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Professional Development as a Negotiated Practice: Usability, Constraints, and Teacher Navigation in China

Yanrong Li

Universiti Kebangsaan Malaysia

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Abstract

Background: This study examines how primary school teachers perceive, experience, and navigate professional development (PD) under everyday organisational constraints in an urban public primary school in southwest China. Semi-structured interviews were conducted with eight teachers and supplemented by non-participant observations of school-based learning routines and teachers' engagement with online PD modules. Data were analysed using reflexive thematic analysis, informed by an integrated framework (Job Demands–Resources, self-determination theory, and practice-based teacher learning). Three themes emerged. (1) Teachers judged PD through a "usability" standard, valuing actionable strategies that fit classroom realities and are feasible to implement. (2) Time scarcity and administrative encroachment fragmented PD and often shifted participation toward completion-oriented compliance, especially in standardised online modules. (3) Teachers navigated constraints through selective engagement, mentoring and collegial support as compensatory pathways, and conditional adoption of digital/AI tools when these reduced workload and aligned with instructional needs; observed AI use was generally low and uneven. PD is a negotiated practice shaped by PD design, organisational conditions, and teachers' adaptive strategies, highlighting the need to protect learning time, strengthen mentoring, align evaluation with PD expectations, and ensure technology-related PD is feasible.

Keywords: Professional Development, Primary School Teachers, Usability, Organisational Constraints, Teacher Agency, Mentoring, Online PD, Ai In Education

Introduction

Teachers' professional development (PD) has long been regarded as a central mechanism for improving teaching quality and enhancing student learning outcomes. A substantial body of empirical research indicates that high-quality PD can shape teachers' instructional practices in ways that are positively associated with student achievement (Darling-Hammond et al., 2017). Accordingly, PD is commonly defined as an ongoing process through which educators develop their professional knowledge, skills, and dispositions to support students' learning (OECD, 2009). Effective PD is typically characterized as sustained, reflective, and collaborative, enabling teachers to critically examine their practice and learn through professional interaction (Business Bliss Consultants FZE, 2021). While these principles are widely endorsed,

the extent to which PD achieves its intended purposes depends not only on its design but also on how it is experienced and enacted by teachers in their everyday professional contexts.

In recent years, teacher PD in China has received substantial institutional and policy attention. Teachers are encouraged—or required—to participate in a wide range of professional learning activities, including school-based teaching and research practices, district- and city-level training programs, and online PD courses. These activities are embedded within a highly institutionalized system characterized by subject-based teaching research groups, administrative performance evaluations, and accountability mechanisms, in which participation and completion are often closely monitored. Alongside long-standing initiatives such as the National Teacher Training Program, broader reform agendas—such as the promotion of holistic education and the increasing integration of artificial intelligence (AI) into teaching and assessment—have further expanded the scope, intensity, and visibility of PD. Although these initiatives are intended to enhance teaching quality and educational equity, they also reshape teachers' daily work patterns and professional experiences.

Existing research suggests that sustained and well-designed PD can strengthen teachers' self-efficacy, motivation, and instructional quality (Li et al., 2022; Burić & Kim, 2020). Teachers with higher self-efficacy are more likely to demonstrate persistence, professional commitment, and adaptive teaching practices, which are closely linked to student engagement and learning outcomes (Bandura, 1997, as cited in Burić & Kim, 2020). Moreover, the quality of teachers' PD has been shown to account for meaningful differences in student achievement (Hattie, 2009, as cited in Fairman et al., 2022). These findings underscore PD as both a policy priority and a core component of teachers' professional lives. However, they also raise an important question: under what conditions does PD function as a meaningful source of professional growth rather than as an additional institutional obligation?

In highly institutionalized and accountability-driven contexts, professional development cannot be presumed to be inherently beneficial; without careful attention to teachers' lived experiences, PD risks becoming a compliance-oriented activity that undermines its intended utility and effectiveness. Despite the rapid expansion of PD opportunities, a growing body of research documents a persistent gap between the formal provision of PD and teachers' lived experiences of engaging in it. Teachers frequently report heavy workloads, fragmented learning time, and competing institutional demands, all of which may constrain the extent to which PD translates into genuine professional learning (Cheng et al., 2023; Zhang & Li, 2023). In highly accountable systems, PD participation may become compliance-driven, emphasizing attendance and completion over reflection and application. As a result, the utility and effectiveness of PD cannot be assumed, particularly when teachers experience PD as an added burden rather than as a supportive resource for improving practice. Differences in school leadership, professional learning cultures, and access to resources further shape how teachers interpret and respond to PD initiatives (Huang, 2023; Yang, 2024).

Notably, much of the existing literature on teacher PD in China has focused on policy frameworks, training models, or large-scale program evaluations. While these studies offer valuable insights into system-level design and implementation, they often provide limited understanding of how PD is experienced by teachers in their everyday work. Relatively fewer studies foreground teachers' perspectives to examine how they make sense of PD, negotiate

institutional expectations, and integrate professional learning into their daily teaching practices. This represents an important gap, as PD is not merely a technical intervention but a situated and relational process shaped by teachers' beliefs, emotions, professional identities, and working conditions. Without attending to teachers' lived experiences, efforts to improve PD effectiveness risk remaining superficial and may fail to achieve their intended outcomes.

