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From Theory to Practice: Transforming Pedagogical Content Knowledge into Personal Practical Knowledge in EFL Contexts

Mehran Memari [1]*
[1] Farhangian University, Tehran, Iran

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Abstract

This qualitative multiple case study investigates the underexplored process through which English as a Foreign Language (EFL) teachers transform theoretical Pedagogical Content Knowledge (PCK) into Personal Practical Knowledge (PPK). Data collected via semi-structured interviews, stimulated recall sessions, and reflective journals from twelve in-service EFL teachers revealed that this transformation is a nonlinear, iterative process of adaptation. Thematic analysis identified four interconnected themes central to this development: (1) the pragmatic tailoring of theory to contextual constraints, (2) the critical mechanism of iterative reflection, (3) the strategic negotiation of technology, and (4) the ultimate consolidation of a confident teaching identity. The findings indicate that PPK is not a lesser form of knowledge but a sophisticated, personalized expertise developed through experiential learning and reflective practice. The study concludes that teacher education must shift from a transmission model of theory to one that deliberately fosters reflective practice, adaptive expertise, and professional agency, thereby effectively bridging the enduring theory-practice gap in teacher development.

1. INTRODUCTION

Pedagogical Content Knowledge (PCK) remains a foundational pillar of teacher education, representing the critical amalgamation of subject matter expertise with the pedagogical skill to make it comprehensible to diverse learners (Gooniband et al., 2023; Momenanzadeh et al., 2023; Shulman, 1987). In the field of English as a Foreign Language (EFL), PCK encompasses the nuanced understanding of how to teach specific language skills, anticipate learner difficulties, and adapt methodologies to varied cultural and linguistic contexts (Richards, 2022). While teacher education programs rigorously instill these theoretical models, a significant and persistent gap often exists between the acquired theoretical PCK and the complex, unpredictable reality of the classroom (Borg, 2015; Johnson & Golombek, 2020). Newly qualified teachers frequently experience a 'reality shock,' finding that prescribed methodologies do not seamlessly translate to

* **Corresponding Author:** Mehran Memari, Assistant Professor, Department of English Language Teaching, Farhangian University, Tehran, Iran, **Email**: memari_english001@yahoo.com

their specific contexts, which are characterized by diverse student needs, institutional constraints, and evolving educational technologies (Zheng & Borg, 2014).

The development of PCK is universally recognized as a cornerstone of effective teacher preparation, though its implementation is shaped by specific national contexts and teacher demographics. Research from Uzbekistan demonstrates a concerted national effort to modernize teacher training through competency-based education, digital tools, and innovative methods like problem-based learning (Xolbayeva, 2025). However, this study also reveals persistent challenges, including a theory-practice gap and resistance to change among teacher educators, which can hinder the full enactment of PCK. This challenge of translating knowledge into practice is a central focus in other contexts. For instance, a study provides direct evidence from early childhood education, showing that the teaching practicum is a critical arena where pre-service teachers actively bridge their theoretical knowledge with classroom reality, solidifying their PCK through direct experience (Machmud et al., 2025). Furthermore, the process is not merely cognitive but also deeply personal, as illustrated by some researchers, whose work with career-changers shows that the development of a professional teacher identity is inextricably linked to the acquisition of PCK (Nilsson & Cederqvist, 2025). Together, these studies suggest that robust PCK formation is a multifaceted process, requiring not only modernized curricula and practical application opportunities but also supportive structures that foster the integration of knowledge, practice, and professional identity.

The enduring relevance of Shulman's foundational framework on teacher knowledge, particularly the integration of PCK and Subject Matter Content Knowledge (SMCK), continues to be affirmed in contemporary STEM education research. Effective STEM teaching requires teachers to deeply and flexibly understand both knowledge domains to make content accessible and help students build cognitive connections (Mafa-Theledi, 2024). Through a qualitative study, the research concludes that PCK and SMCK are not isolated but are critically intertwined, directly enhancing teaching professionalism, instructional quality, and student learning outcomes. The study positions this blended knowledge as the ‘heart of the teaching profession,’ essential for the adaptive and responsive teaching practices demanded in modern STEM classrooms. This perspective reframes PCK not as a static possession but as a dynamic and transformative amalgam of knowledge bases that teachers synthesize in practice (Gess-Newsome, 2015).

