

Pedagogical Awareness of Instructional Effectiveness among EFL Pre-Service Teachers in Media-Based Learning Activities

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ABSTRACT

This qualitative reflective inquiry investigates how English as a Foreign Language (EFL) pre-service teachers develop pedagogical language awareness regarding the effectiveness of their spoken instructional directions during media-driven micro-teaching activities. Grounded in Teacher Language Awareness (TLA) frameworks, Classroom Discourse Analysis (SETT framework), Cognitive Load Theory, and Reflective Practice, this study examines the pedagogical consciousness of four EFL pre-service teachers as they deliver instructional English alongside four distinct teaching media modalities: visual posters, audio recordings, audio-visual videos, and interactive multimedia presentation decks. Data were gathered through reflective journals, video-recorded simulation observations, peer feedback debriefing sessions, and interdisciplinary focus group discussions involving pre-service teachers from English Language Teaching (TBI) and Islamic Education (PAI) departments. Using reflexive thematic analysis, three core dimensions of pedagogical awareness were identified: (1) awareness of instructional clarity and linguistic accessibility, (2) awareness of real-time student affective responses and non-verbal feedback, and (3) awareness of media-instruction synchronization and temporal-spatial timing. Crucially, participant data quotes are preserved in their original Indonesian verbatim form accompanied by English translations to maintain empirical authenticity while ensuring international accessibility. Findings demonstrate that while pre-service teachers initially prioritize grammatical correctness and media visual appeal, collaborative micro-teaching simulations prompt a substantial cognitive transition toward evaluating instructional English based on learner comprehension, cognitive load mitigation, and multimodal alignment. Unclear oral phrasing, unpaused audio overlays, visual clutter, and simultaneous auditory inputs were identified as critical triggers for reflective adaptation. The study offers actionable recommendations for teacher education curricula to integrate instructional language coaching with multimodal pedagogical design.

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1. INTRODUCTION

In second and foreign language education, the spoken language utilized by teachers commonly conceptualized as teacher talk serves a dual function within the classroom ecosystem. It operates simultaneously as the primary medium of pedagogical instruction and as the target linguistic input through which language learning is facilitated (Andrews, 2007; Walsh, 2006). For English as a Foreign Language (EFL) pre-service teachers, mastering the strategic deployment of instructional English represents one of the most complex professional competencies during initial teacher education. Instructing learners in a foreign language requires pre-service teachers to negotiate multiple cognitive demands concurrently: formulating linguistically accurate expressions, adjusting lexical complexity, monitoring classroom management, and gauging learner comprehension in real time (Andrews, 2007; Borg, 2003). When instructional language lacks clarity, precision, or appropriate scaffolding, learners frequently experience heightened cognitive load, ambiguity, and pedagogical disorientation (Walsh, 2006). Consequently, fostering high levels of Teacher Language Awareness (TLA) and Pedagogical Language Awareness (PLA) has emerged as a cornerstone of contemporary EFL teacher education programs (Andrews, 2007; Svalberg, 2007).

In contemporary educational landscapes, language instruction rarely occurs in a purely monologic or print-dominated vacuum. Rather, modern EFL classrooms are intrinsically multimodal, characterized by the dynamic integration of diverse educational media, ranging from static visual posters and digital slides to dynamic audio recordings, audio-visual videos, and interactive digital applications (Jewitt, 2014; Kress, 2009). The integration of educational media alters the architecture of classroom discourse, requiring teachers to synchronize their spoken instructional commands with visual, auditory, and spatial stimuli (Sweller, van Merriënboer, & Paas, 2019). While educational media possess immense potential to contextualize abstract concepts and heighten student engagement, they also introduce complex communicative friction when instructional language and media delivery are improperly aligned (Mayer, 2020). For novice teachers, orchestrating media technology alongside spoken foreign language instructions poses a formidable challenge. Pre-service teachers often struggle to time their instructional verbalizations, inadvertently competing with media soundscapes or overwhelming learners with redundant visual and auditory inputs (Scrivener, 2012; Sweller et al., 2019; Walsh, 2006).