Against this backdrop, this qualitative case study explores professional development as experienced by teachers in an urban public primary school in Sichuan Province. Rather than evaluating specific policies or training programs, the study foregrounds teachers' voices to examine how they perceive PD, how they experience different forms of professional learning, and how they navigate PD amid institutional expectations, technological initiatives, and everyday teaching responsibilities. The study is guided by the following research question: How do primary school teachers perceive, experience, and navigate their professional development?

By focusing on teachers' lived experiences, this study contributes to the literature in several ways. Conceptually, it advances understanding of PD as a negotiated and contextually embedded process rather than a uniformly effective intervention. Practically, the findings offer insights for school leaders, PD designers, and educational administrators seeking to enhance the relevance, usefulness, and effectiveness of professional development in primary school settings. More broadly, the study provides context-sensitive evidence that may inform more teacher-responsive PD practices in educational systems facing similar institutional pressures and reform demands.

Literature Review

Defining Professional Development (PD) in This Study

Professional development (PD) is conceptualized as an ongoing process of knowledge and skill acquisition that spans one's entire educational trajectory, professional career, and extends into lifelong learning. For teachers, this learning unfolds within a rich and multifaceted ecology of practices. It encompasses a spectrum of activities ranging from formal, externally mandated training sessions to embedded, school—based routines such as collaborative lesson planning and peer observation. This ecological view further includes structured support mechanisms like mentoring, self—directed engagement with digital modules, and informal, self—initiated study, collectively shaping the continuum of teacher professional growth (Glatthorn, 1995, as cited in Villegas—Reimers, 2003). In this study, PD is defined as the set of organized and self—initiated activities through which teachers seek to improve instructional practice, meet institutional expectations, and develop professional competence over time.

Importantly, the analytic focus here is not on evaluating a single PD program. Instead, the study examines how teachers make sense of PD opportunities and requirements, how PD is experienced under everyday working conditions, and how teachers actively manage PD demands. This framing treats teachers as sense—makers and decision—makers who evaluate PD not only by intended goals but by whether it is feasible and valuable in context. This perspective aligns with the view of teacher agency as central to professional development and reform processes, wherein teachers engage in cyclical processes of reinvention and

reinterpretation rather than passive implementation (Weick, 1995; Fullan, 2007, as cited in Imants & Van der Wal, 2020).

PD Modalities and Learning Settings: Online Modules, School—Based PD and Mentoring

Teachers' PD experiences are shaped by the modalities through which learning is delivered and monitored. One increasingly common modality is online PD, often delivered as standardized modules with completion requirements. Online PD can expand access and scalability, yet it also risks becoming compliance—oriented when completion is emphasised over reflection, enactment, and follow—up. In such settings, teachers may engage selectively or strategically, depending on time, relevance, and perceived value. Research comparing formats suggests that online PD may be associated with lower levels of cognitive, affective, and behavioral engagement compared to face—to—face settings, due to factors such as technological hurdles, "Zoom fatigue," and reduced social presence. Furthermore, teachers' motivations for choosing online versus face—to—face PD may differ (Fütterer et al., 2024). When online PD is designed primarily for tracking completion rather than fostering deep reflection and practical enactment, these intrinsic challenges can exacerbate the risk of it becoming a compliance—oriented activity. In such contexts, teachers' engagement is likely to become selective and strategic, contingent upon the immediate relevance, perceived value, and feasible time cost of the activity (Mulaimović et al., 2025).

The increasing integration of information technology and AI into education has introduced new dimensions to teacher PD. Online PD programs are often promoted as flexible alternatives to face—to—face training, particularly for teachers with limited time (Bragg et al., 2021). Research indicates that well—designed online PD can positively influence teachers' content knowledge, pedagogical practices, and self—efficacy, especially when programs emphasize practical application and participant engagement (Bragg et al., 2021; Meyer et al., 2023). At the same time, the adoption of AI tools in teaching and assessment has expanded expectations for teachers' digital competence. AI technologies, such as data—driven learning analytics and automated assessment tools, are increasingly positioned as solutions for reducing workload and enhancing instructional efficiency (Akmeşe et al., 2021; Hashem et al., 2024). However, studies also note that teachers' uptake of such technologies is influenced by perceived usefulness, institutional support, and alignment with pedagogical values (Zuhriyah & Pratolo, 2020). Despite the growing emphasis on technology—enhanced PD, limited research has examined how teachers experience and navigate AI—related PD initiatives in their daily practice. Understanding teachers' perspectives on technology—focused PD is particularly important, as technological innovations may simultaneously offer opportunities for professional growth and introduce new forms of pressure or resistance.