The development of teacher knowledge is a complex process that is uniquely shaped by a teacher's background and experiences. This is particularly evident for career-change teachers, who enter the profession with a wealth of non-teaching expertise. A study on pre-service STEM career-change teachers reveals that their prior industry experience is a powerful asset, strongly shaping their teaching orientation and enriching their knowledge of curriculum and instructional strategies by connecting learning to real-world applications. However, this study also highlights an uneven development of PCK, as these teachers simultaneously struggled with core classroom competencies, namely knowledge of learners and assessment, and faced relational tensions with their often-younger mentors. This underscores that professional expertise does not automatically translate into teaching proficiency (Yip, 2025). The development of a teaching identity is thus not merely an accumulation of knowledge components but a deeply personal process of integration. This perspective is reinforced by the analysis of the research on a novice L2 writing teacher. The analysis illustrates the construction of personal practical knowledge (PPK), where teachers weave together their past experiences, personal values, and classroom dilemmas into a coherent professional identity (Li, 2025). Together, these studies suggest that for career-changers, becoming a teacher involves a dual challenge: the strategic transfer of valuable prior knowledge and the often-difficult personal construction of a new professional self, a process that requires targeted mentoring and reflective support.

This process of bridging the theory-practice gap is encapsulated by the concept of PPK, which is the embodied, narrative, and contextually-grounded knowledge teachers develop through lived experience (Clandinin & Connelly, 1995). It is the practical, often tacit, understanding of what works, for whom, and under what conditions, a knowledge shaped by a teacher's identity, beliefs, and the specific ecology of their school (Golombek & Johnson, 2019). The transformation of PCK into PPK is not automatic; it is a complex process of negotiation, adaptation, and reflection that is particularly critical in EFL settings, where teachers often operate in environments influenced by globalization, technological integration, and multilingual demands (Jenkins et al., 2018).

The effective assessment of student understanding is a critical dimension of teacher competency, particularly in complex, systems-oriented subjects like geography. As a powerful and versatile diagnostic tool, concept maps are used predominantly to reveal conceptual change and identify misconceptions within subjects like climate change (Pivarníková, 2025). This tool is especially valuable for fostering the geographical and systems thinking that is central to the discipline. This focus on subject-specific pedagogical strategies emphasizes the importance of specialized instructional and assessment techniques unique to the subject, such as those required in geography education (Smit et al., 2023). The ability to select and effectively implement such a tool is not an isolated skill but part of a larger professional repertoire. Expertise is multi-dimensional, encompassing the knowledge to choose appropriate assessment methods (like concept maps), the pedagogical skill to implement them, and the reflective capacity to interpret their results (Zhang & Tian, 2025).

The purpose of this qualitative study was to investigate the contemporary experiential process through which in-service EFL teachers translate theoretical PCK into their own PPK. By examining the narratives and reflective practices of educators in diverse digital and face-to-face contexts, this research aimed to identify the modern catalysts, barriers, and reflective processes that facilitate this transformation, ultimately seeking to map the journey from acquired theory to embodied, practical expertise.

This study holds significant potential for both theoretical and practical advancement in post-pandemic EFL teacher education. Theoretically, it contributes to a deeper, more contemporary understanding of the dynamic relationship between PCK and PPK within globalized and digital learning environments (Hattie, 2023). Practically, the findings will provide teacher educators, curriculum designers, and school administrators with evidence-based insights to design more effective, responsive, and technology-integrated professional development programs. By focusing on the transition to practice with modern considerations, this research can help bridge the theory-practice gap, ultimately fostering the development of more adaptive, resilient, and effective EFL practitioners for the 21st-century classroom (Darling-Hammond, 2021).

Research Questions

1. How do experienced EFL teachers describe the process of adapting and internalizing theoretical PCK into their PPK within contemporary digital and multilingual classrooms?
2. What specific modern contextual factors (e.g., technology integration, post-pandemic teaching realities, global Englishes) and experiential catalysts most significantly facilitate or hinder the transformation of PCK into PPK?
3. What implications do the narratives of this transformation hold for the structure and focus of pre-service and in-service EFL teacher education programs in the current educational landscape?

2. LITERATURE REVIEW

Theoretical Foundations and Evolution of PCK

The conceptual bedrock of this study is Shulman's (1987) seminal work on PCK, which he defined as the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners. This construct moved the focus of teacher education beyond mere content knowledge toward the specialized knowledge required for effective teaching. In the decades since, the concept has been rigorously explored and validated across disciplines, including language education (Depaepe et al., 2013). In English Language Teaching (ELT), PCK translates to knowing not just the grammar and vocabulary of English, but understanding how to teach these elements effectively—anticipating student difficulties, employing multiple representations, and tailoring instruction to specific contexts (Mashhadi et al., 2022; Mashhadi et al., 2023; Richards, 2022).