Within the Indonesian higher education context, pre-service teacher training programs under the Faculty of Tarbiyah and Teacher Training face unique pedagogical imperatives. EFL student teachers enrolled in English Language Teaching (Tadris Bahasa Inggris / TBI) programs are expected not only to master English pedagogy but also to collaborate with peers from non-English disciplines, such as Islamic Religious Education (Pendidikan Agama Islam / PAI), to design interdisciplinary learning activities (Mann & Walsh, 2017). In these interdisciplinary settings, TBI pre-service teachers deliver English classroom instructions to non-EFL peer students who act as simulated learners during micro-teaching exercises. This interdisciplinary dynamic provides a uniquely rigorous laboratory for examining pre-service teachers' pedagogical language awareness. Because simulated learners from non-English majors may possess varying degrees of EFL proficiency, TBI pre-service teachers cannot rely on complex jargon or unmonitored speech rates; they are compelled to calibrate their instructional language for maximum accessibility, clarity, and media synergy (Adhikari & Timsina, 2024; Alfiana, 2021; Andrews, 2007; Kaniati, Virgo, Soro, & Mardiana, 2025; Virgona, Ruby, & Kashima, 2025).

Despite the recognized importance of teacher language awareness and multimodal media integration, a critical gap remains in empirical ELT research. Existing literature has extensively examined pre-service teachers' grammatical knowledge, general reflective thinking or technical technological pedagogical content knowledge (TPACK) in isolation (Andrews, 2007; Mann & Walsh, 2017; Mishra & Koehler, 2006; Rosmaladewi, Yulyul Yuliana Hastuti, & Rahayu, 2023). However, limited empirical attention has been directed toward understanding how pre-service teachers develop real-time pedagogical consciousness regarding the operational effectiveness of their spoken instructional English when paired with specific media modalities in micro-teaching contexts. Specifically, few studies have qualitatively investigated how novice teachers perceive the cognitive friction, timing mismatches, and learner reactions caused by their instructional language during multimodal teaching activities (Mayer, 2020; Walsh, 2006).

To address this empirical gap, the present qualitative study investigates the pedagogical language awareness of four EFL pre-service teachers as they deliver media-integrated instructional English across eight collaborative micro-teaching simulations involving TBI and PAI student teacher cohorts. Grounded in reflective practice models and classroom discourse frameworks, this study explores how pre-service teachers notice, evaluate, and adjust their instructional language when utilizing visual posters, audio recordings, audio-visual videos, and interactive multimedia presentation decks (Juharoh & Ardianti, 2024; Mann & Walsh, 2017; Walsh, 2006). To preserve the empirical authenticity and rich qualitative contextualization of the participants' reflective experiences, all direct data quotes from pre-service teachers' journals and debriefings are retained in their original Indonesian verbatim form accompanied by English translations.

Specifically, this research is guided by three central research questions: 1. How do EFL pre-service teachers demonstrate pedagogical awareness regarding the clarity and linguistic accessibility of their spoken instructional English during media-based micro-teaching activities? 2. How do pre-service teachers perceive and interpret real-time learner responses and affective feedback in relation to their instructional language delivery? 3. In what ways do pre-service teachers develop reflective awareness regarding the spatial-temporal synchronization between their spoken directions and distinct media modalities?

By answering these questions, this study contributes both theoretically and practically to language teacher education. Theoretically, it extends frameworks of Teacher Language Awareness into the domain of multimodal pedagogy, highlighting the interplay between teacher talk, learner cognitive load, and media timing. Practically, it provides empirical insights for curriculum designers and teacher educators seeking to refine micro-teaching practicums, interdisciplinary peer coaching, and reflective training for pre-service language educators preparing for 21st-century multimodal classrooms.