School—based PD is embedded in routine work, such as teaching—research (jiaoyan) activities, lesson study, and peer observation. Within China's unique five—level teaching—research system, these practices are designed to connect professional dialogue with local instructional problems. Their effectiveness is theorized to depend on the interplay of three core elements: individual teacher reflection, collaborative peer support, and expert guidance (Luo, 2025). This framework positions jiaoyan as a potential engine for situated learning. However, its actual value is contingent on whether school—level conditions—such as protected time and facilitation quality—enable a genuine focus on pedagogical problem—

solving, or whether the activity is co—opted for top—down administrative reporting within the same systemic structure.

Mentoring and induction support constitute a third learning pathway, particularly salient for novice teachers. In theory, mentoring is championed as a cornerstone of teacher induction, purported to facilitate novice growth, ease adaptation, and even revitalize experienced teachers through reciprocal learning (Fan & Xuan, 2023). Ideally, it provides the timely feedback, contextualised guidance, and emotional support that help novices translate general expectations into feasible classroom routines. However, the implementation of this attractive ideal is fraught with challenges. As Cullingford (2016) critically notes, the mentor role often emerges as a symbolic remedy in an era where teachers are increasingly burdened with managerial and delivery—oriented tasks, leaving little time for the nurturing, relational work that mentoring entails. Consequently, mentoring in practice becomes highly uneven, its quality varying not just with superficial factors like mentor availability or role clarity, but with deeper systemic issues: the clash between the ethos of care intrinsic to mentoring and the culture of performativity dominating schools, as well as the risk of mentoring degenerating into a ceremonial formality when divorced from meaningful time and structured interaction (e.g., Xu, 2024). Thus, the promise of mentoring is frequently mediated, and sometimes undermined, by the very organizational constraints it seeks to address.

Key Processes: Usability Judgments and Constraints

To link PD modalities to teachers' lived experiences, this study foregrounds two processes: usability judgments and structural constraints. First, teachers often evaluate PD through a pragmatic usability standard—whether PD provides actionable guidance that can be enacted under local classroom conditions. Usability in this article refers to the perceived practicality and implementability of PD content, including (a) actionability (clear strategies and routines), (b) contextual fit (alignment with students, subject, and school conditions), and (c) enactment feasibility (the ability to try, adapt, and sustain changes given time and resources). This focus on practical enactment aligns with the consensus that effective professional development should possess core features such as content focus, active learning, and coherence, which are theorized to enhance teachers' knowledge and skills, thereby supporting the transfer of learning into classroom practice (Desimone, 2009).

Second, teachers' PD is shaped by structural constraints, especially time scarcity and administrative encroachment. When professional learning time is fragmented or displaced by non—teaching tasks, PD participation may shift from sustained learning toward short, irregular engagement episodes. These constraints are not simply individual preferences; they arise from organizational designs and accountability arrangements that govern teachers' time and attention. Fairman et al. (2022) also claim that when PD is experienced as compliance—oriented or disconnected from teaching problems, motivation can weaken, especially under heavy workloads.

Theoretical Framework

The study integrates three complementary lenses to explain how PD becomes meaningful learning or compliance—oriented completion, and how teachers navigate between these poles: (1) the Job Demands—Resources (JD—R) perspective, (2) Self—Determination Theory

(SDT), and (3) practice—based views of teacher learning emphasizing reflection and relational support.

The JD—R perspective conceptualises teachers' work as shaped by job demands (e.g., time pressure, administrative workload, monitoring requirements) and job resources (e.g., protected learning time, collegial support, mentoring). When demands are high and resources are insufficient, teachers are more likely to experience strain and reduced capacity for sustained learning, a process well—documented in studies on teacher well—being and occupational outcomes (Bakker & Demerouti, 2007). Applied to PD, JD—R helps explain why teachers may value PD in principle yet struggle to engage deeply: their cognitive and emotional resources are depleted by chronic job demands, while the specific resources needed to translate PD into practice—such as time for experimentation or collaborative feedback—are often lacking. The model further suggests that adequate job resources can buffer the depleting effects of demands, a dynamic crucial for creating conditions conducive to professional learning (Bakker & Demerouti, 2017).

In addition, Self—Determination Theory (SDT) provides a framework for understanding variation in how teachers regulate their PD participation. SDT posits that sustained, high—quality motivation depends on the support for three basic psychological needs: autonomy (having choice and voice), competence (feeling capable and effective), and relatedness (feeling respected and connected to others) (Ryan & Deci, 2000). In educational contexts, PD that is experienced as controlling (e.g., mandatory, standardized training with no choice) thwarts these needs and tends to foster only superficial, controlled motivation—compliance driven by external pressure or rewards. In contrast, PD that is autonomy—supportive—offering meaningful choice, relevance to classroom problems, and collaborative learning opportunities—nourishes these needs and promotes autonomous motivation, where teachers engage because they find the learning personally meaningful and valuable (Ryan & Deci, 2000). Empirical research in school settings confirms this link; for instance, teachers' motivation for professional learning increases when school leaders encourage autonomous learning (Zhang et al., 2021).

