönnberg, J., Holmer, E., & Rudner, M. (2021). Cognitive hearing science: three memory systems, two approaches, and the ease of language understanding model. *Journal of Speech, Language, and Hearing Research*, 64(2), 359–370. https://doi.org/10.1044/2020_JSLHR-20-00007

Sigurjónsdóttir, S., & Nowenstein, I. (2021). Language acquisition in the digital age: L2 English input effects on children's L1 Icelandic. *Second Language Research*, 37(4), 697–723. <https://doi.org/10.1177/02676583211005505>

Sparks, R. L. (2021). Identification and Characteristics of Strong, Average, and Weak Foreign Language Readers: The Simple View of Reading Model. *Modern Language Journal*, 105(2), 507–525. <https://doi.org/10.1111/modl.12711>

Su, F., & Zou, D. (2022). Technology-enhanced collaborative language learning: theoretical foundations, technologies, and implications. *Computer Assisted Language Learning*,

35(8), 1754–1788. <https://doi.org/10.1080/09588221.2020.1831545>

Syafii, M. L., Buntoro, G. A., Sugianto, A., Nurohman, & Sutanto. (2022). A Conceptual Model of Culture-Based English Learning Materials in Indonesia. *International Journal of Learning, Teaching and Educational Research*, 21(10), 50–63. <https://doi.org/10.26803/ijlter.21.10.3>

Taherdoost, H. (2022). What are different research approaches? Comprehensive review of qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), 53–63. <https://doi.org/10.30564/jmser.v5i1.4538>

Takona, J. P. (2024). Research design: qualitative, quantitative, and mixed methods approaches. *Quality & Quantity*, 58(1), 1011–1013. <https://doi.org/10.1007/s11135-023-01798-2>

Tekir, S. (2025). Strategies for Effective Classroom Management in Online Teaching: A Post-Pandemic Review of Empirical Studies. *SAGE Open*, 15(3), 21582440251377320. <https://doi.org/10.1177/21582440251377321>

Thornhill-Miller, B., Camarda, A., Mercier, M., Burkhardt, J. M., Morisseau, T., Bourgeois-Bougrine, S., Vinchon, F., El Hayek, S., Augereau-Landais, M., Mourey, F., Feybesse, C., Sundquist, D., & Lubart, T. (2023). Creativity, Critical Thinking, Communication, and Collaboration: Assessment, Certification, and Promotion of 21st Century Skills for the Future of Work and Education. *Journal of Intelligence*, 11(3). <https://doi.org/10.3390/jintelligence11030054>

Tinoca, L., Piedade, J., Santos, S., Pedro, A., & Gomes, S. (2022). Design-based research in the educational field: A systematic literature review. *Education Sciences*, 12(6), 410. <https://doi.org/10.3390/educsci12060410>

Tondeur, J., Howard, S., Carvalho, A. A., Kral, M., Petko, D., Ganesh, L. T., Røkenes, F. M., Starkey, L., Bower, M., & Redmond, P. (2024). The DTALE Model: Designing Digital and Physical Spaces for Integrated Learning Environments. *Technology, Knowledge and Learning*, 1–23. <https://doi.org/10.1007/s10758-024-09784-9>

Tundreng, S., Yawan, H., & Marhamah, M. (2025). Implementing differentiated instruction in Indonesian secondary schools: Opportunities and challenges from language teachers. *English Review: Journal of English Education*, 13(1), 93–106. <https://doi.org/10.25134/erjee.v13i1.10741>

Vu, N. N., Hung, B. P., Van, N. T. T., & Lien, N. T. H. (2022). *Theoretical and Instructional Aspects of Using Multimedia Resources in Language Education: A Cognitive View BT - Multimedia Technologies in the Internet of Things Environment, Volume 2* (R. Kumar, R. Sharma, & P. K. Pattnaik (eds.); pp. 165–194). Springer Singapore. https://doi.org/10.1007/978-981-16-3828-2_9

Wang, F. L., Zhang, R., Zou, D., Au, O. T. S., Xie, H., & Wong, L. P. (2021a). A review of vocabulary learning applications: From the aspects of cognitive approaches, multimedia input, learning materials, and game elements. *Knowledge Management & E-Learning*, 13(3), 250–272. <https://doi.org/10.34105/j.kmel.2021.13.014>

Wang, F. L., Zhang, R., Zou, D., Au, O. T. S., Xie, H., & Wong, L. P. (2021b). A review of vocabulary learning applications: From the aspects of cognitive approaches, multimedia input, learning materials, and game elements. *Knowledge Management and E-Learning*, 13(3), 250–272. <https://doi.org/10.34105/j.kmel.2021.13.014>

Yip, S. Y., & Xu, Y. (2024). Increasing the diversity of the teaching workforce: a review of

minority teacher candidates' recruitment, retention, and experiences in initial teacher education. *Pedagogy, Culture & Society*, 1–18. <https://doi.org/10.1080/14681366.2024.2384492>

You, H., & Yu, H. (2025). Early childhood teachers in the digital age: An empirical exploration of the current status and influencing factors of their digital literacy. *Education and Information Technologies*, 1–31. <https://doi.org/10.1007/s10639-025-13568-8>

Yu, H., & Wang, J. (2025). Enhancing college students' creativity through virtual reality technology: a systematic literature review. *Humanities and Social Sciences Communications*, 12(1), 1–14. <https://doi.org/10.1057/s41599-025-05044-y>

Zein, S., Sukyadi, D., Hamied, F. A., & Lengkanawati, N. S. (2020). English language education in Indonesia: A review of research (2011–2019). *Language Teaching*, 53(4), 491–523. <https://doi.org/10.1017/s0261444820000208>

Zou, D., Luo, S., Xie, H., & Hwang, G. J. (2022). A systematic review of research on flipped language classrooms: theoretical foundations, learning activities, tools, research topics and findings. *Computer Assisted Language Learning*, 35(8), 1811–1837. <https://doi.org/10.1080/09588221.2020.1839502>

Zou, Y., Kuek, F., Feng, W., & Cheng, X. (2025). Digital learning in the 21st century: trends, challenges, and innovations in technology integration. *Frontiers in Education*, 10, 1562391. <https://doi.org/10.3389/feduc.2025.1562391>

Zulkflee, Z., Azmi, N. N., Kamaruzaman, S. S. S., Prakas, J., Ng, M. M., & Jeyaraja, S. S. B. (2022). Issues and challenges of Malaysian primary school teachers in incorporating blended learning in ESL classroom. *International Journal of Advanced Research in Education and Society*, 4(4), 117–130. <https://doi.org/10.55057/ijares.2022.4.4.11>