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# EXPLORING HIGH-ACHIEVING EFL PRE-SERVICE TEACHERS' UNDERSTANDING OF PEDAGOGICAL CONTENT KNOWLEDGE (PCK) THROUGH REFLECTIVE PRACTICE IN A MICROTEACHING COURSE

**Tina Priyantin[1], Nenden Sri Lengkanawati[2], Ika Lestari Damayanti[3], Fazri Nur Yusuf[4]**
[1,2,3,4]*Department of English Education, Faculty of Language and Literature, Universitas Pendidikan Indonesia, Bandung, West Java, Indonesia*

**Corresponding author's email:** tina.priyantin1275@upi.edu

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**Abstract:** This study aims to examine how five high-achieving EFL pre-service teachers reflect on their understanding and integration of Pedagogical Content Knowledge (PCK) during a microteaching course. Employing a qualitative method with a case study design, reflective writings before and after teaching that were posted on their digital portfolios (Blogs) were used to gather data. Thematic analysis was used to analyze data by employing deductive and inductive methods. The findings reveal that the participants demonstrated a strong understanding of language processing and production and language teaching strategies. However, while they exhibited a moderate understanding of learners' needs, their comprehension of cognitive language learning strategies and intercultural communication remained limited. The study highlights the importance of guided reflection in helping pre-service teachers bridge theory and practice. It suggests that teacher education programs should provide explicit instruction in assessment, cognitive strategies, and intercultural competence, along with ongoing mentoring to promote deeper reflection. The study contributes valuable insights into the role of reflection in enhancing the pedagogical expertise of future EFL teachers.
**Keywords:** *EFL pre-service teachers, pedagogical content knowledge, microteaching, reflective practice, teacher education.*

## INTRODUCTION

Pedagogical Content Knowledge (PCK) remains a central construct for understanding how teachers transform subject matter into learnable forms, linking content expertise with pedagogy, learners, and context (Grigaliūnienė et al., 2025; She et al., 2025). Contemporary perspectives emphasize that PCK is not static but develops through practice, reflection, and situated professional learning across disciplines and educational levels (Drollinger-Vetter et al., 2025; Lee & Kriewaldt, 2025; Vettriselvan et al., 2025). In language education, this integration is increasingly intertwined with technological, intercultural, and humanizing dimensions of teaching, especially as digital tools and artificial intelligence reshape instructional landscapes (Oved & Alt, 2025; Zou et al., 2025; Peercy et al., 2025). For EFL pre-service teachers (PSTs), developing PCK is therefore a multidimensional process that requires not only mastering language content but also learning to design meaningful pedagogy through reflective engagement in practice-based settings such as microteaching. Pedagogical aspects often become the main challenge in this process, particularly when PSTs struggle to translate theoretical understanding into classroom enactment (Achadiyah & Azmi, 2023).

Research across subject domains shows that PCK development benefits from structured teacher education experiences that explicitly target topic-specific knowledge and its pedagogical transformation (Grigaliūnienė et al., 2025; Drollinger-Vetter et al., 2025; Hanuscin et al.,

2025). Longitudinal and quasi-experimental studies indicate that carefully designed coursework and field-based interventions can significantly enhance PSTs' ability to connect content representations, student thinking, and instructional strategies (Quarder et al., 2025; Kong, 2025; Ravanal-Moreno et al., 2025). Moreover, links between teachers' PCK and student learning outcomes reinforce its practical importance (She et al., 2025; Mazibe et al., 2025).

Another strong line of research situates PCK within broader knowledge frameworks such as TPACK, highlighting the growing role of technology in shaping pedagogical reasoning (Oved & Alt, 2025; Huang et al., 2025; Urfan et al., 2025). Studies across contexts report that technological self-efficacy, institutional support, and professional development models influence how PSTs integrate digital tools into content teaching (Ayık & Gül, 2025; Mafa & Govender, 2025; Cattaneo et al., 2025). Emerging work also addresses AI-related competencies and anxieties, showing that teachers' knowledge bases must expand to include pedagogic AI understanding (Li & Thien, 2025; Zou et al., 2025; Hwang & Wu, 2025).