2. METHODS

The method contains an explanation of the research approach, subjects of the study, the conduct of the research procedure, the use of materials and instruments, data collection, and analysis techniques. This study adopted a qualitative, reflective practitioner design incorporating elements of collective case study methodology (Creswell & Creswell, 2018; Sugiyono, 2021). The research context involved an interdisciplinary collaborative micro-teaching practicum integrating fourth-year undergraduate student teachers from the English Language Teaching and Islamic Education degree programs. Four EFL pre-service teachers from the TBI program (pseudonymized as Participant A/Aisyah, Participant B/Budi, Participant C/Cici, and Participant D/Deni) were selected through purposive sampling based on three criteria: (1) completion of core L2 methodology and instructional media coursework, (2) active participation in interdisciplinary micro-teaching simulations across multiple media modalities, and (3) willingness to maintain detailed reflective journals and participate in video debriefings.

During the micro-teaching practicum, the four primary TBI participants operated in collaborative teams with peer student teachers from the PAI program across eight micro-teaching simulation groups

(designated as Groups 1 through 8). TBI pre-service teachers were assigned the role of delivering instructional English and language scaffolding, while PAI pre-service teachers provided Islamic subject content (e.g., Fiqh, Islamic Cultural History / SKI, Aqidah) and served as simulated L2 learners during micro-lessons. The learning activities integrated four distinct teaching media modalities: 1) Static Visual Posters (Groups 3 and 6: SKI materials). 2) Audio Recordings (Groups 2 and 5: Fiqh prayer & purification procedures). 3) Audio-Visual Video Clips (Groups 4 and 7: Islamic history documentaries). 4) Interactive Multimedia Presentation Decks (Groups 1 and 8: Arabic vocabulary & Islamic ethics).

Data were gathered through a multi-source qualitative triangulation protocol over an eight-week simulation period (Creswell & Creswell, 2018): 1) Reflective Journals: Each TBI participant submitted weekly structured reflective entries immediately following each micro-teaching session. Reflective prompts focused on self-perceived instructional clarity, learner responses, media timing challenges, and linguistic adjustments. 2) Video-Recorded Classroom Observations: All eight micro-teaching sessions (each lasting 25-30 minutes) were video-recorded cameras. Observation protocol forms were utilized by the researchers to track spoken instructional turns, non-verbal learner behaviors, and media playback timestamps. 3) Peer Debriefing & Focus Group Discussions (FGD): Weekly post-lesson debriefing sessions were conducted with TBI and PAI participants. These 45-minute sessions provided a collaborative reflective space where peer learners offered immediate feedback regarding the clarity, volume, and timing of the teacher's instructional English.

Qualitative data were analyzed using Reflexive Thematic Analysis following the six-phase framework for reflexive thematic analysis (Braun & Clarke, 2019, 2021). The analysis proceeded through: (1) dataset familiarization via repeated reading of journals and transcribing video audio, (2) generating initial codes for instances of teacher language awareness and media interaction, (3) collating codes into potential thematic clusters, (4) reviewing candidate themes against raw transcript excerpts and video timestamps, (5) defining and naming refined themes, and (6) producing the final narrative synthesis. Crucially, to preserve empirical authenticity while maintaining international readability, all direct participant reflection quotes and peer feedback excerpts are presented in their original Indonesian verbatim form accompanied by English translations.

To ensure qualitative trustworthiness and rigor, principles of credibility, transferability, dependability, and confirmability were strictly implemented (Creswell & Creswell, 2018). Data source triangulation (cross-verifying journal entries with video recordings and peer debriefing transcripts), member checking (verifying transcript accuracy with participants), and detailed audit trails maintained by independent research coders ensured data integrity.

3. FINDINGS AND DISCUSSION

Thematic analysis revealed three interconnected dimensions of pedagogical language awareness among EFL pre-service teachers during media-driven micro-teaching activities: (1) Awareness of Instructional Clarity and Linguistic Accessibility, (2) Awareness of Real-Time Student Response and Affective Feedback, and (3) Awareness of Media Instruction Synchronization and Timing.