The Emergence of PPK

While PCK provides a crucial theoretical framework, it often exists as a body of knowledge to be acquired. In practice, however, teachers develop the term PPK (Clandinin & Connelly, 1995). This form of knowledge is narrative, embodied, and shaped by a teacher's experiences, beliefs, and the specific moral, affective, and aesthetic dimensions of their classroom (Golombek & Johnson, 2019). PPK is not simply the application of PCK; it is the knowledge teachers use to make instantaneous decisions in the complex and unpredictable reality of their own classrooms. It is, therefore, highly individualized and context-bound, representing the practical wisdom that guides a teacher's daily actions (Borg, 2015; Johnson & Golombek, 2020).

The Critical Theory-Practice Gap

A significant challenge in teacher education is the persistent gap between the theoretical PCK presented in programs and the practical demands of the classroom (Korthagen, 2010). This gap is acutely felt by novice EFL teachers, who may struggle to translate methodological theories into actionable strategies for their specific students, who often come from diverse cultural and linguistic backgrounds and study within exam-oriented systems (Farrell, 2012). This disconnect can lead to frustration and a retreat to traditional teaching methods, underscoring the necessity of understanding how theoretical knowledge is transformed into personal, practical competence.

The Transformative Process: From Acquired PCK to Embodied PPK

The transformation of PCK into PPK is not an automatic process but a complex, iterative one of adaptation and internalization. Recent research suggests that this transformation is selectively partial, means teachers filter and adapts theoretical knowledge through the lens of its own beliefs, prior experiences, and the immediate constraints and affordances of its teaching context (Wildeman et al., 2023; Xu & Wang, 2023). This process is mediated by critical reflection, where teachers constantly analyze their practices and student outcomes to refine their understanding (Úcar, 2022). Essentially, PPK is developed through a dialectical relationship between received theory and lived experience.

The Catalytic Role of Blended Learning and Technology

The recent pivot to technology-mediated instruction has created new avenues for this transformation. Blended learning environments, which integrate face-to-face and online

modalities, can serve as powerful catalysts for developing PCK and fostering its evolution into PPK (Alimuddin et al., 2021; Mashhadi et al., 2016). Frameworks like Technological Pedagogical Content Knowledge (TPACK) (Mishra & Koehler, 2006) explicitly address this integration, arguing that effective teaching requires an interplay between technology, pedagogy, and content. Navigating these tools forces teachers to make deliberate pedagogical choices, thereby making their PCK more explicit and subject to refinement, a key step in their transformation into personalized PPK.

The Importance of Community and Collaboration

The development of PPK is not a solitary endeavor. Professional learning communities, both online and face-to-face, provide vital spaces for teachers to co-construct knowledge through dialogue, observation, and shared reflection (Churchward & Willis, 2019; Mashhadi & Dehghani, 2022). Within these communities, teachers can articulate their practical dilemmas, receive feedback, and witness alternative approaches, which helps them challenge and expand their own developing PPK (Craig, 2013). This social mediation is crucial for moving beyond individual trial and error and for grounding PPK in a broader professional discourse.

Contextual Factors as Mediators

The transformation process is profoundly influenced by a myriad of contextual factors. Socio-cultural conditions, institutional policies, class sizes, resource availability, and national curricula all act as either facilitators or barriers (Hayes, 2009). For instance, a rigid, exam-focused curriculum may constrain a teacher's ability to experiment with communicative language teaching methods they learned theoretically, thereby shaping the kind of PPK they develop. Acknowledging these contextual mediators is essential for a realistic understanding of how PCK becomes PPK in real-world EFL settings (Borg, 2005).

Methodological Considerations in PCK/PPK Research

Research into these knowledge domains has employed diverse methodologies. While large-scale quantitative studies have used surveys to measure PCK (TEDS-M, COACTIV), they often struggle to capture the nuanced, dynamic, and personal nature of PPK. Consequently, there is a growing emphasis on qualitative approaches like narrative inquiry, case studies, and video-stimulated recall, which are better suited to exploring the experiential and reflective processes underlying knowledge transformation (Allas et al., 2017).

Persistent Challenges and Measurement Issues

A significant challenge in the field that remains, is the difficulty of defining and measuring these complex constructs, particularly PPK which itself is often topic-specific and context-dependent, making generalized measurements problematic (Depaepe et al., 2013). Assessing PPK is even more elusive, as it resides in the individual teacher's practice and reflections. Developing robust, validated instruments and observational protocols to capture the development of PPK over time remains a key area for methodological advancement (Chan & Hume, 2019).

Synthesis and Identification of the Research Gap

The existing literature provides a robust foundation on PCK and PPK as separate constructs and acknowledges the theory-practice gap. However, a critical gap remains in empirically investigating

the process through which EFL teachers transform acquired PCK into their own PPK. While factors like reflection, context, and technology are acknowledged as influential, the precise mechanisms and experiences that drive this transformation are underexplored, particularly within the unique challenges of diverse EFL contexts. This study aims to address this gap by examining the experiential narratives of in-service EFL teachers to map this critical journey from theory to practice.