Third, practice—based views of teacher learning emphasise that professional growth depends on iterative cycles of experience, reflection, experimentation, and feedback, often supported by trusted colleagues. This perspective is grounded in theories of reflective practice, which posit that expertise develops through critical examination of one's actions both during and after teaching, with the aim of improving future practice (Schön, 1983; Loughran, 2002). Within this reflective and collaborative cycle, mentoring and peer interaction function as essential compensatory pathways that translate abstract or general ideas into workable classroom practices through dialogue, modeling, and shared problem—solving (Garrison, 2022). This framework clarifies why teachers, when faced with formal PD that is constrained or perceived as lacking immediate usability, may naturally prioritize these relational learning channels. Such channels provide the situated feedback and social support necessary for the "reflection—for—action" (Schön, 1983) that bridges theory and daily instructional reality.

Research Gap and the Contribution of This Study

Existing scholarship provides rich accounts of PD design features, teacher learning processes, and the challenges of implementing reform. However, the gaps motivate this study. First, PD

effectiveness is often assessed at the program level by external criteria, while less attention is paid to how teachers themselves apply an internal, pragmatic usability standard to judge whether PD is worth investing in and whether it can be enacted under real classroom constraints. This gap is evident in critiques of prescriptive, "one—size—fits—all" PD models, which have been shown to position teachers as passive recipients of decontextualized theory rather than active agents whose engagement depends on perceived relevance and practical feasibility (e.g., Hu & Xu, 2025; Cui et al., 2024). Consequently, there is a need to shift the analytical lens from what PD programs offer to how teachers evaluate and selectively engage with these offerings based on their situated professional realities.

Although existing studies have separately examined the influence of organizational conditions on teacher motivation (Zhang et al., 2021), and the differential effects of autonomous versus controlled motivation on professional learning (Belay & Melesse, 2024), fewer studies systematically integrate these elements into a coherent "organization—motivation—engagement" explanatory chain. Recent integrative frameworks, such as the action model proposed by Urhahne and Wijnia (2023), position motivation as a sequential process linking situational factors, self—related orientations, and goal—directed actions, yet their application to teachers' strategic engagement in professional development remains underdeveloped. For instance, while Zhang et al. (2021) link school—level pressures to controlled motivation, they do not trace how such motivation translates into strategic engagement—potentially mere compliance rather than deep learning. Similarly, Belay and Melesse (2024) acknowledge the role of workplace conditions in shaping motivation and PLC development, but do not closely examine how teachers strategically navigate between learning—oriented and compliance—oriented participation under structural constraints. Consequently, a significant gap persists: the lack of an integrative framework that connects organizational demands/resources → motivational orientations (autonomous/controlled) → engagement strategies (learning/compliance) → professional development effectiveness. Such a framework is needed to more comprehensively explain how teachers negotiate structural limitations, mobilize motivational resources, and ultimately shape their pathways of professional growth within complex school ecologies.

Addressing these gaps, the present study contributes an integrated account of PD as a negotiated practice. By combining interviews with observations, it shows how teachers' usability judgments, structural constraints, and adaptive navigation strategies jointly shape PD experiences. The findings also extend discussion of technology/AI—related PD by situating adoption within workload and infrastructure realities rather than assuming that training automatically yields implementation.

Research Method

Research Design

This study employed a qualitative case study design to examine how primary school teachers perceive, experience, and navigate professional development (PD) within a specific institutional setting. A qualitative approach is appropriate because the research question focuses on teachers' subjective meanings, lived experiences, and sense—making processes rather than measuring program outcomes. This study adopts a qualitative case study design to generate an in—depth understanding of teachers' PD experiences within a bounded organizational context (Yin, 2018). A single—school case supports analytic depth by capturing

how teachers make sense of PD and how school routines, expectations, and resources shape that sense—making.

Research Context

The research was conducted in an urban public primary school in Sichuan Province, China. PD opportunities in this school are organized through multiple channels, including school—based teaching and research activities, district— and municipal—level initiatives, and online training platforms. The setting is relevant for understanding how broader expectations for teacher development and technology integration translate into teachers' everyday work.

Researcher Positionality

The researcher conducted the study as an intern and independent researcher embedded in the school for an extended period. Prior to the interviews, the researcher spent one academic semester observing classroom teaching and participating in school—based activities. This prolonged engagement supported contextual understanding of school culture, teachers' daily work rhythms, and informal professional interactions, and it informed the interview questions by grounding them in issues teachers raised in practice. The researcher adopted a learning—oriented stance, aiming to elicit teachers' perspectives rather than evaluate teacher performance. Reflexive memos documented assumptions, emerging interpretations, and potential sources of bias to support transparency in qualitative inference (Lincoln & Guba, 1985).