Within teacher education, reflective and practice-based models are consistently identified as catalysts for knowledge integration. Co-teaching, simulation, and educative curriculum materials have been shown to support novice teachers in enacting and refining professional knowledge (Yadav et al., 2025; Pitura et al., 2025; Cisterna et al., 2025). Lesson planning and post-lesson reflection discourses, especially when technology-enhanced, foster deeper articulation of instructional reasoning (Ga et al., 2025; Tembrevilla & Milner-Bolotin, 2025). These findings align with evidence that propositional knowledge becomes pedagogically meaningful through reflective enactment in classroom-like settings (Yu et al., 2025). However, external factors may also influence the effectiveness of such practice-based experiences, including student engagement levels and resource limitations in partner schools (Pakpahan, 2023).

Studies focusing on PST transitions into teaching further reveal that PCK growth is shaped by identity formation, prior experiences, and contextual demands (Yip, 2025; Marbán & Sintema, 2025). Professional learning environments that foreground inquiry, powerful knowledge, and pedagogical reasoning help PSTs negotiate beliefs and classroom realities (Lee & Kriewaldt, 2025; Santos & Luque-Agulló, 2025). At the same time, emotional and motivational dimensions influence how PSTs engage with pedagogical challenges (Maung et al., 2025; Riski & Sakhiyya, 2025).

In EFL and language-related fields, research highlights the complexity of language teacher knowledge, which includes linguistic content, intercultural awareness, and learner-centered pedagogy (Shi et al., 2025; Peercy et al., 2025). Digital storytelling, CALL-mediated tasks, and creativity-oriented activities have been used to promote reflective and innovative teaching orientations among EFL PSTs (Kaçar, 2025; Ahdi et al., 2025; Rahman & Rahmat, 2025). Knowledge-building pedagogies are also associated with reflective mindsets and creative practices in EFL teacher education (Gao et al., 2025).

Indonesian and regional studies further document how curriculum reforms and apprenticeship programs shape PSTs' TPACK and instructional beliefs (Mualim et al., 2025; Anggrarini & Yulianawati, 2025; Chang et al., 2025). PSTs report both opportunities and constraints in integrating digital media, creativity, and reflective mentoring into practicum experiences (Mistang et al., 2025; Ardi et al., 2025). Broader professional development discourses stress strategic integration of technology and pedagogy in response to knowledge-economy demands (Napitupulu et al., 2025; Kang, 2025).

Across early childhood, STEM, arts, geography, and vocational education, scholars emphasize that PCK is domain-sensitive yet guided by shared principles of aligning content, learners, and pedagogy (Leung et al., 2025; Martínez-Bello et al., 2025; Getenet et al., 2025). Comparative and perception-based studies show that PSTs often overestimate or unevenly develop components of their knowledge, underscoring the need for explicit scaffolding and assessment-informed feedback (Karlsen et al., 2025; Sicat et al., 2025; Karlsen et al., 2025; Cisterna et al., 2025). Best-practice syntheses advocate integrated, reflective, and context-responsive approaches to PCK cultivation (Vettriselvan et al., 2025).

The more detailed EFL teacher knowledge domains of PCK were proposed by Roters (2017) as summarized in Table 1. These domains encompass knowledge of language processing and production, learners, language teaching strategies, cognitive language learning strategies, and intercultural communication.