3. METHODOLOGY AND DESIGN

Research Design and Rationale

This study will employ a qualitative multiple case study design Creswell and Poth (2016) to investigate the process through which EFL teachers transform PCK into PPK. A case study approach was deemed most appropriate because it facilitates an in-depth, multi-faceted exploration of a contemporary phenomenon (the transformation of teacher knowledge) within its real-life context (Yin, 2018). This design allowed for the retention of the holistic and meaningful characteristics of teachers' lived experiences, which is essential for understanding a complex and nuanced process like knowledge transformation. Rather than seeking statistical generalization, this study aimed for analytical generalization, where the findings are extrapolated to broader theory about teacher development (Tisdell et al., 2025). The multiple-case design enabled a cross-case analysis, revealing patterns and unique insights across different teaching contexts, thus strengthening the robustness and trustworthiness of the conclusions.

Participant Selection and Context

A purposive sampling strategy was used to select information-rich cases that could provide profound insights into the research problem (Palinkas et al., 2015). The target participants were twelve in-service EFL teachers from various institutional contexts (e.g., public schools, private schools and private language institutes) in Khuzestan. To capture the developmental nature of knowledge transformation, the sample included four teachers from each career stage: early-career (1-5 years), mid-career (6-15 years), and late-career (16+ years). All participants had to complete a formal teacher education program, ensuring they possess the foundational theoretical PCK that is the starting point of this investigation. Prior to data collection, ethical approval was sought from the relevant institutional review board, and all participants were provided informed consent, ensuring confidentiality through the use of pseudonyms.

Data Collection Methods

Data were collected over a six-month period using a triangulation of methods to ensure comprehensive and reliable data, capturing both the process and the outcomes of knowledge transformation.

The rationale behind the structured elements within each data collection method was to systematically target different, yet complementary, dimensions of teacher cognition and practice. This multi-pronged approach was designed to move from general background understanding, to real-time instructional reasoning, and finally to ongoing reflective synthesis, thereby capturing the complex process of knowledge transformation from theory into personal practice.

Semi-Structured Interviews

Two in-depth interviews, approximately 60-90 minutes each, were conducted with each participant. The first interview focused on their educational background, their understanding of PCK, and their initial teaching experiences. The second interview explored specific classroom practices, critical incidents that shaped their approach, and their reflective processes, explicitly probing how theory has been adapted into their personal practice.
Stimulated Recall Sessions

Each participant was video-recorded during one typical lesson. Within 48 hours of the recording, a stimulated recall session was conducted where the teacher and researcher watched selected clips. The teacher was prompted to articulate the rationale behind their instructional decisions in the moment, providing a window into their practical, often tacit, PPK (Gass & Mackey, 2016).

Reflective Journals

Participants were asked to maintain a digital journal for the duration of the study, making entries at least twice a month. Prompts guided them to reflect on lessons where they felt theory and practice were aligned or in conflict, challenges they faced, and moments of professional insight. This method captures the ongoing, reflective process of knowledge transformation.

Data Analysis

The analysis followed a thematic analysis approach which is well-suited for identifying, analyzing, and reporting patterns within qualitative data (Braun & Clarke, 2006). All interviews and stimulated recall sessions were audio-recorded, transcribed verbatim, and combined with the journal entries to form a comprehensive dataset. The analysis proceeded in an iterative cycle. First, the researcher engaged in multiple close readings of the transcripts to achieve familiarization. Initial codes were then generated that identify interesting features of the data relevant to the research questions. These codes were then collated into potential themes, which were reviewed and refined to ensure they form a coherent pattern and are supported by the data. NVivo software was used to facilitate the organization and management of the codes and themes. The final step involved defining and naming the themes, weaving them into a narrative that directly addresses the research questions, using vivid, illustrative excerpts from the data.

Table 1: Thematic Analysis Codebook Framework

Theme	Description	Example Initial Codes	Data Source
Contextual Adaptation	How teachers modify theoretical PCK to fit their specific classroom constraints and resources.	"Large class workarounds", "Exam pressure", "Resource limitations", "Cultural appropriateness"	Interviews, Journals
Iterative Reflection	The process of consciously thinking about and learning from teaching experiences.	"Thinking on my feet", "After-class analysis", "Learning from mistakes", "Mentor feedback"	Stimulated Recall, Journals
Technological Negotiation	The process of selecting, rejecting, and adapting technology to align with pedagogical goals.	"App selection", "Tech fails", "Student engagement hacks", "Blending old and new"	Interviews, Stimulated Recall
Identity Formation	The development of teacher confidence and a personalized sense of self-efficacy.	"Finding my voice", "Trusting my judgment", "My teaching philosophy"	Interviews, Journals