Participants and Sampling

Eight teachers participated in the study. Purposive sampling was used to capture variation across career stages and work roles, which could yield interpretable findings and credible conclusion from the data (Patton, 2015). The sample included teachers across career stages and roles (e.g., novice and experienced teachers; subject teachers and class teachers; teachers with administrative responsibilities; and teachers involved in teaching and research leadership). This purposeful diversity supported analytic comparison across professional roles and career stages while holding the institutional context constant. Participation was voluntary and teachers were anonymised. To protect confidentiality, all participants were anonymised and referred to using participant codes (e.g., T1—T8) in reporting.

Data Collection

Interviews were conducted with eight primary school teachers (T1–T8). In total, the interview dataset comprises 123 minutes of audio and approximately 13,900 words of transcript. Interviews were scheduled during afternoons when teachers did not have teaching duties. All interviews were audio—recorded with participants' consent. Audio was first transcribed using an audio—transcription tool (Yunzhushou/'Cloud Assistant'). The researcher then proofread the transcripts line—by—line against the recordings to ensure verbatim accuracy.

In addition to interviews, the researcher conducted non—participant observations of routine teaching—research (jiaoyan) activities, averaging approximately 2 sessions per week. Observations also attended to teachers' engagement with online PD (e.g., course completion behaviours) and to their day—to—day use of AI tools in preparation and planning. Observed AI use varied by subject area and teacher role, but overall remained low. Notably, it was common to observe teachers dragging the online—course progress bar to complete required

modules; this recurrent pattern was used as a prompt for follow—up interview questions to better understand the constraints and motivations underlying such behaviours.

Data Analysis

Data analysis followed reflexive thematic analysis. The researcher began with repeated reading of the transcripts to build familiarity and wrote analytic memos to capture emerging patterns, surprises, and provisional interpretations. Next, the researcher conducted line—by—line coding with an emphasis on segments directly related to the research question (teachers' perceptions of PD, experienced constraints, and navigation strategies). Codes were then iteratively clustered into focused code groups and refined into themes through constant comparison across teachers, attending to both convergence and meaningful variation (e.g., differences by role, workload, and subject). Theme names and boundaries were revised through multiple rounds of review to ensure that each theme was internally coherent and externally distinct. Throughout, interpretations were checked back against the raw transcript to preserve participants' intended meanings and to avoid over—generalisation. Table 3.1 documents the theme development logic by linking initial codes, clustered code groups, and the final three themes reported in the Findings section.

Table 3.1
Theme Development Table

RQ focus	**Sensitising concepts**	**Examples of initial codes**	**Focused code clusters**	**Final theme**
Perceive	PD as ongoing learning; effective PD is sustained, reflective, collaborative; PD quality depends on relevance and enactment conditions	"Good PD solves real teaching problems"; "empty theory"; "needs to be implementable"; "subject—specific usefulness"	Practicality; classroom applicability; local fit; subject/role differences	Theme 1. Usability as the standard of "good PD". Subthemes: (1) Actionable guidance and local fit (2) Subject/role—specific practicality
Experience	Workload and institutional demands shape engagement; PD can become an added burden; policy–practice gap	"No time"; "fragmented learning"; "admin tasks crowd out PD"; "PD feels like a task"; "meetings used for notices"	Time scarcity; workload pressure; administrative encroachment: PD time displacement	Theme 2. PD under constraint becomes fragmented and compliance—oriented. Subthemes: (1) Chronic time scarcity and workload (2) Online PD as task completion (3) organizational intrusion into PD time

Navigate	Teacher agency in learning; reflection and collaboration are shaped by constraints; social learning/mentoring as a key mechanism	"Selective watching"; "skip long theory"; "finish requirements first"; "learn only what I need"; "mentoring helps but uneven"; "AI adoption depends on resources and workload"	Selective engagement; strategic skipping; mentoring as compensatory learning; conditional technology uptake	Theme 3. Adaptive navigation and compensatory pathways. Subthemes: (1) Selective engagement strategies (2) Mentoring and peer support as compensatory learning (3) Conditional adoption of AI/digital tools

Trustworthiness and Ethical Considerations

All participants provided informed consent, participation was voluntary, and pseudonymous identifiers were used to protect confidentiality. Interviews were conducted in Mandarin. All quotations are translated by the author for reporting. Translation prioritised meaning—based equivalence rather than literal word—for—word rendering. To ensure accuracy, translated quotations were checked against the original transcripts and reviewed by a bilingual colleague with expertise in education research.

Findings

Across eight interviews, teachers described professional development (PD) not as a single, uniform experience, but as a set of activities that must be evaluated, managed, and often "worked around" within the realities of school life. Three interrelated themes emerged. First, teachers consistently judged PD through a usability standard—PD is valued when it produces actionable guidance that can be implemented in their specific classrooms. Second, teachers' experiences of PD were strongly shaped by structural constraints, particularly time scarcity and workload, which often transformed PD into fragmented participation or compliance—driven completion. Third, teachers demonstrated active navigation of PD demands through selective engagement, reliance on mentoring and collegial support, and conditional adoption of digital or AI tools depending on whether these tools reduced workload and fit local conditions.

