

The Clash Between Ideals and Reality: The Construction Path of Student Teachers' Practical Knowledge in a Chinese Voluntary Teaching Program

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ABSTRACT

This study takes the voluntary English teaching program in primary schools participated by student teachers from S University as the practical field, and employs the grounded theory method to deeply explore the construction path of student teachers' practical knowledge. The research finds that when student teachers enter real classrooms with idealized teaching beliefs acquired in university courses, they generally encounter "reality shock". This impact triggers cognitive adjustment through "reflective practice," which in turn drives "strategic adaptation" actions. In this process, the "community of practice" provides crucial social support. Ultimately, student teachers achieve an identity transformation from "theoretical applicators" to "problem solvers," and their practical knowledge undergoes a cyclical construction and internalization process from "reality shock" to "reflective generation." The "shock–reflection–internalization" model constructed in this study provides a theoretical basis and practical insights for optimizing the practical teaching system for student teachers.

Keywords: *Practical knowledge, Student teachers, Voluntary teaching programs, Reflective practice.*

1. INTRODUCTION

The generation and transformation of practical knowledge constitute a core element and a driving force in teachers' professional development. This form of knowledge does not stem from the direct transmission of theory but is rather constructed as personalized wisdom through action and reflection within complex, uncertain real-world teaching contexts. For student teachers, the transition from being a theoretical learner in university classrooms to becoming a practicing teacher in real classrooms represents a crucial yet challenging step in their professional growth. A prevalent issue in current teacher preparation systems is the disconnection between theory and practice. Student teachers often acquire what might be termed an "idealized teaching blueprint" based on hypothetical scenarios in their university courses—advanced concepts such as "student-centered learning," "gamified instruction," or "full English immersion environments." However, when they carry this

"ideal blueprint" into authentic primary school classrooms, they frequently encounter the shock of reality: loss of classroom control, significant individual differences among students, the failure of meticulously designed activities, or a lack of response to instructions given entirely in English. This intense clash between ideal and reality forms the primal driving force and central tension in the genesis of student teachers' practical knowledge. The process of adaptation, reflection, and construction that occurs within this space lies at the heart of understanding the intrinsic mechanisms of teacher professional learning.

The primary school voluntary teaching program organized by S University precisely provides an ideal practical field for observing this dynamic process. The 13 reflective summary reports analyzed in this study vividly demonstrate that the teaching beliefs and practical behaviors of the student teachers underwent profound evolution during the 11-week program. Their initial confidence, rooted in theoretical constructs, was

severely tested when confronted with specific classroom realities, such as pupils "acting out due to familiarity with the volunteers" or "verbally challenging the volunteer teachers." These practical predicaments compelled them to transform from mere theoretical applicators into proactive problem-solvers. Through daily group feedback, weekly debriefings, consultations with mentors, observations of exemplary lessons, and personal reflection, they continuously engaged in strategic adaptations. Examples included shifting from over-reliance on games and songs to exploring a wider repertoire of activities, moving from classroom management disarray to establishing reward systems and classroom monitors, and progressing from the struggles of full English instruction to the creative use of body language and realia. This journey was far more than a simple skill-acquisition process; it constituted a complex, multidimensional endeavor—involving cognition, behavior, and emotion—through which a personal teaching philosophy was continually constructed within the support of a community of practice. Therefore, utilizing these summary reports as textual data and employing the grounded theory method, this study aims to delve into the following core questions: Along what path is the practical knowledge of student teachers constructed amidst the clash between ideal and reality? What is its intrinsic generative mechanism? Unraveling this process will not only provide an empirical foundation for optimizing the practical training system for student teachers but also hold significant academic value for enriching theories of teacher development.