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Table 1. *EFL teachers' knowledge domains of PCK*

| EFL knowledge domains of pedagogical content knowledge (PCK) | Sub-dimensions |
|---|---|
| Language processing and production skills | Listening, speaking, reading, writing + integration of these four skills |
| Knowledge of cognitive language learning strategies | Risk-taking, tolerance of ambiguity, self-monitoring, communication strategies |
| Knowledge of language teaching strategies | Using different activity types, distinguishing between accuracy-based and fluency-based activities, adapting materials for different ability levels |
| Knowledge of learners | Learners' cognition and misconceptions, prior knowledge, learning development, motivation to learn a foreign language |
| Knowledge of intercultural interaction | Learners' knowledge, skills, and strategies in order to be able to interculturally communicate |

Despite the breadth of PCK and TPACK research, limited attention has been given to how *high-achieving* EFL PSTs conceptualize and articulate their PCK across specific knowledge domains through reflective practice in microteaching, particularly in contexts where digital, intercultural, and humanizing dimensions intersect (Shi et al., 2025; Gao et al., 2025; Peercy et al., 2025). Existing studies often focus on general skill development, technology adoption, or beliefs, rather than a domain-focused analysis of EFL PCK as expressed in reflective accounts during structured microteaching experiences (Mualim et al., 2025; Ga et al., 2025). Therefore, this study asks: How do high-achieving EFL pre-service teachers understand and demonstrate domains of pedagogical content knowledge through reflective practice in a microteaching course?

This study contributes a domain-specific examination of EFL PCK by integrating reflective practice analysis with a focus on high-achieving PSTs, an underexplored subgroup in teacher education research. By bridging PCK, TPACK, and pedagogic AI–related perspectives within a microteaching context, it extends existing frameworks toward a more holistic, language-education–centered model of knowledge enactment (Oved & Alt, 2025; Goodarzi & Rezai, 2025; Zou et al., 2025). The study also connects reflective discourse with concrete PCK domains, moving beyond self-reported competence to analytically grounded representations of knowledge-in-action.

The findings are expected to inform EFL teacher education by clarifying how reflective microteaching can surface, shape, and deepen PSTs' PCK across learner, strategy, curriculum, and assessment dimensions. Insights may guide the design of coursework, feedback systems, and technology-integrated reflective tasks that better support knowledge integration (Drollinger-Vetter et al., 2025; Ga et al., 2025; Napitupulu et al., 2025). More broadly, the study contributes to international conversations on preparing future language teachers who can navigate digital transformation, intercultural demands, and human-centered pedagogy through well-developed pedagogical content knowledge.

## METHOD

This study employed a qualitative approach using a case study design to explore in-depth reflections of EFL pre-service teachers regarding the EFL knowledge domains of PCK. It was carried out at a university in Indonesia within the English Education Department.

Participants were five high-achieving third-year EFL pre-service teachers purposefully selected to investigate the relationship between academic achievement and reflective teaching practices, as well as their understanding of Pedagogical Content Knowledge (PCK). The small sample size was taken by referring to Creswell and Creswell (2018), that a qualitative study does not require large sample sizes because the goal is an in-depth understanding of a phenomenon in context. For a case study, it can include four to five participants. Furthermore, taking high-achieving participants also aims to investigate the relationship between academic achievement and their reflective thinking. According to Kızıldağ & Warren (2026), high-achieving students typically exhibit strong cognition, motivation, and self-regulation.

In this study, high achievement was only defined by cumulative Grade Point Averages (GPAs) ranging from 3.50 to 4.00. Academic competence was further corroborated by final grades in four key courses relevant to pedagogy and content knowledge: Teaching and Learning Strategy (TLS), Teaching English as a Foreign Language (TEFL), Curriculum and Material Development (CMD), and Language Assessment

(LA). Participants' identities were anonymized using pseudonyms, as shown in Table 2.

Table 2. *EFL pre-service teachers' academic profiles*

| Names | GPA | Cognition tests | | | |
|---|---|---|---|---|---|
| | | TLS | TEFL | CMD | LA |
| Wina | 3.88 | A | A | A | A |
| Karen | 3.84 | A | A | A | B |
| Ali | 3.81 | A | A | A | A |
| Tira | 3.76 | A | A | A- | A- |
| Susan | 3.76 | A | A | A | A- |

Data collection involved gathering reflective writings submitted before teaching (focused on lesson planning) and after teaching (focused on teaching practice). Participants submitted two reflective writings for each stage through their digital portfolios hosted on *Blogger.com*. Reflection prompts were adapted from Cirocki and Widodo (2019) to guide participants in critically analyzing both pedagogical and content aspects of their teaching.