3.1. Finding

Awareness of Instructional Clarity and Linguistic Accessibility

Prior to engaging in micro-teaching simulations, TBI pre-service teachers overwhelmingly assumed that instructional effectiveness was primarily a function of advanced grammatical complexity and fluent native-like delivery. However, when instructing non-EFL peer students from the PAI program, participants quickly recognized that uncalibrated English phrasing generated cognitive friction and task hesitation. Reflection data indicated a growing consciousness regarding the necessity for concise imperatival structures, reduced speech rates, and clear lexical choices.

For instance, during the visual poster simulation on Islamic Cultural History (Group 3), Participant A (Aisyah) initially delivered lengthy, syntactically complex directions. Upon observing peer

confusion, she reflected on the need to streamline her instructional speech into structured, numbered commands:

"Instruksi bahasa Inggris yang saya sampaikan di awal ternyata terlalu panjang dan membuat teman-teman PAI bingung. Saya menyadari bahwa untuk media poster, instruksi harus singkat dan langsung pada intinya, seperti 'Attention please, look at the poster, and read line one'. Ketika saya memakai kalimat yang lebih simpel, siswa baru bisa mengikuti dengan baik."

(English translation: "The English instructions I delivered at the beginning turned out to be too long and confused the PAI peers. I realized that for poster media, instructions must be brief and directly to the point, such as 'Attention please, look at the poster, and read line one'. When I used simpler sentences, only then could the students follow along properly.")

Similarly, in Group 6 (visual poster on SKI materials), Participant C (Cici) experienced a realization concerning font legibility in relation to her oral instructions. She noticed that even when oral directions were clear, visual limitations impairing learner execution triggered reflective awareness:

"Instruksi lisan saya 'Please focus to the poster' sebenarnya sudah mudah dipahami, hanya saja tulisan yang ada di poster terlalu kecil sehingga siswa di baris belakang kesulitan membaca poin-poin materi. Dari sini saya belajar bahwa kejelasan instruksi lisan tidak bisa dipisahkan dari keterbacaan media visual yang kita gunakan."

(English translation: "My oral instruction 'Please focus to the poster' was actually easy to understand, but the text on the poster was too small, making it difficult for students in the back row to read the material points. From this, I learned that oral instructional clarity cannot be separated from the legibility of the visual media we use.")

These reflections demonstrate a significant shift in pedagogical awareness. Pre-service teachers transitioned from evaluating their language based on internal formal criteria (grammatical accuracy) to evaluating it based on external operational criteria whether L2 learners could successfully execute the requested task in relation to the visual media.

Awareness of Real-Time Student Response and Affective Feedback

The second major theme pertains to pre-service teachers' developing sensitivity toward real-time student behavioral, non-verbal, and affective cues. Micro-teaching simulations exposed participants to immediate peer feedback, forcing them to read non-verbal indicators such as vacant gazes, delayed task initiation, and anxious peer glances.

During an interactive PowerPoint presentation session on Islamic jurisprudence (Group 1), Participant B (Budi) noticed that his rapid delivery of English instructions caused noticeable cognitive overload among PAI peer learners, as captured in his post-lesson reflective journal entry:

"Saya memperhatikan raut wajah siswa yang tampak bingung dan saling berbisik ketika saya memberi perintah dalam bahasa Inggris dengan cepat. Tampilan slide terlalu banyak animasi yang bergerak bersamaan dengan instruksi yang saya ucapkan, sehingga fokus siswa teralih ke efek visual daripada ke isi perintah. Respons siswa lambat karena mereka bingung harus mengklik tombol mana dulu sesuai instruksi lisan saya."

(English translation: "I noticed the students' confused facial expressions and saw them whispering to each other when I gave commands in English rapidly. The slide display had too many moving animations playing simultaneously with my spoken instructions, causing student focus to shift toward the visual effects rather than the command content. Student response was slow because they were confused about which button to click first according to my oral directions.")