2. RESEARCH DESIGN

2.1 Research Method

This study adopts the research approach of grounded theory, aiming to construct theory from the ground up through an in-depth analysis of first-hand qualitative data, thereby systematically revealing the dynamic construction path and intrinsic mechanisms of student teachers' practical knowledge within the voluntary teaching program. Grounded theory, proposed by sociologists Glaser and Strauss in 1967, is fundamentally guided by the core principle that theory must be grounded in systematic empirical data. Through the continuous comparative analysis of data, the abstraction of concepts, and the identification of categorical relationships, it ultimately aims to form a middle-range theory capable of explaining social phenomena.[1]

This methodological approach emphasizes a logic of discovery rather than a logic of verification, which aligns closely with the exploratory aim of this study: to investigate how student teachers' practical knowledge is generated and evolves through the clash of ideal and reality. The student teachers' summary reports constitute deep narratives and reflections on their practical experiences, richly characterized by concrete situations, internal conflicts, action strategies, and emotional responses. This makes them highly suitable as raw data for grounded theory analysis, thereby enabling the construction of an explanatory framework that genuinely reflects their authentic learning process.

2.2 Data Collection

All data for this study were derived from a complete educational practice cycle. The participants were 13 third-year student teachers from the School of Education at S University in the Guangdong-Hong Kong-Macao Greater Bay Area of China, who took part in the "Comprehensive Intelligent English" voluntary teaching project. This project required the student teachers, working in groups, to visit a nearby primary school 2-4 times per week over an 11-week period. During after-school service hours, they provided English oral language instruction to lower-grade pupils. University mentors provided ongoing guidance on lesson preparation and offered feedback based on classroom observations throughout the project.

Upon completion of the program, each participating student teacher submitted a detailed summary report. This study employed a purposive sampling strategy, selecting 13 reports that demonstrated deeper reflection and more complete narratives from all submissions as the objects of analysis. These reports constitute the student teachers' systematic retrospective accounts of their experiences post-practice. Their content comprehensively covers the entire process, including initial beliefs, encountered difficulties, implemented strategies, support received, as well as final reflections and professional growth. This provides the study with rich, authentic, and process-oriented textual data.

3. DATA ANALYSIS

3.1 Open Coding

Open coding constitutes the initial phase of grounded theory analysis, with its core task being the deconstruction, distillation, and conceptualization of raw data. The researcher meticulously examines the text line-by-line and sentence-by-sentence, breaking down, comparing, and labeling key events, actions, feelings, and reflections embedded within the materials. This process forms a series of initial concepts that capture the essence of the phenomenon under study.

Adhering strictly to this analytical procedure, this study conducted a systematic semantic scan

and content analysis of the 13 summary reports from the student teachers (totaling approximately 30,000 Chinese characters). By tagging and conceptually refining all narratives related to "teaching practice," "coping with difficulties," and "professional growth," 68 initial concepts ultimately emerged from the data. These initial concepts are derived directly from the authentic expressions of the student teachers, forming the empirical foundation for subsequent theory building. To clearly demonstrate the coding process, the table below presents a selection of representative raw statements and their corresponding initial concepts. ("Table 1")

Table 1. Illustrative Examples of Open Coding

No.	Original Statement (Representative Quotation)	Initial Concept
S3	"The students acted up, relying on their familiarity with us."	Management Challenges Due to Familiarity
S5	"Students verbally challenged the teacher."	Direct Verbal Conflict from Students
S4	"The class teacher also 'delegated' their own discipline management methods to us, the volunteer teachers."	Authorization and Pressure from the class Teacher
S1	"Some children felt unfamiliar with or afraid of English and dared not speak; others struggled to keep up with the teaching pace due to weak foundations."	Manifestation of Student Individual Differences
S3	"I insisted that our group members must adhere to 'daily feedback and weekly summaries'."	Establishing a Team Reflection Mechanism
S11	"Under the guidance of my mentor teacher and senior peers, combined with my own practical exploration, I came to understand that teaching must be adapted to the children's foundations, characteristics, and interests."	Seeking Guidance from Experts and Peers
S7	"After class, I reflected on my lesson preparation, teaching activities, classroom reactions, etc., striving to do better in the next lesson."	Conducting Individual Teaching Review
S4	"I empowered capable students to become good helpers in maintaining classroom order (e.g., appointing a rotating discipline monitor, often a student who usually performed less well in class)."	Empowering Students to Participate in Classroom Management
S13	"Using the students' own belongings as teaching aids."	Utilizing Student Realia to Create Authentic Contexts
S3	"Putting clothing props into a backpack to test students' memory."	Designing Inquiry-Based Teaching Games
S2	"I introduced a reward system, offering small incentives to students who performed well and followed the rules."	Establishing a Material Reward System
S7	"I crouched beside his desk and said, 'It's nothing.' If you need to use the restroom later, don't wait until it's urgent to raise your hand...' I also loudly reprimanded those few students, making them learn to respect their classmates."	Handling Sudden Student Emotional Incidents
S10	"When I saw the students' sudden understanding due to my guidance, and when I saw their continuous growth in learning, I deeply felt my own sense of value."	Gaining a Sense of Teaching Efficacy
S3	"This dispelled my previous worries about the teaching profession and strengthened my conviction to become a teacher."	Strengthening of Professional Identity
S7	"Teacher, will you come again tomorrow? I still want to have your class."	Receiving Emotional Recognition from Students