Theme 1. Usability as the standard of "good PD"

Teachers tended to define "good PD" less in terms of abstract professional ideals and more in terms of whether it helped them address immediate instructional and management challenges. Many participants contrasted practice—oriented learning with training perceived as overly theoretical. One teacher expressed a clear preference for PD that does not rely on "empty theory," stating that facilitators should remember PD is useful only when it offers concrete solutions: "The curriculum researcher would let you know the effective and specific strategies to solve all kinds of problems" (T4). This emphasis on implementable guidance also appeared in novice teachers' accounts, who valued advice that could be directly adapted for teaching—describing senior colleagues' guidance as "methods that really solve practical

problems" and noting that teachers can make adjustments "according to the class situation" before applying them (T2).

Teachers also evaluated usability through subject and role differences. Specialist teachers, for example, tended to value PD when it offered concrete tools, materials, or routines that could be immediately incorporated into lessons, while classroom teachers placed greater emphasis on classroom management and daily instructional routines. Overall, teachers' accounts suggest that PD is most likely to be perceived as meaningful when it respects classroom variability and offers strategies that are feasible under real constraints.

Theme 2. PD under constraint becomes fragmented and compliance—oriented

Although teachers recognised that PD can be valuable, their accounts highlighted a persistent mismatch between PD expectations and the time available to engage with PD meaningfully. Many teachers described time as the primary constraint, often linked to teaching load and competing responsibilities. One teacher summarised this pressure bluntly: "We don't really have time" (T7), and another emphasised that the "biggest barrier for my professional development is time" (T1). In some cases, teachers tied time scarcity directly to workload volume—for instance, teaching schedules that leave little space for sustained professional learning (e.g., "I have got eighteen classes a week, there's simply no time for me to work on my professional development").

Time scarcity was particularly visible in teachers' descriptions of online PD. Even when teachers acknowledged that online content could be "actually quite good," they reported that limited time made meaningful participation difficult: "teachers generally don't have time," and participation becomes "task—like completion," sometimes reduced to "dragging the progress bar to the end" (T3). These accounts indicate that under heavy workload, online PD risks functioning as compliance rather than learning—especially when the training is long, theoretical, or poorly aligned with classroom realities.

Teachers also described organizational patterns that further displaced professional learning time. For example, some reported that nominal "PD meetings" were often used to deliver notices rather than to conduct genuine professional inquiry, with one teacher remarking that PD time was taken over by administrative communication and that many messages could simply be sent via a quick group message (T3). Such experiences suggest that the institutional organisation of time—what is protected, what is interrupted, and what is reclassified as "urgent"—directly shapes whether PD becomes sustained learning or fragmented completion.

Theme 3. Adaptive navigation and compensatory pathways

Facing constraints, teachers did not passively accept PD demands; instead, they actively navigated PD through selective engagement strategies. Several teachers described purposeful filtering of content: online PD was viewed as "useful," but teachers needed to "watch selectively," and if a course spent too long "explaining the meaning," they would "skip it," because the practical obstacle remained insufficient time (T3). Others described disengagement as a pragmatic response when content lacked operational value; if training was perceived as too abstract, a teacher might "listen selectively or do one's own work" (T1). Together, these patterns show navigation as a spectrum—from strategic selection and

prioritisation to minimal compliance—shaped by the interaction of teacher agency and institutional pressure.

Mentoring and collegial support emerged as a key compensatory pathway, especially for novice teachers learning classroom routines and management. Teachers described mentoring as effective when it enabled observation and reflective feedback; one participant emphasised that "the most important thing is to watch the mentor's lessons and listen more," and that experienced teachers "guide reflection" (T8). However, mentoring was also experienced as uneven. Some teachers noted that mentor assignment did not always occur in practice ("I do not have a mentor yet"). These contrasts imply that mentoring functions as a critical compensatory mechanism when formal PD is time—constrained or poorly aligned with classroom realities, but its effectiveness depends on implementation capacity and relational commitment.

Teachers' navigation strategies also extended to technology and AI—related practices. Rather than embracing technology universally, teachers adopted a pragmatic cost–benefit approach shaped by subject fit, resource availability, setup time, and data demands. T4 reported "We use AI only when mandated or for high—priority tasks, because schools lack sufficient equipment and setup can be time—consuming". For assessment—related AI tools, teachers pointed to data burdens—"collecting data is troublesome" and some preferred everyday grading as a more reliable way to understand students. These accounts suggest that technology—related PD succeeds when it lowers workload or clearly improves instruction with manageable costs, and fails when it adds invisible labour or requires resources the school cannot reliably provide.

In sum, teachers' PD in this case is best understood as a negotiated practice shaped by a usability standard, structural constraints, and adaptive navigation. Teachers value PD that is actionable and locally feasible, but time scarcity and workload frequently turn PD into fragmented participation or task completion. Teachers respond through selective engagement, reliance on mentoring and peer learning, and conditional adoption of digital/AI tools depending on whether these innovations fit real working conditions.