During peer debriefing, a PAI student acting as a peer learner confirmed this observation in authentic Indonesian dialogue, highlighting the affective impact of unmonitored teacher talk:

"Jujur kami agak sungkan untuk interupsi saat simulasi, tapi sejujurnya instruksinya terlalu cepat dan bahasanya tinggi. Kami jadi takut salah pencet di slide interaktif karena tidak mengerti sepenuhnya maksud instruksi dalam bahasa Inggris tersebut."

(English translation: "Honestly, we felt a bit hesitant to interrupt during the simulation, but to be frank, the instructions were too fast and the language was too advanced. We became afraid of clicking the wrong button on the interactive slide because we didn't fully understand the meaning of the English instructions.")

This feedback loop heightened pre-service teachers' emotional and cognitive awareness. Participants realized that L2 learners experience anxiety when oral instructions are delivered too rapidly alongside complex digital media, highlighting the crucial role of teacher empathy and responsive wait-time in instructional delivery.

Awareness of Media Instruction Synchronization and Timing

The third and most prominent theme focused on media-instruction synchronization—the temporal and spatial management of spoken teacher talk alongside media playback. Audio and video modalities presented the greatest friction for pre-service teachers due to simultaneous auditory competition. In Group 2 and Group 5 (audio recordings of Fiqh prayer procedures), Participant D (Deni) attempted to explain task procedures in English while the audio track was actively playing in the background. Video observation analysis revealed that peer learners stopped listening to Deni and attempted unsuccessfully to decipher both sound channels. Deni's reflective journal captured this critical insight verbatim:

"Instruksi yang disampaikan kurang dipahami oleh siswa karena ketika instruksi disampaikan bertabrakan dengan audio yang diputar. Tidak ada jeda antara instruksi dengan audio. Saya kurang menyadari kalau volume audio terlalu keras, jadi ketika saya memberi instruksi lisan dalam bahasa Inggris, suara saya tertutup audio. Siswa tampak bingung dan tidak merespons."

(English translation: "The delivered instructions were poorly understood by students because they collided with the playing audio. There was no pause between the instructions and the audio. I failed to realize that the audio volume was too loud, so when I gave oral instructions in English, my voice was drowned out by the audio. Students looked confused and did not respond.")

A similar synchronization breakdown occurred in Group 7 during an audio-visual video documentary on Islamic history. Participant A (Aisyah) recognized that speaking over dynamic video clips overwhelmed learners' working memory:

"Saat video diputar, saya memberikan instruksi lisan tanpa menekan tombol pause. Akibatnya, perhatian siswa terpecah antara mendengarkan instruksi saya dan menonton video. Siswa baru paham setelah video dipause dan instruksi diulang secara perlahan dalam bahasa Inggris yang lebih sederhana."

(English translation: "While the video was playing, I gave oral instructions without pressing the pause button. As a result, students' attention was divided between listening to my instructions and watching the video. Students only understood after the video was paused and the instructions were repeated slowly in simpler English.")

These verbatim data excerpts demonstrate that media integration does not automatically enhance learning unless teachers possess high pedagogical language awareness regarding spatial-temporal timing. Pre-service teachers learned that spoken English directions must be delivered sequentially pausing media playback before instructing to avoid auditory collision and cognitive overload.

To provide a systematic qualitative synthesis of these findings, Table 1 delineates the matrix of pre-service teachers' pedagogical language awareness across the four media modalities, including selected authentic Indonesian verbatim data quotes, English translations, and corresponding pedagogical insights.