3.2 Axial Coding

Following the completion of open coding, which yielded 68 initial concepts, the research proceeded to the stage of axial coding. The core objective of this phase is to systematically identify and establish the intrinsic logical connections

among the initial concepts. Through continuous comparative and inductive analysis, concepts that are semantically similar and pertain to the same category of phenomena are effectively clustered and synthesized. This process forms more generalized and explanatory core categories. Subsequently, the structural relationships among

these categories are further clarified—such as causal conditions, action strategies, intervening conditions, and consequences—thereby laying the groundwork for subsequent theory building. The

table below specifically illustrates the systematic inductive process from initial concepts to core categories. (“Table 2”)

Table 2. Illustrative examples of axial coding forming core categories

Core Category	Corresponding Initial Concepts (Examples)	Explanation of Category Connotation
Reality Shock	Struggling with Full English Instruction (S8); Classroom Management Chaos (S5); Manifestation of Student Individual Differences (S1); Failure of Pre-designed Teaching Activities (S3); Management Challenges Due to Familiarity (S3)	This category encapsulates the intense clash between student teachers' idealized teaching beliefs and the complexities of the real classroom. It serves as the triggering condition and logical starting point for the construction of practical knowledge.
Reflective Practice	Establishing a Team Reflection Mechanism (S3); Conducting Individual Teaching Review (S7); Observing Exemplary Lessons (S3, S11); Seeking Guidance from Experts and Peers (S4, S9)	This category describes the core cognitive and action strategies employed by student teachers in response to dilemmas. It functions as the core mediating process connecting "predicament" with "new understanding," acting as the key engine for knowledge generation.
Strategic Adaptation	Adjusting Teaching Language (Using Body Language as Aid) (S8); Innovating Classroom Management Strategies (Reward System/Discipline Monitor) (S2, S4); Designing Diverse Teaching Activities (S3, S12); Utilizing Realia to Create Authentic Contexts (S13)	This category centrally embodies the specific teaching behaviors that student teachers actively adjust and create to solve problems based on reflection. It represents the concrete action path and external manifestation of practical knowledge generation.
Community Practice	Receiving Emotional Recognition from Students (S7, S10); Receiving Authorization and Guidance from the Class Teacher (S4, S9); Close Collaboration Within the Team (S3, S6)	This category denotes the social support network that sustains student teachers through the knowledge construction process. It provides emotional support, resource assurance, and identity recognition for reflection and adaptation, constituting the crucial context for knowledge building.
Identity Transformation	Gaining a Sense of Teaching Efficacy (S10); Strengthening Professional Conviction (S3); Formation and Reinforcement of Professional Identity (S7); Transition from Being Flustered to Being Poised and Confident (S13)	This category represents the deep internal change in student teachers after undergoing the entire construction process. It signifies that practical knowledge has been preliminarily internalized and integrated into their professional selves, marking the core outcome of knowledge construction.