Ethical considerations included obtaining informed consent from all participants, ensuring anonymity by using pseudonyms, and securely storing data to protect confidentiality. The study maintained a non-intrusive role throughout data collection, allowing participants to freely express their reflections without interference, while ensuring the research purpose was clearly communicated.

Thematic analysis, following Braun and Clarke's (2006) six-phase framework, was employed to analyze the reflective writings by also employing inductive and deductive analysis. The process began with familiarization by thoroughly reading all reflective texts to gain an overall understanding. Next, initial codes were generated by identifying significant features related to content knowledge (CK), pedagogical knowledge (PK), and their integration. Using a deductive approach, themes were then searched for based on Roters' (2017) EFL teacher knowledge domains: knowledge of language processing and production, knowledge of learners, knowledge of language teaching strategies, knowledge of cognitive language learning strategies, and knowledge of intercultural interaction.

Themes were reviewed and refined to ensure clear consistency and distinctiveness. Finally, descriptive labels were assigned to each theme, and the findings were related to the research aims and existing literature. This iterative and interpretive process allowed themes to emerge naturally while remaining grounded in the theoretical framework of PCK and reflective practice.

## RESULTS

The findings of this study are organized according to the five knowledge domains of Pedagogical Content Knowledge (PCK) as outlined by Roters (2017). These domains include: (1) knowledge of language processing and production, (2) knowledge of learners, (3) knowledge of language teaching strategies, (4) knowledge of cognitive language learning strategies, and (5) knowledge of intercultural interaction. Figure 1 presents the overall level of understanding across these domains based on participants' reflective writings. In general, participants showed a strong understanding of language processing and teaching strategies, a moderate understanding of learners, and a low understanding of cognitive learning strategies and intercultural interaction.

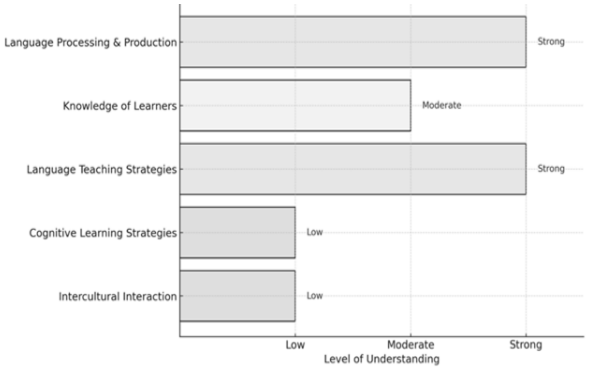



Figure 1. *EFL pre-service teachers' level of understanding of PCK*

*Knowledge of language processing and production*

Data from the reflective writings revealed that all participants demonstrated a strong understanding of integrating language skills supported by good task design, specifically when they reflected on their lesson plans (reflection-before-lesson). This knowledge was demonstrated in terms of selecting topics and developing materials, as well as connecting learning objectives to lesson activities.

Participants also demonstrated a solid grasp of integrating the four primary language skills: listening, speaking, reading, and writing. They were able to design meaningful tasks that promoted integrated skill use, aligned with the Indonesian EFL curriculum. For example, *Wina* designed a lesson on digital literacy that guided students in expressing opinions, agreement, and disagreement through listening and speaking activities (Excerpt #1). Meanwhile, *Karen* incorporated critical thinking tasks into a unit on environmental issues,

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emphasizing synthesis and coherent dialogue construction.

Excerpt #1

> The element I want to focus on is listening and speaking. Students are expected to use English to express their opinions on social issues. As regards the learning goals in the textbook, students can categorize statements of opinions, agreement, and disagreement and can use them in transactional conversations.