Discussion

The interviews suggest that teachers in this school evaluate professional development (PD) through a pragmatic criterion of usability under real classroom and institutional constraints, rather than through an idealised image of PD as sustained reflection and collaboration. This aligns with scholarship arguing that reflection becomes effective when it generates meaning and informs future action (Loughran, 2002), and with models of in—depth learning that connect experience, analysis, and experimentation (Korthagen & Nuijten, 2022). In this case, teachers distinguished "good" PD from "empty" training by emphasizing actionability and local fit: PD was seen as legitimate when it offered operational guidance that could be adapted to the specific realities of students, discipline, and school conditions, whereas standardized online modules were often experienced as detached from classroom variability. At the same time, teachers' experience of PD was consistently shaped by chronic time scarcity and workload, which frequently shifts PD from learning into compliance—oriented completion. Even when teachers acknowledged that online PD content can be valuable, they described limited time as making meaningful engagement difficult, sometimes resulting in

task—like completion behaviours (e.g., "dragging the progress bar to the end"). This pattern is better understood as a structural mismatch between institutional time allocation and the cognitive, emotional, and practical labour required for genuine professional learning, rather than as simple resistance to development. This aligns with the JD—R perspective: time pressure and administrative workload operate as demands that erode engagement and reduce the feasibility of sustained learning (Bakker & Demerouti, 2007). Cheng et al. (2023) similarly highlight evidence linking burnout to excessive workload, underscoring the importance of organizational conditions for sustainable PD.

Under such constraints, teachers actively navigate PD through selective engagement strategies that balance compliance requirements, personal relevance, and immediate instructional priorities. Teachers described filtering and prioritising content (e.g., selectively watching segments that provide practical guidance while skipping extended theoretical exposition) as a rational adaptation to time scarcity and uneven practical value. Importantly, the observed spectrum of practices—from strategic adaptation to minimal compliance—can be further interpreted through the lens of self—determination theory (SDT). When institutional conditions support teachers' basic psychological needs for autonomy, competence, and relatedness, teachers are more likely to engage in meaningful, agentic integration of new tools and ideas; when such needs are undermined under high demands and externally regulated requirements, participation is more likely to tilt toward controlled motivation and compliance (Ryan & Deci, 2000). This suggests that sustainable PD requires supportive structures that enable professional agency under realistic working conditions.

Mentoring relationships further illuminate how teachers manage the gap between formal PD provision and situated learning needs. Many participants positioned mentoring as the most efficient route to practical competence, particularly for classroom management and daily routines, because novices can obtain timely and contextualised guidance. The mentoring relationship also supports reflection—on—action, enabling teachers to draw on past experience to plan future action and view problems from new perspectives (Schön, 1983). However, the data also indicate that mentoring is contingent and uneven (e.g., variation in mentors' willingness, novices' proactiveness, and whether mentors were formally assigned), implying that mentoring can function as a critical compensatory mechanism when formal PD is time—constrained or poorly aligned with classroom realities, but its effectiveness depends on implementation capacity and relational commitment.

Teachers' accounts of AI and digital tools reinforce the same pragmatic logic: adoption is selective and conditioned by perceived usefulness, subject fit, resource availability, and hidden labour costs. While some teachers described pedagogically rich uses of AI, many emphasised constraints such as insufficient equipment, time—consuming setup, and burdensome data collection for assessment tools. Several accounts also imply a misalignment between standardized online modules and subject—specific instructional needs. Tan et al. (2025) similarly highlight that as education systems increasingly expect teachers to embed diverse AI tools into their teaching practices, PD initiatives face substantial challenges and can impose significant cognitive burdens on teachers, who must continually refresh technical knowledge and instructional methods in response to rapid technological change. Taken together, these patterns suggest that technology—related PD cannot be evaluated

independently of the working conditions that determine whether teachers have the time, equipment, and institutional support to implement new practices.

Overall, the discussion points to PD as an interaction between institutional structures and teacher agency. Teachers articulate a clear vision of meaningful learning—actionable, context—sensitive, and supported by credible peers—yet they also report structural constraints that push PD toward compliance and fragmentation. Addressing this gap therefore requires not only offering more training, but also creating conditions in which PD can realistically function as professional learning: protected time, reduced non—teaching burdens, reliable mentoring arrangements, and technology supports that do not shift additional invisible labour onto teachers.

Conclusion and Implications

This qualitative case study examined how primary school teachers perceive, experience, and navigate professional development (PD) in an urban public school in Sichuan. Across eight interviews, the findings show that teachers do not reject PD as a concept; rather, they judge its value through a pragmatic, context—sensitive lens. PD is viewed as meaningful when it offers actionable support for immediate classroom needs (e.g., classroom management, lesson delivery, subject—specific pedagogy). However, teachers' lived experience of PD is strongly shaped by structural constraints—especially chronic time scarcity, heavy teaching and administrative workloads, and the frequent intrusion of non—instructional tasks into time that is nominally reserved for professional learning. Under these conditions, PD is often transformed from deep learning into fragmented participation, strategic skipping, or compliance—oriented completion.