3.3 Selective Coding

During the selective coding stage, the primary task of the research is to further integrate and refine the core categories formed through axial coding. This involves identifying a central category capable of encompassing all the data and systematically establishing logical connections between this central category and the other categories. The ultimate goal is to construct a coherent and explanatory theoretical narrative.

For this study, the central category was ultimately determined to be "The Generation and Internalization of Practical Knowledge." This process centrally encapsulates the holistic dynamic pathway of student teachers within the voluntary teaching context, evolving from initial reality shock to eventual identity transformation (as illustrated in “Figure 1”).

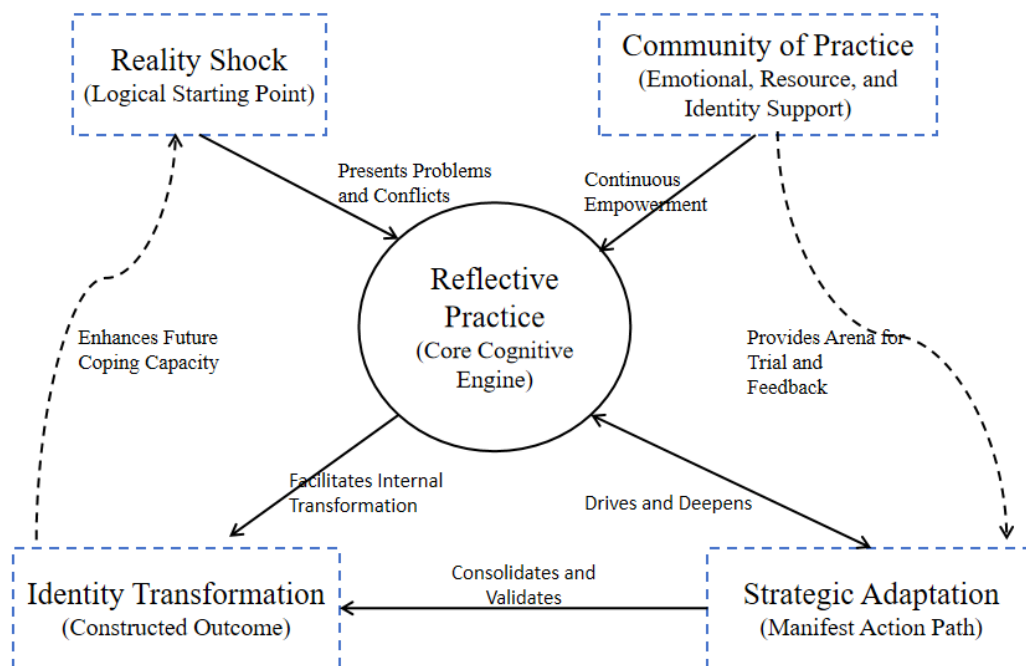


Figure 1 The 'Shock-Reflection-Internalization' Cyclical Construction Model of student teachers' practical knowledge.

4. RESEARCH FINDINGS AND INTERPRETATION

The central narrative of this model can be summarized as follows: student teachers enter real classrooms imbued with idealized teaching beliefs and encounter the intense impact of reality shock. Supported by a community of practice, they engage in reflective practice as the core cognitive engine, which drives the concrete actions of strategic adaptation. Through the cyclical iteration of reflection and adaptation, practical knowledge is generated and tested, ultimately leading to a profound transformation in their professional identity. This constitutes a complex process that begins with external collision, is accomplished through internal transformation, depends on social interaction, and is characterized by iterativeness and generativity. The following sections will elucidate each core category and their interactive relationships.

4.1 Reality Shock: The Collision between Idealized Vision and Complex Practice

Reality shock is not an abstract predicament but rather a multifaceted and concrete intense collision between the decontextualized teaching ideals held by student teachers—originating from university

classrooms—and the specific, uncertain realities of primary school teaching. This collision constitutes the activated logical starting point for the process of constructing practical knowledge. When student teachers enter real classrooms filled with theoretically derived instructional designs, they often encounter the dilemma of a "poor fit": for instance, efforts to create a fully English-immersive environment can devolve into the teacher's difficult pantomime and students' bewildered incomprehension due to the pupils' weak English foundation in the voluntary teaching school. Meticulously pre-designed gamified teaching activities also frequently fail to launch effectively due to complex rules or lax classroom discipline. These experiences lead them to the profound realization that effective instructional design must begin with a deep understanding of the specific learning context, not the direct application of abstract concepts.