Furthermore, an understanding of the selection of appropriate materials and tasks was demonstrated. As with *Karen*'s first reflective writing before teaching, she chose an environmental theme to raise awareness of the environmental impact of waste and to develop basic English skills, especially listening and speaking.

This knowledge is assumed to be well developed in relation to their content knowledge. Participants have understood how to design activities and tasks that integrate different language skills. However, a deep understanding of receptive or productive skills assessment has not been demonstrated. It can be seen in the way participants reflected on the assessments used in the teaching practices. In the reflective writings before teaching, most of them demonstrated an emerging understanding of how to design, implement, and interpret assessments in line with learning objectives. However, the reflections showed that they were all concerned with the development of the rubric and distinguished between the formative and summative assessments. Data from the reflective writings after teaching strengthened the challenge.

An inability to build awareness of the assessment and the link to the learning objectives was found during the teaching practices. In both reflections after the teaching practices, *Wina* said that the learning objectives had been achieved, but that she had not made a formal assessment because she had not yet been able to figure out how to do so, and she reflected on the need for improvement in terms of more structured and well-planned assessments. *Tira* reflected the same points: the learning objectives were well achieved in both teaching practices, but there was no clear description of how the students were assessed. On the second reflection after teaching, she convinced herself that the assessment had been done well because she saw the students actively participating.

It was even found that *Ali* had skipped the assessment process in his first teaching exercise because he was too nervous to complete it, and that time management was another factor that caused him to rush his teaching. After the second teaching exercise, he showed greater awareness of the assessment and was more attuned to the learning goals, although he stated that he was only checking the students' answers to the exercise questions. He also said that the evaluation needed to be more explicit, but did not include any strategy in his consideration of how to do this. Moreover, he stated that his weakness in teaching was in assessing students. He claimed to have a sufficient understanding of the assessment matrix, but was still confused by the procedures, as described in excerpt #2.

Excerpt #2

> I think that regarding my assessment, I am still confused in assessing, so I only asked again about the students' understanding of what was conveyed.

The findings suggest that EFL pre-service teachers were developing foundational PCK related to language processing and production, particularly through integrated skill instruction, material development, and alignment of goals and tasks. Yet, challenges remain in clearly articulating and scaffolding language output, translating learning objectives into observable student production, and assessing and reflecting on language outcomes meaningfully.

*Knowledge of language teaching strategies*

Language teaching strategies include the approaches, methods, and techniques used in teaching. Data from the reflective writings revealed that all participants showed their understanding of the use of the Genre-Based Approach (GBA) and the cooperative learning method, followed by the techniques (Table 3) It was found that the GBA helped them to structure their lesson plans, although they encountered inappropriate sequencing of the stages at the beginning, as was found in the first reflective writing of *Ali* and *Wina*. However, they claimed that the lesson plans were aligned with the stages of GBA.

Table 3. *Understanding of the use of teaching approaches, methods, and techniques*

| Approaches | Methods | Techniques |
|---|---|---|

| | | |
|---|---|---|
| Genre-based approach | Cooperative learning | • Think-Pair-Share (TPS)<br>• Student Achievement Divisions (STAD |

Implementation of the GBA was demonstrated to be difficult in the teaching of English, as reflected by *Tira*, although she believed it helped her organize the classroom activities. In her first reflective writing before teaching, she reflected on her careful preparation of designing activities based on the GBA to create a lesson that could improve the students' understanding. The contents of the materials were also checked and linked to the topic of the lesson. However, she did not feel that the process was easy; for example, she felt that she had misplaced the relevant tasks at the Joint Construction of Text (JCoT).

Her awareness and understanding grew as she designed her second lesson plan, which analysed more closely the tasks for each GBA stage to ensure that they were consistent with the concepts of GBA. The use of GBA was not discussed extensively in the discussion between *Karen* and *Susan*'s reflections. They only stated that their lesson plans implemented the four stages of the GBA without explaining whether they considered the activities to be aligned with each stage.