Trustworthiness and Ethical Considerations

To explicitly address the foundational principles of rigor within this qualitative paradigm, this study established trustworthiness by adhering to the four criteria proposed by Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability. Credibility, the qualitative parallel to internal validity, was rigorously pursued through methodological triangulation, leveraging the complementary strengths of semi-structured interviews, stimulated recall sessions, and reflective journals to provide a multi-faceted view of teacher cognition. This was further enhanced by member checking, wherein preliminary interpretations and synthesized summaries were shared with participants to verify accuracy and ensure that their experiences were authentically represented. The use of stimulated recall, conducted within 48 hours of the recorded lesson, specifically served to capture real-time, situated decision-making, thereby mitigating the limitations of purely retrospective self-report and strengthening the credibility of the findings concerning tacit knowledge (Gass & Mackey, 2016). Dependability, the qualitative counterpart to reliability, was ensured through the creation of a comprehensive and transparent audit trail. This trail meticulously documented all research decisions, from the initial framing of research questions and the iterative development of the codebook to sequential coding iterations and analytical memoing. NVivo software facilitated this process, providing a clear, date-stamped record of the analytical journey and enabling an external reviewer to scrutinize the logical progression from raw data to interpreted findings.

Furthermore, transferability was addressed not through the pursuit of statistical generalization, which is inconsistent with the case study design, but through the provision of thick, contextualized description. Detailed portraits of the participants' professional backgrounds, their specific institutional ecologies (e.g., public school vs. private institute, class sizes, resource availability), and the broader socio-educational context of Khuzestan were provided, empowering readers to assess the degree of resonance and applicability of the findings to their own contexts. Finally, confirmability was safeguarded through sustained researcher reflexivity. A reflexive journal was maintained throughout the data collection and analysis phases, serving as a space to bracket personal assumptions, acknowledge potential biases related to the researcher's own teaching background, and consciously work to ensure that the emergent themes were genuinely

grounded in the participants' voices and data rather than a priori preconceptions. This reflexive practice was complemented by peer debriefing sessions with two experienced qualitative researchers, who critically interrogated the coding framework and challenged emerging interpretations, thereby ensuring that the findings were a credible co-construction between the researcher and the data. Collectively, these methodical strategies provide robust, evidence-based support for the reliability and validity of this study, reconceptualized appropriately as trustworthiness within the qualitative research tradition.

4. RESULTS

This section presents a detailed thematic analysis of the data collected from twelve EFL teachers regarding their transformation of PCK into PPK. The data is organized into four primary themes, each explored in depth with supporting evidence from interviews, journals, and stimulated recall sessions. Summary tables are provided after each theme to offer a concise overview of the sub-themes and their prevalence across the participant group.

Theme 1: The Imperative of Contextual Adaptation

The analysis revealed that the classroom context is not a passive backdrop but an active agent that fundamentally shapes PPK. Teachers consistently described a process of "pragmatic tailoring," where theoretical ideals were reshaped to fit realities. This theme was pervasive across all twelve participants. Sub-themes included adapting to large class sizes (e.g., modifying group work into structured pair activities), exam-oriented curricula (e.g., embedding communicative practice within exam-task frameworks), and diverse learner needs (e.g., simplifying language without sacrificing content goals). For example, A3 (Pseudonym, Public School Teacher) noted in her journal: "The theory says 'promote free discussion,' but with 48 students and a national exam to prepare for, my practical knowledge is about 'scaffolded dialogue with key phrases.' It's different, but it's effective." This demonstrates that PPK develops as a direct response to contextual imperatives.

Table 2: Manifestations of Contextual Adaptation in PPK Development

Sub-Theme	Description	No. of Participants Reporting	Representative Quote
Large Class Sizes	Modifying interactive methods for manageability and engagement.	10/12	"I use think-pair-share instead of large group debates. It's the only way everyone gets to speak."
Exam Pressure	Integrating skill development with exam preparation techniques.	9/12	"I weave grammar points into past exam papers. Theory meets reality there."
Resource Limitations	Creating low-tech or no-tech solutions to achieve pedagogical goals.	7/12	"No projector? No problem. We use picture cards from magazines for the same vocabulary lesson."

Theme 2: The Mechanism of Iterative Reflection

The transformation of PCK into PPK was consistently mediated by a process of ongoing reflection, encompassing both reflection-in-action and reflection-on-action. The stimulated recall sessions were particularly valuable in making this tacit process explicit. Participants analyzed their recorded lessons and articulated the real-time decision-making that deviated from theoretical models. C1

(Pseudonym, Early-Career Teacher) observed during his session: "Here, I'm skipping the planned board-work. I see the students are confused, so I quickly draw a simple timeline on the whiteboard. My professor taught me about timelines, but not how to decide when to use one. That's my practical knowledge now." This reflective cycle, plan, act, observe, and adapt, was the fundamental engine of knowledge transformation.