Simultaneously, their previously held democratic educational belief in "student-centeredness" may manifest concretely in lower-grade classrooms as pupils "acting up due to familiarity" or even "verbally challenging the teacher." The idealized vision of teacher-student dialog is often replaced by the practical need to maintain basic classroom order. This experience of

losing managerial control forces them to re-examine the deeper meaning of "student-centeredness," leading to the realization that establishing an orderly classroom environment with clear rules is a prerequisite for any teaching activity, and that care for students must go hand in hand with effective management. Furthermore, the students they previously encountered in theory were often a homogeneous collective. The real classroom confronts them with pupils who exhibit significant differences in English proficiency, learning motivation, and personality traits. This stark manifestation of diversity completely shatters their one-size-fits-all teaching fantasy, thereby driving them to contemplate the necessity and implementation pathways of differentiated instruction.

4.2 Reflective Practice: The Mediator Connecting Predicament and New Understanding

Confronted with reality shock, the student teachers did not stop at feeling helpless or complaining. Instead, they proactively initiated multi-layered reflective practice. This process served as the crucial cognitive mediator transforming problematic situations into learning opportunities, acting as a converter for the generation of their practical knowledge. Within this process, collective reflection, individual review, and seeking guidance formed an interconnected system of reflection that supported one another. The mechanisms of daily feedback and weekly summaries within small groups established a "safe clinic" for diagnosing problems, transforming personal dilemmas into public issues. The experiences and diverse perspectives of peers provided not only emotional support but also accelerated the flow and collaborative construction of strategies.

Simultaneously, the solitary post-lesson review of teaching preparation, activities, and reactions became a key moment for student teachers to personally process and internalize the meaning of external experiences. This prompted them to step back from specific events and examine the assumptions, successes, and failures underlying their own actions. Furthermore, actively consulting mentor teachers and observing exemplary lessons indicated that they began consciously situating their own practice within a framework of reference to expert practices and excellent models for comparison and learning. This not only helped

them acquire context-specific coping strategies but also, more subtly, facilitated the absorption and transformation of tacit knowledge concerning elements like classroom pacing and teacher-student interaction.

4.3 Strategic Adaptation: The Creative Arena for Making Knowledge Explicit and Testing It

Driven by reflection, the student teachers engaged in creative strategic adaptation. These adaptations were not mechanical applications of existing theory but rather practical strategies dynamically generated within authentic contexts in response to concrete problems. They constituted the experimental ground where practical knowledge was made explicit and tested. For instance, when full English instruction encountered comprehension barriers in practice, the student teachers gradually shifted from relying solely on verbal language to comprehensively utilizing body movements, physical teaching aids, and even objects from the students' immediate environment to facilitate communication and context-building. This demonstrated their deepening understanding of the essence of pedagogical communication—that teaching is essentially a multimodal process of co-constructing meaning, integrating various semiotic systems such as language, action, and visuals.

Regarding classroom management, their strategies also evolved from unidirectional teacher control toward collaborative teacher-student co-construction. By establishing rotating student discipline monitors and introducing structured reward systems, they not only granted students a degree of autonomous responsibility but also combined external incentives with behavioral guidance. This represented an attempt to find a dynamic balance between maintaining classroom order and fostering student autonomy.

Concurrently, based on continuous reflection on students' actual learning conditions, the design of their teaching activities also transformed. It moved from employing singular games aimed at superficial fun toward comprehensive tasks that integrated multiple objectives such as memory training, collaborative inquiry, and cognitive development. This series of adaptation processes not only reflected the growing ingenuity and creativity they generated in practice but also signified the ongoing evolution of their instructional design perspective—from merely

capturing student attention toward substantively fostering deeper learning.