The reflections also covered teaching methods and techniques, and the use of collaborative learning was mentioned as a key method to promote interaction, critical thinking and language learning among students. Based on data from reflection and interviews, most of them identified teaching methods and techniques by also identifying learning objectives and material. *Wina, Karen, Ali,* and *Tira* preferred to use the Think-Pair-Share method (TPS) in their lesson plans, as it was thought to encourage participation and sharing of ideas between peers (collaborative discussion). *Tira* has stated that the use of the cooperative learning method, and in particular the TPS method, can create a dynamic learning environment in which students can share their ideas and perspectives with their peers, as described in Excerpt #3. She also added that the technique could be used to maximize brainstorming time for students. brainstorming time.

While the four EFL pre-service teachers were confident in TPS, *Susan* was confident in the Student Achievement Divisions (STAD) as an effective technique to facilitate collaborative learning, engage students, and improve learning experiences.

Excerpt #3

> In terms of teaching methods, I use the Cooperative Learning method and the Think-Pair-Share technique. I hope that these methods will be effective because I believe they can stimulate collaboration and discussion and allow students to learn from each other.

In this case, their pedagogical knowledge was valid in the choice of strategy. However, their reflections tended to focus more on describing "what" than on examining "why" a particular approach, method, or technique was effective. There was insufficient substantial evidence on how the strategies were implemented and whether they influenced students' learning interests and outcomes.

*Knowledge of learners*

An understanding of learners' needs, interests, levels of competence and learning differences can be classified as teacher knowledge of learners. Although participants were engaged in learning exercises in a micro-learning course with classmates as students, their reflections showed an increased understanding of the knowledge. They have shown that selecting topics that are relatable and based on the interests and concerns of students is a valuable exercise.

As was found in *Tira*'s reflection writing, she considered the question of defining a topic of study which should be relevant to the level of students and their daily lives, as described in Excerpt #4. It also added that it had read various sources to develop the material, but that it had always linked it to a textbook based on educational standards. Moreover, *Tira* was concerned about the different learning styles of the students when it came to implementing the genre-based approach (GBA). It argued that the different phases of the process could accommodate different learning styles of students.

Excerpt #4

> The way I determine the learning topic is relevant to grade 10 students. The selection of the topic considers the relevance to the students' lives, the level of difficulty of the material, and the educational values contained.

The increasing awareness of learner motivation and participation is also evident in most reflection *writings*, especially before teaching. Ali, for example, has shown an interest in encouraging students to participate by asking them questions

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and encouraging them to read the text aloud or any of the materials provided in the presentations. He said that in the classroom and that he was aware of the other improvements in the relevant issues to be tackled.

Meanwhile, *Wina* highlighted the implementation of the Genre-based Approach (GBA), which was considered interesting. She believed that each stage could increase student participation, although the evidence was unclear. *Susan*'s reflection on the GBA was also demonstrated by the fact that she found the phases helped her to scaffold activities that could increase student participation, as illustrated in Excerpt #5.

Excerpt #5

> The application of English language learning using a genre-based approach is very interesting, in my opinion, because it contains scaffolding, and each stage has activities that can increase student participation.

It has been shown that motivation and interest remain central to student learning as comprehension increases. However, participants did not consider factors that could influence students' motivation to learn, such as individualized learning, cognitive burden or language anxiety. Instead, their focus was mainly on learner motivation and engagement.

*Knowledge of cognitive language learning strategies*

According to Roters (2017), cognitive language learning strategies include elements such as risk-taking, tolerance of ambiguity, self-monitoring, and communication strategies. These align with learners' awareness of how language is acquired, stored, and retrieved through mental processes such as repetition, summarizing, and inferencing. However, analysis of participants' reflective writings has revealed limited evidence that they explicitly taught or facilitated these strategies.