Table 3: Forms and Outcomes of Iterative Reflection

Form of Reflection	Data Source	Outcome for PPK	Example
Reflection-in-Action	Stimulated Recall	Immediate adaptation of teaching strategies in the moment.	"I changed the activity mid-flow because I saw it wasn't working."
Reflection-on-Action	Journals, Interviews	Long-term refinement of lesson plans and teaching philosophy.	"I journaled about why that lesson failed and redesigned it completely for next time."
Collaborative Reflection	Interviews	Validation and sharing of practical strategies with peers.	

Theme 3: Negotiation of Technological Integration

A significant finding was that technological knowledge (TK) does not simply integrate with PCK; it forces an active negotiation, closely aligning with the TPACK framework. Teachers described a process of trial and error, assessing not just *if* a tool worked, but *how* it could be made to work for their specific pedagogical purpose. C3 (Pseudonym, Late-Career Teacher) explained: "I wanted to use an online discussion forum [TK]. The theory says it promotes writing [PK]. But students posted shallow comments. My practical knowledge was to add a required 'respond-to-a-peer' rubric [PK] and focus the topic on our course content [CK]. Now it works." This shows PPK developing at the intersection of technology, pedagogy, and content.

Table 4: The Process of Technological Negotiation in PPK

Stage of Negotiation	Process Description	Participant Insight
Selection	Choosing tools that align with core learning objectives.	"I don't use tech for tech's sake. Will it help them understand the grammar better?"
Adaptation	Modifying the use of a tool to fit context or improve efficacy.	"The quiz app was too fast. I now use it for review, not for introducing new content."
Rejection	Discarding tools that consistently fail to enhance learning.	"I abandoned the fancy vocabulary app. Flashcards and peer quizzing were more effective for my students."

Theme 4: Consolidation of a Teaching Identity

The ultimate outcome of the transformative process was the consolidation of a confident and personalized teaching identity. Participants described a journey from seeking validation from external theory to trusting their own professional agency and judgment. This theme was strongly correlated with experience but was also evident in the narratives of reflective Mid-Career teachers. B2 (Pseudonym, Private Institute Teacher) summarized this shift: "I am no longer just applying 'methods.' I have a toolbox. More importantly, I have the confidence to know which tool to use

and when. That is my practical knowledge." This emergence of a professional self, defined by autonomy and efficacy, is the hallmark of matured PPK.

5. DISCUSSION AND CONCLUSION

Discussion

The primary aim of this study was to elucidate how the empirical results from this multiple case study address the research questions and enhance our understanding of the transformative process from PCK to PPK in EFL contexts. The discussion is organized around the four central themes identified in the findings: (1) The Imperative of Contextual Adaptation, (2) The Mechanism of Iterative Reflection, (3) The Negotiation of Technological Integration, and (4) The Consolidation of a Teaching Identity. By examining each theme in light of existing literature, this section will highlight the study's contributions, acknowledge its limitations, and suggest implications for teacher education and future research.

The finding that contextual constraints act as a primary catalyst for the development of PPK resonates powerfully with prior research. This study confirms and extends the work of Borg (2005) and Hayes (2009), who identified socio-cultural and institutional contexts as critical mediators of teacher cognition. However, where previous literature often framed context as a *barrier* to implementing theory, this study reveals a more nuanced view: teachers engage in a proactive process of "pragmatic tailoring." They are not merely circumventing constraints but are actively and creatively synthesizing theory with situational realities to produce effective, context-sensitive practices. This aligns with the concept of adaptive expertise (Stevenson et al., 1986), where teachers develop the flexibility to innovate and improvise rather than merely applying routine skills. The present study contributes a refined understanding of this process within EFL settings, illustrating that PPK is, at its core, knowledge that is functionally adaptive to its ecosystem.

The mechanism of iterative reflection, encompassing both reflection-in-action and reflection-on-action, emerged as the engine of knowledge transformation. This finding robustly supports the theoretical frameworks of Farrell (2012) who championed reflective practice as the cornerstone of professional growth. The use of stimulated recall sessions in this study was particularly effective in making the tacit, in-the-moment dimensions of reflection-in-action explicit, a methodological advancement on studies reliant solely on retrospective interviews or journals. The data demonstrates that it is through this continuous cycle of action, observation, and adjustment that abstract principles of PCK are tested, refined, and ultimately integrated into a teacher's personalized repertoire. This study therefore provides robust empirical evidence from the EFL domain to validate long-held theoretical assumptions about the importance of reflection, specifying it as the critical link between knowing *what* to do and knowing *how* and *when* to do it.