4.4 Community of Practice: The Social Incubator for Knowledge Construction

The knowledge construction of student teachers does not occur in an isolated vacuum. The community of practice provides indispensable emotional, resource-based, and legitimacy support for the entire dynamic process, constituting the social "incubator" within which practical knowledge is nurtured and cultivated.[2] Within this supportive network, interactions and recognition from multiple parties played pivotal roles. For example, a pupil's sincere inquiry, "Teacher, will you come again tomorrow?" (S7) provided the student teacher not only with immediate emotional consolation, mitigating the sense of frustration from their teaching practice, but also, on a deeper level, endowed their fragmented adaptive efforts with professional value and significance. This, in turn, stimulated and reinforced their professional enthusiasm.

Concurrently, significant others within the community provided crucial resource empowerment and identity authorization. The class teacher partially delegating the authority and responsibility for classroom discipline management (S4), along with the mentor teacher offering contextualized professional guidance, were actions that served not only as sources of concrete strategies but also as symbolic rites of acceptance. These acts signified the student teachers' gradual transition from classroom observers or temporary assistants into acknowledged responsible agents, furnishing them with the necessary legitimacy to attempt and innovate boldly.

Furthermore, the sustained, close collaboration within the practice groups (S3, S6) fostered a collective atmosphere of mutual learning and support. Within this micro-community, the student teachers exchanged not only specific teaching techniques but also, through the collaborative processes of lesson planning, observation, and post-lesson discussion, subtly learned how to think, dialog, and act like a professional teacher. Thereby, they progressively constructed and strengthened their professional identity as teachers through interaction.

4.5 Identity Transformation: The Internalization of Knowledge and the Reconfiguration of the Professional Self

Having undergone the complete construction process of "collision–reflection–adaptation," the student teachers experienced an internal transformation of their professional identity. This signifies that their practical knowledge has been internalized and integrated into their professional selves, evolving from externally acquired strategies and techniques into an internal schema that guides future teaching actions. This transformation constitutes the crystallization point of the entire knowledge construction process.[3] This profound internal transformation is first manifested as the leap from an initial sense of powerlessness in the classroom to a stable sense of efficacy. Witnessing students experiencing "a moment of sudden clarity" (S10) due to their guidance led to the establishment of a professional conviction of "I can do this." This constitutes the most direct and powerful affirmation of their professional competence, laying the cornerstone for their professional confidence. Simultaneously, their professional beliefs underwent a process of being tempered from wavering to firming. The various early anxieties about their ability to adapt were, after successfully overcoming specific challenges and witnessing student growth firsthand, transformed into a "strengthened conviction to become a teacher" (S3). The challenges of reality, far from shattering their ideals, instead rendered their educational beliefs more solid and resilient through the tempering of problem-solving. Ultimately, this series of transformations culminated in the evolution of their fundamental role. They gradually evolved from imitators and learners who mechanically applied theoretical knowledge into constructors and emerging teachers capable of proactive reflection, independent judgment, and continuous creation within complex, uncertain teaching contexts.[4] At this point, they began to formulate the embryonic form of a personalized teaching philosophy rooted in their situated experiences, thereby accomplishing a crucial act of identity reconfiguration and self-transcendence within their professional growth.

5. IMPLICATIONS AND RECOMMENDATIONS FOR THE PRACTICAL TRAINING SYSTEM OF STUDENT TEACHERS

Based on the mechanism of practical knowledge construction among student teachers revealed by the "shock–reflection–internalization" model, the traditional training paradigm characterized by front-loaded theory, back-loaded practice, and loosely structured practical components faces profound challenges. This study posits that an effective practical training system, one that genuinely fosters the generation of practical knowledge, should not merely function as a simple application field for theoretical learning. Instead, it must be systematically designed as a supported arena for cognitive conflict and a reflective learning community.