Not all the participants described instances where they taught students to memorize vocabulary, to visualize abstract concepts, or to infer meaning from context. Explicit instruction on the use of strategy, especially on risk-taking, self-regulation, and strategic communication, was largely absent from their reflections. However, some reflection indicated that unconscious awareness of these strategies was transferred by the teaching practices. For example, in *Tira*'s teaching reflection, her implementation of the Think-Pair-Share (TPS) technique was designed to help students analyze the main ideas of the text. She noted that the activity encouraged students to demonstrate comprehension collaboratively, which could be interpreted as an indirect use of cognitive strategy use.

Similarly, *Wina*'s reflection on improving her instructional approach in order to better support students' learning also indicate an emerging, albeit unarticulated, awareness of cognitive learning strategies, as illustrated in Excerpt #6.

Excerpt #6

> From my teaching practice experiences, I realized that students find it easier to answer if a concept is demonstrated first. This will be the focus of my future improvements, from delivery style to more structured assessments.

The participants' reflections demonstrated only limited awareness and application of cognitive language learning strategies. This might be caused by unreal classroom contexts, so that they were not aware of the need to reflect on how to take risks, be tolerant with ambiguity, monitor themselves, and develop strategies for communication. Lack of explicit reference to strategy instruction might be the aspect that made them not fully integrate cognitive strategies into their content delivery. From a PCK perspective, this indicates that while they recognize the value of interaction (pedagogy), they have not connected it directly to how students process texts cognitively (content).

*Knowledge of intercultural interaction*

Understanding how language use is influenced by social and cultural norms, and preparing students to interact appropriately with other cultures, is seen as knowledge of intercultural interaction. This knowledge also addresses the knowledge, skills, and strategies of EFL teachers to enable them to communicate with each other in a multicultural way.

Data from reflective writings revealed that cultural knowledge was implicitly addressed by some participants. Topics such as extracurricular activities, environmental awareness, and social media reflected an attempt to integrate the lived experiences of students with social reality. However, explicit awareness of the cultural dimension has not been clearly articulated. Their understanding of cultural knowledge remains superficial. It has been used as context or topic content, rather than as a dimension of language teaching in itself.

The choice of topics implied cultural relevance, but none of the participants discussed how culture

affects communication styles and whether this is a misunderstanding. Participants were working in culturally relevant spaces but lacked an intercultural perspective.

The findings indicate that even high-achieving EFL pre-service teachers (PSTs) demonstrated uneven understandings across PCK domains, reinforcing the view that pedagogical expertise develops in domain-specific and practice-based ways rather than as a uniform outcome of academic success. Research across disciplines shows that PCK growth is complex, context-bound, and dependent on how teachers connect content, learners, and pedagogy through enactment and reflection (Grigaliūnienė et al., 2025; Drollinger-Vetter et al., 2025; Vettriselvan et al., 2025). Thus, strong academic performance does not automatically translate into balanced pedagogical understanding.

Regarding language processing and production, participants showed strength in integrating language skills and designing tasks aligned with curricular aims. This reflects patterns found in studies where PSTs more readily demonstrate content-related instructional planning than deeper pedagogical reasoning (Shi et al., 2025; Santos & Luque-Agulló, 2025). However, their limited assessment literacy, difficulty aligning objectives, tasks, and evaluation, suggests that knowledge of teaching strategies was not consistently connected to assessment knowledge, a gap also noted in broader PCK and TPACK research emphasizing the need for explicit scaffolding of instructional decision-making (Cisterna et al., 2025; Sicat et al., 2025). This supports the idea that PSTs may plan engaging lessons yet struggle to articulate the pedagogical logic that links learning goals, evidence, and feedback.

In terms of language teaching strategies, the frequent use of collaborative and genre-oriented activities indicates orientation toward student-centered pedagogy and meaningful communication, trends widely reported in contemporary teacher education (Peercy et al., 2025; Rahman & Rahmat, 2025). Nevertheless, reflections rarely justified why specific techniques were selected, suggesting limited meta-pedagogical awareness. Similar findings appear in studies where PSTs enact innovative practices but provide only surface-level rationales, indicating that reflective discourse does not always reach deeper pedagogical reasoning without structured support (Ga et al., 2025; Yadav et al., 2025).