Theoretical Contribution

This study contributes to PD research by emphasizing PD as a lived, situated, and negotiated practice rather than a uniform intervention. It extends reflective and collaborative conceptions of PD by showing that reflection and collaboration are not simply "present or absent"; they are constrained, reshaped, and sometimes compressed into pragmatic decision—making under institutional pressure. The analysis highlights an interactional view of PD in which teacher agency (selection, adaptation, prioritization) operates within—and is often bounded by—organizational conditions (time allocation, workload distribution, mentoring arrangements, and resource availability). This perspective helps bridge the gap between policy—oriented PD literature and the everyday realities of teachers' work.

Practical Implications for School Leaders and Policymakers

The findings suggest several actionable directions for improving PD in ways that align with teachers' realities: First is to protect time for professional learning. PD is unlikely to function as genuine learning when teachers lack uninterrupted time. Schools can increase PD effectiveness by reducing administrative encroachment into PD time, streamlining meeting agendas, and minimizing non—teaching tasks that displace learning. This recommendation is consistent with evidence that pressure and stress can shift teachers' participation toward more externally regulated engagement, which is typically less conducive to deep learning and instructional change (Zhang et al., 2021). Additionally, as teachers consistently valued PD that provides concrete strategies, examples, and adaptable routines. PD providers should reduce overly abstract, theory—heavy delivery and instead anchor sessions in classroom scenarios,

subject—specific practices, and locally feasible interventions. This is aligned with evidence that online PD is more likely to support changes in practice when it is intentionally designed for transfer and application rather than passive consumption (Bragg et al., 2021; Meyer et al., 2023). In addition, teachers' voices and feedbacks should be valued in professional development curriculum design and activity arrangement. Ding and Fan, (2024) also agree that the feedback from the teachers during and after training should be collected and shared with all relevant parties. Moreover, mentoring supports enactment when it is organized as a structured learning pathway rather than an informal expectation. Schools should ensure timely mentor assignment, clarify expectations on both sides, and create protected opportunities for observation and feedback. This is important because school—level conditions—especially leadership and climate—shape whether teachers experience PD as supported professional learning or as compliance (Zhang et al., 2021).

When evaluation criteria remain unchanged while new instructional or policy priorities are introduced through PD, teachers may face competing signals about what counts as "good performance." Policymakers and school leaders should adjust evaluation criteria and feedback practices to match what PD is asking teachers to do, thereby supporting more autonomous motivation rather than participation driven by avoidance of punishment or pursuit of rewards (Ryan & Deci, 2000; Zhang et al., 2021). Furthermore, makeing technology/AI PD conditional on infrastructure, workload realities, and robust evaluation is also significant. Training teachers to use AI or digital tools is insufficient if equipment, time, data access, and implementation support are missing. Tan et al. (2025) stress the importance of examining how PD formats, durations, and intensities shape outcomes—and of tracking how teachers' attitudes, confidence, and competencies evolve over time—suggesting that leaders should pair AI—related PD with ongoing feedback and longitudinal evaluation rather than one—off training events. Course evaluation should systematically compare feedback from teachers across different disciplines. Practically, this means coupling AI PD with resource provision and simplified workflows that reduce (rather than add) invisible labour, while monitoring whether AI PD translates into instructional changes rather than merely increased tool use (Tan et al., 2025).

Limitations

This study has several limitations that should be acknowledged. First, it is a single—school case study with a small sample, which limits statistical generalization. Second, interviews were relatively brief, which may constrain the depth of narrative detail for each participant. Third, while the researcher conducted observations over a semester, the analysis primarily relied on interview data; additional triangulation with sustained observation notes, PD materials, or institutional documents could further strengthen claims. Finally, the study reflects teachers' self—reported experiences, which are essential for understanding perceptions and navigation strategies but may not capture all organizational dynamics behind PD arrangements.

Future Research

Future research could extend this study in several focused ways. Comparative multi—site qualitative studies across different school contexts would help distinguish context—specific PD experiences from broader structural patterns. Longitudinal qualitative designs, such as repeated interviews, could capture how teachers' PD perceptions and navigation strategies

change over time. Methodological triangulation combining interviews with observations and institutional documents would strengthen analytic depth. In addition, incorporating school leaders' perspectives could clarify organizational constraints shaping PD implementation. Finally, further research on AI—related PD should examine how infrastructure, subject demands, and workload conditions influence whether technology supports or burdens teachers' professional learning.

Closing Statement

Overall, the study underscores that the effectiveness of PD depends not only on what training is offered, but also on whether schools create the conditions for teachers to engage in sustained, context—relevant learning. When time is protected, mentoring is implemented consistently, and PD is designed around practical classroom needs, teachers are more likely to experience PD as meaningful professional growth rather than as another task to complete.

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