5.1 Curriculum Design: Shifting from Theoretical Transmission to Cognitive Preparation and Problem Orientation

In curriculum design, a shift should be promoted from static theoretical transmission to dynamic cognitive preparation and problem orientation. This firstly requires the systematic front loading of a reality-cognition module within theoretical courses. This means moving beyond presenting only idealized cases to introducing a repository of cognitive conflict cases that reflect the complexities and dilemmas of real classrooms—for instance, videos or narratives depicting loss of classroom control, failed activities, or pronounced individual differences. By exposing student teachers to these shocking scenarios and discussing them in advance within the safe theoretical environment, the intensity of future practical shocks can be buffered. This transforms potential emotional frustration into professionally framed problems to be solved, thereby accomplishing a preliminary cognitive rehearsal.

Furthermore, in practical courses, there must be a fundamental change from simulation modes following pre-set scripts to a problem-driven design logic. By meticulously designing typical task scenarios derived from authentic teaching—such as "How to engage a silent student?" or "How to handle a sudden disruption?"—student teachers can be guided through a complete cognitive cycle from the failure of preconceptions to the generation of strategies via attempts, observations, and collaborative discussion. This approach grounds the

cultivation of reflective habits and problem-solving abilities at the very starting point of practice.

5.2 Support System: Transitioning from a Single-Mentor Model to Building a Diversified Community of Practice

Regarding the support system, it is essential to move beyond the traditional single-mentor model and commit to constructing a structured, diversified community of practice.[5] This community should constitute a three-dimensional support network comprising university mentors, frontline practitioner-mentors (e.g., class teachers or lead teachers from primary and secondary schools), and peer groups. Within this framework, the role of university mentors should shift from being evaluators of outcomes to becoming process-oriented facilitators of reflection. Utilizing tools such as critical incident interviews and video-based lesson debriefings, they should guide student teachers in conducting deep analysis rather than providing standard answers. Frontline practitioner-mentors, in turn, need to clarify their dual functions as contextual consultants and delegators of authority. Through institutional arrangements, they should provide student teachers with timely contextual strategic support and, crucially, the endorsement of identity legitimacy.

Concurrently, a stable peer reflective partnership system should be established. Through regular activities such as collaborative lesson planning, lesson observation and discussion sessions, and problem-solving clinics, individual experiences can be transformed into collective wisdom, creating a dual support system of emotional resonance and cognitive collaboration. Furthermore, institutions should equip student teachers with a resource scaffold encompassing strategies for classroom management, differentiated instruction, and multimodal communication. This should be combined with micro-teaching analyzes of authentic exemplary lessons from experienced teachers, particularly segments dealing with unexpected situations, to help them initiate their own practical creations through emulation and reflection.

5.3 Assessment Mechanism: Shifting from Outcome-Based Evaluation to a Process-Oriented Growth Portfolio

The assessment mechanism requires a fundamental shift from focusing on final outcomes

to emphasizing the growth process. The assessment focus should move away from evaluating the standardization of lesson plans or the fluency of classroom demonstrations toward examining the depth of reflection, the logic of strategy iteration, and the ability for evidence-based improvement analysis demonstrated by student teachers after encountering authentic dilemmas.

To this end, the implementation of a professional growth e-portfolio assessment method should be promoted. Student teachers should be encouraged and guided to systematically compile key materials from their entire practical learning cycle. This includes initial descriptions of dilemmas, ongoing teaching reflection logs, iteratively revised lesson plans, evidence of practical effectiveness (such as student work and classroom recording clips), and periodic reflective summaries. This portfolio serves not only as the basis for comprehensive evaluation but, more importantly, as a visual record of their journey of professional identity transformation. By constructing and reviewing this portfolio, student teachers can clearly see the trajectory of change in their own cognition and behavior, thereby significantly enhancing their professional self-awareness, sense of efficacy, and intrinsic motivation for continuous development.

5.4 System Integration: Creating a Fully Immersive, Iteratively Ascending Practical Cycle

Finally, building upon the three core practical phases in teacher education—Teaching Observation, Teaching Inquiry, and Teaching Practicum—we should strive to create a fully immersive, iteratively ascending spiral practical system. This entails organically integrating practical components throughout the entire teacher preparation curriculum, designing a progressive pathway from observation and experience to research and innovation.