For knowledge of learners, participants demonstrated moderate awareness by selecting relevant topics and attempting to maintain engagement. This aligns with research showing that PSTs often prioritize motivation and participation as visible indicators of success (Maung et al., 2025; Riski & Sakhiyya, 2025). However, limited attention to learner variability, affective factors, and differentiated support suggests that learner knowledge remained generalized rather than analytically grounded. Studies in diverse contexts similarly report that PSTs need more guided opportunities to interpret learner thinking and diversity as part of PCK development (Leung et al., 2025; Martínez-Bello et al., 2025).

The domain of cognitive language learning strategies appeared weak. Strategy development (e.g., inferencing, self-monitoring) was incidental rather than explicitly scaffolded, echoing research indicating that PSTs often focus on activities rather than the learning processes those activities are meant to cultivate (Getenet et al., 2025; Karlsen et al., 2025). This suggests a gap between task design and awareness of how learners cognitively engage with language, reinforcing calls for teacher education models that make learning processes more visible in reflection and planning.

Intercultural interaction knowledge was the least developed area. Although cultural topics appeared in lesson content, reflections did not address pragmatics, intercultural communication strategies, or how language use varies across contexts. This finding resonates with language teacher education scholarship advocating more explicit integration of intercultural and humanizing perspectives in content and pedagogy (Peercy et al., 2025; Kızıldağ & Warren, 2026). It suggests that culture was treated as content rather than as a communicative and pedagogical dimension of language use.

Overall, reflective practice proved valuable in surfacing both strengths and blind spots in PSTs' PCK. Consistent with research linking reflection, knowledge-building, and professional growth, structured reflective engagement can foster more articulated pedagogical reasoning (Gao et al., 2025; Ardi et al., 2025). However, the findings also show that reflection alone does not guarantee comprehensive understanding; without targeted prompts and feedback, PSTs may remain at descriptive levels of reflection, a pattern also observed in technology-enhanced lesson planning and post-lesson discourse studies (Ga et al., 2025; Tembrevilla & Milner-Bolotin, 2025).

These results imply that teacher education programs should provide stronger scaffolding in

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four areas: assessment literacy, learner diversity, explicit strategy instruction, and intercultural pedagogy. Integrating reflective microteaching with structured feedback, technology-supported analysis, and domain-focused prompts may help PSTs connect what they do in lessons with why they do it (Drollinger-Vetter et al., 2025; Napitupulu et al., 2025; Zou et al., 2025). Sustained, guided reflection embedded in coursework can therefore play a crucial role in supporting more balanced and transferable PCK development among future EFL teachers.

## CONCLUSION

This study shows that even high-achieving EFL pre-service teachers develop PCK unevenly. Their reflections revealed strengths in integrating language skills and applying student-centered teaching strategies, but more limited understanding of assessment design, learner diversity, cognitive language learning strategies, and intercultural communication. These patterns indicate that strong performance in planning and delivery does not automatically translate into deep, balanced pedagogical reasoning across PCK domains.

Structured reflection in microteaching functioned as a critical mechanism for making this knowledge visible. Reflective tasks helped participants recognize gaps between what they taught and how learning was supported, positioning reflection as a bridge between theoretical knowledge and pedagogical enactment. However, reflection alone was insufficient to ensure comprehensive PCK development without explicit scaffolding and domain-focused feedback.

The study contributes to the field by offering a domain-specific picture of how PCK is understood by high-achieving EFL PSTs and by demonstrating the value of analyzing reflective discourse to capture knowledge-in-action. Practically, it underscores the need for teacher education programs to integrate guided reflection with targeted support in assessment literacy, strategy instruction, learner diversity, and intercultural pedagogy. Strengthening these areas can better prepare future EFL teachers to enact informed, responsive, and context-sensitive teaching in increasingly complex language classrooms.

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