Table 1: Matrix of Pre-Service Teachers' Pedagogical Language Awareness across Media Modalities

Media Modality & Group Context	Pedagogical Awareness Dimension	Authentic Quote & Translation	Verbatim English	Pedagogical Impact & Insight
Static Visual Poster (Groups 3 & 6: SKI History)	Instructional Clarity & Visual Accessibility	<i>"Instruksi bahasa Inggris yang saya sampaikan di awal ternyata terlalu panjang... Saya menyadari bahwa untuk media poster, instruksi harus singkat..."</i> (Eng: <i>"The English instructions I delivered at the beginning turned out to be too long... I realized that for poster media, instructions must be brief..."</i>)		Recognized the need for concise imperatival structures, reduced speech rate, sequential directions, and visual-verbal alignment to prevent learner disorientation.
Audio Recordings (Groups 2 & 5: Fiqh Procedures)	Media-Instruction Synchronization & Auditory Timing	<i>"Instruksi yang disampaikan kurang dipahami oleh siswa karena ketika instruksi disampaikan bertabrakan dengan audio yang diputar..."</i> (Eng: <i>"The delivered instructions were poorly understood by students because they collided with the playing audio..."</i>)		Identified the 'auditory collision' phenomenon; learned that oral English directions must precede audio playback with explicit pauses rather than overlapping speech.
Audio-Visual Video (Groups 4 & 7: Islamic Documentaries)	Temporal Timing & Split-Attention Mitigation	<i>"Saat video diputar, saya memberikan instruksi lisan tanpa menekan tombol pause. Akibatnya, perhatian siswa terpecah..."</i> (Eng: <i>"While the video was playing, I gave oral instructions without pressing the pause button. As a result, students' attention was divided..."</i>)		Understood split-attention effects caused by simultaneous visual and auditory stimuli; established the pedagogical practice of pausing video before delivering L2 commands.
Interactive Multimedia (Groups 1 & 8: Fiqh & Vocabulary PPT)	Learner Affective Response & Cognitive Load Control	<i>"Saya memperhatikan raut wajah siswa yang tampak bingung... Tampilan slide terlalu banyak animasi"</i>		Developed sensitivity to non-verbal learner feedback (puzzled expressions, hesitations); recognized that excessive digital animation

		<i>yang bergerak bersamaan dengan instruksi..."</i> <i>(Eng: "I noticed the students' confused facial expressions... The slide display had too many moving animations playing simultaneously...")</i>	combined with rapid English directions induces cognitive paralysis.
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3.2. Discussion

Authors The empirical findings elucidate the instructional and discursive challenges observed when EFL pre-service teachers used spoken instructional English in media-rich micro-teaching. The discussion draws on teacher language awareness, classroom discourse analysis, cognitive load theory, and reflective practice (Andrews, 2007; Mann & Walsh, 2017; Svalberg, 2007; Sweller et al., 2019; Walsh, 2006).

Cognitive Transitions from Linguistic Accuracy to Pedagogical Functionality

A major theoretical contribution of this study lies in illustrating how collaborative micro-teaching simulations prompt a cognitive shift in pre-service teachers' language awareness from structural-linguistic accuracy to pedagogical functionality. In traditional teacher education coursework, student teachers often evaluate their spoken English primarily through an error-avoidance paradigm, worrying about grammatical perfection, formal vocabulary selection, and accent native-likeness (Andrews, 2007; Borg, 2003). However, the reflection data demonstrate that live instructional performance forces novice teachers to re-evaluate language efficacy based on learner comprehension.

This finding is consistent with work on teacher language awareness, which examines the relationship between teachers' knowledge of language and their pedagogical practice (Andrews, 2007; Svalberg, 2007). In this study, when TBI pre-service teachers instructed non-EFL peer learners from the PAI program, they reported that syntactically complex directions were associated with task hesitation. To address this, participants simplified their English syntax, used structured imperatival signposts ('Attention please', 'Look at line one'), and increased wait-time. This interpretation is also consistent with Walsh's SETT framework for systematic reflection on classroom discourse (Walsh, 2006; Zhou, 2024).

Multimodal Synchronization and Cognitive Load Mitigation

The second key contribution concerns the spatial-temporal dynamics of teacher talk in multimodal media environments. Although multimodal media can provide useful meaning-making resources, the present findings suggest that using media without coordinating it with spoken instructions can create competing demands for learners (Jewitt, 2014).