The finding that teachers *negotiate* technological integration aligns perfectly with and extends the TPACK framework (Mishra & Koehler, 2006) . This study moves beyond simply documenting whether teachers use technology to reveal the complex cognitive process behind its use. Teachers in this study did not just integrate technology; they constantly assessed its alignment with pedagogical goals (PK) and content demands (CK), a process that actively generated new PPK. This negotiation often involved failure, adaptation, and at times, rejection, a messy but crucial process of learning that is often absent from idealized models of TPACK. The findings suggest that PPK development in the digital age occurs precisely at this intersection of trial, error, and strategic thinking about technology. Consequently, this study argues for a view of TPACK not

as a static knowledge base to be acquired, but as a dynamic and ongoing process of negotiation that is a fundamental driver of practical knowledge formation.

The consolidation of a confident and autonomous teaching identity is perhaps the most significant outcome of the transformative process. This finding elevates the discussion from the acquisition of skills and knowledge to the development of a professional self. It strongly supports the assertions of Clandinin and Connelly (1995) and Golombek and Johnson (2019) that PPK is deeply personal and narrative in nature. When teachers like B3 stated, "I teach like *me*," they were articulating the culmination of the transformation: the development of professional agency. This agency is characterized by the confidence to selectively draw from theory, adapt it through reflection, and apply it judiciously within their specific context. Therefore, this study posits that the ultimate signifier of mature PPK is not a specific teaching technique but the emergence of a teacher's unique voice and the secure identity of a self-reliant, adaptive professional.

Synthesizing these themes, this study provides a clear understanding of how PCK is transformed into PPK. The process is ignited by contextual imperatives, fueled by iterative reflection, enriched through technological negotiation, and ultimately crystallized in a stable professional identity. The findings reveal that this transformation is iterative, reflective, and deeply embedded in context. The key catalysts include contextual challenges, reflective practice, collaborative dialogue, and technological problem-solving. The implications for teacher education highlight the need to move beyond the transmission of theory toward creating experiences that foster reflection, agency, and adaptive expertise. Theoretically, this study bridges Shulman's (1987) foundational work on PCK with the narrative and identity-focused perspectives of Clandinin and Connelly (1995) on PPK, offering a coherent, evidence-based account of the journey between these two constructs. It demonstrates that PPK is not a lesser or simplified form of knowledge but rather a more sophisticated, personalized, and powerful form of professional understanding.

Conclusion

This study set out to investigate the complex process through which EFL teachers transform theoretical PCK into their own PPK. Employing a qualitative multiple-case study design, the research drew on the experiences of twelve in-service EFL teachers through interviews, stimulated recall sessions, and reflective journals. The analysis revealed that this transformation is not a linear or automatic process but a dynamic and iterative journey. The findings were organized around four central themes: the imperative of contextual adaptation, the mechanism of iterative reflection, the negotiation of technological integration, and the consolidation of a teaching identity. Together, these themes illustrate that PPK is not a diluted form of PCK but a sophisticated, personalized, and contextually-grounded form of professional expertise that is built through experience, reflection, and problem-solving.

The significance of this study's conclusions is threefold. Theoretically, the research bridges the classic framework of PCK proposed by Shulman (1987) with the narrative concept of PPK introduced by Clandinin and Connelly (1995), offering an empirically derived model of the transformation between them. It further extends the Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) by conceptualizing it as a dynamic process of negotiation rather than a static knowledge base. Practically, the study provides teacher educators with a blueprint for designing more effective curricula that emphasize reflective practice and the development of adaptive expertise. For practicing teachers, it validates their experiential knowledge and offers a framework for understanding their professional growth, encouraging deliberate reflection and collaboration. From a policy perspective, the findings underscore the need

for educational policymakers and school administrators to create conditions that foster knowledge transformation. This involves allocating time for collaborative planning and reflection, reducing administrative burdens that constrain reflective practice, and investing in professional development that is sustained, contextually relevant, and centered on classroom problem-solving rather than one-off theoretical workshops.

While this study offers valuable insights, its limitations must be acknowledged. The qualitative multiple-case design, while providing depth, limits the generalizability of the findings. The sample was confined to one geographical region, and the findings are influenced by its specific educational culture. Future research could employ a longitudinal design to track the transformation process in novice teachers over several years. Additionally, studies could explore the specific role of mentorship and professional learning communities in facilitating this process, or investigate whether the developed model holds true in different cultural and educational contexts (e.g., ESL vs. EFL). Finally, research could focus on developing and evaluating specific teacher education interventions designed to catalyze the transition from PCK to PPK based on the findings of this study.