Specifically, activities focused on observation and composing educational narratives can be arranged in the lower grades to provide initial exposure to the educational field. In the middle grades, these can be combined with micro-teaching sessions and short-term voluntary teaching projects, allowing student teachers to experience a complete design-implementation-reflection cycle within relatively simple tasks. By the senior year, they should advance to the stage of full teaching responsibility practicum and action research, where

they can deepen their professional judgment and creative capabilities within more independent responsibilities and complex contexts.

This design aims to enable the construction cycle of "reality shock–reflection–adaptation" to occur repeatedly and in a graduated manner across practices of varying difficulty and responsibility levels. Each iteration of the cycle is not a simple repetition but rather drives the iterative development of their practical knowledge and professional identity toward higher, more mature levels, ultimately achieving a deep integration of theory and personal practical wisdom.

6. CONCLUSION

This study, by constructing the "shock–reflection–internalization" cyclical model, unveils the "black box" of how student teachers' practical knowledge is dynamically constructed within authentic settings from a micro-process perspective. The research reveals that the professional growth of student teachers is, in essence, an iterative social process. It originates from reality shock, is accomplished through reflective practice, depends on the support of a community of practice, and ultimately leads to a profound transformation in professional identity. This model clarifies that the effective generation of practical knowledge is not a linear application from theory to practice. Instead, it is a coordinated evolution of cognition, behavior, and the professional self, achieved through continuous action, reflection, and social interaction in response to the challenges of complex situations. Based on these insights, this study offers a core implication for reconceptualizing student teacher preparation: future teacher education must systematically design practical components as a supported arena for cognitive conflict, rather than a mere training ground for skills. This necessitates breaking away from the fragmented paradigm of front-loaded theory and back-loaded practice. Instead, it calls for the construction of a fully immersive, iteratively ascending practical pathway, supported by problem-oriented curriculum design and process-oriented growth assessment mechanisms. The goal is to consciously create and guide student teachers through this crucial construction cycle.

Looking ahead, this study could be deepened in the following aspects: First, longitudinal studies could be introduced to investigate whether there are differences and evolutionary patterns in the construction pathways of practical knowledge

among teachers at different developmental stages, such as during the teaching observation, teaching practicum, and initial induction phases. Second, employing diverse methods like video analysis and stimulated recall interviews could allow for a finer-grained capture of the immediate cognitive processes underlying student teachers' instructional decision-making and reflection. Third, the effectiveness and generalizability of the model proposed in this study warrant testing and refinement within broader contexts, such as different subject areas (e.g., science, humanities) and various practical modes (e.g., full responsibility practicum, project-based learning). Deepening research in these directions will provide ongoing theoretical and practical impetus for building a more scientific and supportive ecosystem for teacher development.

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REFERENCES

- [1] Glaser, B. G., & Strauss, A. L. The discovery of grounded theory: Strategies for qualitative research (X. D. Fei, Trans.). Beijing, China: Peking University Press, 2009. (Original work published 1967)
- [2] Matodzi Godfrey Sikhwari. Exploring the relationship between assessment feedback and resilience in student teachers on teaching practice. *International Journal of Research in Business and Social Science*, 2025:14(8 (special issue)).
- [3] Tine Nielsen, Morten Pettersson, & Line Toft. Student Teachers' Practice Self-Efficacy Prior to Their First Field Practice in Schools: Interrelatedness of Subconstructs Within Three Domains of Practice. *Psychology International*, 2025:7(3).
- [4] Kramer, Charlotte, Strauß, Sarah, & König, Johannes. Student teachers' learning about effective classroom management: efficacy and transfer of a video-based intervention aimed at promoting situation-specific skills and self-efficacy. *ZEITSCHRIFT FÜR ERZIEHUNGSWISSENSCHAFT*, 2025: 28(6).
- [5] Obonyo, Carolyne, & Thomas, Gareth. Bridging the Gap: Strategies for Preparing Student Teachers for 'Real-World' Innovative Learning Environments in Aotearoa New Zealand. *New Zealand Journal of Educational Studies*, 2025: 60(2).