The reflection excerpts concerning 'auditory collision' and 'split attention' illustrate how participants interpreted these classroom events. When pre-service teachers delivered oral English directions while audio tracks or videos were playing, participants observed that learners had difficulty attending to both streams. Cognitive load theory and multimedia learning provide relevant frameworks for interpreting these observations, while the present qualitative data do not independently measure cognitive load. Through video-mediated reflection, participants developed awareness of media instruction timing and learned to pause media before giving instructions. This is a pedagogical interpretation of the study data, informed by multimedia learning principles (Mayer, 2020; Reed, 2006; Sweller et al., 2019).

Interdisciplinary Peer Feedback as a Catalyst for Pedagogical Consciousness

Third, this study highlights the value of interdisciplinary peer simulations involving TBI (EFL) and PAI (Islamic Education) pre-service teachers (Hasbiyallah & Nasir, 2023; Nasir, Tatang Muh, Hasbiyallah, 2024; Nasir et al., 2024; Nasir, Irawan, Karimah, & Robaeah, 2023; Nasir, Purnama, Haryanti, Komara, & Sain, 2025; Nasir & Karimah, 2023; Robaeah, Irawan, & Nasir, 2023). The participants' reflections suggest that peers with different levels of English-language experience may notice instructional difficulties that are less visible when teachers practise only with peers who share similar language-learning backgrounds. This interpretation is consistent with the use of reflection and dialogue in teacher development (Mann & Walsh, 2017; Walsh, 2006).

By contrast, collaborating with PAI peer learners required TBI pre-service teachers to consider how their instructions were understood outside their own disciplinary cohort. The feedback described by participants became a prompt for reflective discussion (Mann & Walsh, 2017). Video-mediated debriefings allowed participants to connect their language choices with observed learner responses, consistent with a classroom-discourse perspective (Walsh, 2006).

These empirical insights suggest a practical implication for teacher education: instructional communication and media instruction timing can be made explicit objects of reflection during micro-teaching. This small, institution-specific study does not establish national certification requirements; rather, it points to areas that teacher educators may consider when designing feedback and reflection activities (Eliana, 2021; Mann & Walsh, 2017; Syaiful Romadhon, Rahmah, & Wirani, 2019; Syaiful Romadhon et al., 2019; Walsh, 2006).

4. CONCLUSION

This qualitative study examined the pedagogical language awareness of EFL pre-service teachers delivering instructional English alongside multimodal multimedia tools during interdisciplinary micro-teaching simulations. By analyzing authentic Indonesian reflection data alongside English translations, the inquiry demonstrated that pre-service teachers undergo a profound cognitive evolution, shifting their initial focus from grammatical accuracy and media design aesthetics to instructional clarity, non-verbal learner feedback, and media instruction synchronization. These findings yield actionable implications for teacher education, suggesting that institutions explicitly integrate instructional language coaching with TPACK, mandate spatial-temporal synchronization training to prevent learner cognitive overload, foster interdisciplinary collaborative simulations, and embed video-mediated data-led reflections within their curricula.

However, several contextual and methodological limitations must be acknowledged regarding the scope of the study. The investigation was conducted with a small cohort of four pre-service teachers within a single Islamic higher education institution during simulated micro-teaching environments. While these simulated settings provided structured insights through peer learners, they may not fully capture the unpredictable behavioral and linguistic dynamics present in authentic primary or secondary classrooms. Additionally, the qualitative scope relied on self-reports, observations, and debriefing protocols without incorporating direct measures of cognitive processing, such as eye-tracking or formal cognitive load scales.

To build upon these contributions, future research should expand in both scope and empirical methodology. Longitudinal field practicum studies are recommended to track pre-service teachers from micro-teaching simulations into their actual school teaching placements (PPL), examining how pedagogical language awareness persists over time. Furthermore, multi-institutional expansions across diverse public and private universities will enhance contextual transferability, while mixed-methods and biometric investigations utilizing eye-tracking, physiological cognitive load measures, or quantitative learner comprehension assessments can objectively evaluate the impact of media timing strategies and teacher speech rates on L2 learners.

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