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Appendices

Appendix A: Informed Consent Form

Title of Project: From Theory to Practice: Transforming PCK into Personal Practical Knowledge in EFL Contexts

Researcher: Mehran Memari

Introduction and Purpose: You are invited to participate in a research study about how English teachers develop their personal teaching knowledge. The purpose of this study is to understand how the theories learned during teacher education are transformed into practical classroom knowledge.

Procedures: If you agree to participate, you will be asked to:

- Participate in two individual interviews (60-90 minutes each).
- Allow one of your lessons to be video-recorded.
- Participate in a stimulated recall session based on the recording (60 minutes).
- Maintain a reflective journal over a period of six months.

Confidentiality: Your participation will be kept strictly confidential. Your name and any identifying information will be replaced with a pseudonym in all study records and publications. All digital files will be stored on a password-protected computer.

Voluntary Participation: Your participation is entirely voluntary. You have the right to refuse to answer any question and to withdraw from the study at any time without any penalty.

Consent: By signing below, you confirm that you have read this form, have had your questions answered, and agree to participate in this study.

_____ _____

Participant Signature Date

Appendix B: Semi-Structured Interview Protocol (First Interview)

Interview Guide: Background and Initial PCK Participant

Code: Date:

I. Introduction & Warm-up

1. Can you tell me a little about your professional background? How long have you been teaching English?

2. What initially interested you in becoming a teacher?

II. Teacher Education & Theoretical Knowledge (Focus on PCK)

3. Think back to your teacher education program. What were the most significant theories or teaching methods you learned about? (Probes: communicative language teaching, task-based learning, grammar instruction methods).

4. How would you define "effective English language teaching" based on your training?

5. Can you describe a time you tried to implement a specific theory or method from your studies in your classroom? What happened?

III. Early Teaching Experiences

6. Describe your first year of teaching. What was the biggest surprise or challenge in translating what you learned into practice?

7. What kind of support did you have (e.g., mentor, colleagues) during this transition?

Appendix C: Semi-Structured Interview Protocol (Second Interview)

Interview Guide: Practical Knowledge & Reflection Participant

Code: Date:

I. Reflection on Practice (Focus on PPK)

1. How would you describe your current teaching style or philosophy? How is it similar to or different from when you started?

2. Think of a recent lesson you felt was very successful. What did you do that made it work so well? Where did that idea/strategy come from?

3. Think of a lesson that didn’t go as planned. What did you learn from that experience? How did it change your approach afterward?

II. Navigating Context

4. How do factors like large class sizes, exams, or limited resources influence your daily teaching decisions?

5. Can you give an example of how you've had to adapt a "best practice" or theoretical ideal to fit your specific classroom reality?

III. Synthesis

6. How do you balance what you *know you should do* (from theory) with what you *feel works* in your classroom?

7. Is there anything else about your development as a teacher that you think is important for me to understand?

Appendix D: Reflective Journal Prompt Guide

Instructions for Participants: Please make an entry in your journal at least twice a month. You can write as much or as little as you like. Below are some prompts to guide your thinking if you find them helpful.

Prompt 1: Describe a moment this week where you had to "think on your feet" and change your lesson plan in the moment. What prompted the change? What was the outcome?

Prompt 2: Reflect on a interaction with a student or a group that surprised you. What did it teach you about teaching or about your students?

Prompt 3: Where did you see a clear connection between something you learned in your training and your classroom practice this week? Where did you see a disconnect?

Prompt 4: What is a recurring challenge in your teaching? What have you tried to do to address it? What has worked or not worked?

Prompt 5: Free reflection: Is there anything else you are reflecting on about your teaching this week?

Appendix E: Stimulated Recall Protocol

Participant Code: **Date of Recording:** **Date of Recall Session:**

Researcher Instructions: Select 2-3 short video clips (2-3 minutes each) that depict:

- A point where the teacher made a significant instructional decision.
- A moment of apparent challenge or surprise.
- An instance of particularly successful student engagement.

Introduction for Participant: "We are now going to watch a few short clips from the recorded lesson. As we watch, I will pause the video and ask you to describe what you were thinking about at that specific moment. There are no right or wrong answers. I am just interested in understanding your decision-making process."

Prompt Questions (to be asked after pausing the video):

- "Can you tell me what you were thinking here?"
- "What were you considering at this moment?"
- "What was the reason behind choosing to do [X] at this point?"
- "Was this a planned decision or a spontaneous one?"
- "What were you paying attention to in the students' reactions?"

Appendix F: Demographic Survey

- **Participant Code: _____**
- **Age: _____**
- **Gender: _____**
- **Years of Teaching Experience: _____**
- **Current Teaching Context (e.g., public primary school, private university): _____**
- **Highest Qualification Earned: _____**
- **Approximate Class Size: _____**
- **Years since completing initial teacher education: _____**