

Article

Influencing Factors and Mechanisms of the Construction of Practical Knowledge for Chinese as a Foreign Language Intern Teachers in an Online Internship Program: A Qualitative Study Based on Key Events

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Abstract

A persistent challenge in teacher education is that intern teachers often struggle to effectively apply theoretical knowledge to classroom practice. While constructing practical knowledge is key to bridging this gap, current research has paid insufficient attention to the dynamic processes and triggering mechanisms through which such knowledge develops among Chinese as a Foreign Language (CFL) intern teachers during the internship stage. This study focuses on the “key events” encountered by 7 CFL intern teachers participating in an online internship program at a teacher education institution in Northeast China, through 83 class observations and semi-structured interviews. Using qualitative analysis methods, it explores the content, influencing factors, and mechanisms of practical knowledge construction. The results show that CFL intern teachers generated seven types of practical knowledge. Among them, teaching belief knowledge was the most frequently coded category (20.5%), while teaching context knowledge was the least frequently constructed (6.7%)—a pattern largely attributable to the online teaching environment in which all internships were conducted. Negative key events outnumber positive events in terms of quantity, depth of reflection, and persistence of impact. Reflection is the core mediating mechanism connecting key events and knowledge construction, but the “reflection-in-action” ability of intern teachers is weaker than that of expert teachers. This study reveals the dynamics and cross-cultural particularity of practical knowledge construction for CFL intern teachers, providing empirical evidence for optimizing teacher education internship training.

Keywords: teaching internship stage; Chinese as a foreign language teacher; practical knowledge; key events



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1. Introduction

Since the 1980s, teacher knowledge has been the core topic in teacher education research. The research focus has shifted from the classification of teacher knowledge to teacher thinking, and finally returned to the practical dimension of teacher knowledge. For teacher professional development, practical knowledge—that is, the highly personalized and experiential knowledge formed by teachers in specific teaching situations—plays a crucial role (Elbaz, 1981; Shulman, 1987). Therefore, it is particularly important to cultivate such knowledge during the internship stage for teachers about to enter the

profession. However, researchers have long pointed out that the difficulty of integrating theory and practice is a fundamental dilemma faced by novice teachers (Grossman, 2007; Korthagen, 2010). When teachers encounter specific problems in teaching practice, they often feel confused and believe that they are not yet ready to meet the challenges of the profession (Grossman et al., 2009; Meijer, 2010). The pressure in the early stages of teaching may lead to job burnout, even in the early stages of the internship (Eisenschmidt et al., 2013). A considerable number of teachers choose to leave after the first few years due to heavy emotional burdens and lack of support (Fantilli & McDougall, 2009). To improve teacher retention rates and teaching quality, educational researchers attach great importance to internship experiences and attempt to bridge the gap between theory and practice by supporting the construction of practical knowledge. The main way to promote teacher continuous development is reflection. Reflection not only includes the review and analysis of teaching practice, but also involves in-depth thinking about personal educational concepts, teaching methods, and their effects (Korthagen, 2004; Toom, 2012). However, in practice, many teachers often limit reflection to problem aspects (such as students' learning difficulties, classroom management problems), while neglecting the positive aspects of practice, such as successful teaching cases or the sense of achievement brought by students' active participation. More importantly, regarding how to assist novice teachers in extracting "key events" from teaching practice and how these events affect the construction of their knowledge, there is still limited understanding. "Key events" refer to those ordinary daily events that, after reflection, have a profound impact on teachers' thinking and behavior (Tripp, 1994). Existing research acknowledges that key events have the potential to promote teachers' reflection and professional growth, but most studies only regard them as empirical materials, fail to systematically integrate them with specific learning theories (such as transformative learning, reflective practice), and fail to deeply reveal the internal mechanisms by which key events trigger the generation and reconstruction of practical knowledge.

In this article, "Chinese as a foreign language (CFL) teacher" refers specifically to teachers who teach Chinese to international students in China, as opposed to those teaching abroad. This study takes master's students of the Foreign Chinese Language program as the research subjects. After completing the courses, they go to specific foreign universities for internships. The internships focus on theory, case studies, and simulated classrooms in the first year, and real classroom teaching in batches in the second year, with the teaching objects being international students studying in China for undergraduate degrees. Understanding the factors that affect the construction of practical knowledge by novice teachers is crucial for their future teaching (Hanna et al., 2020; X.-Q. Wang et al., 2018). However, although research on teacher practical knowledge has begun to form a system, studies that start from "key events" to explore the construction of practical knowledge and its influencing factors are still few. To fill this gap, this study investigates the internship teachers participating in the PEI project (Preparatory Education for International Students Program) at a teacher education institution in Northeast China, focusing on the "key events" that have a significant impact on teachers in the real classroom, and explores the content, influencing factors, and mechanisms of the construction of practical knowledge by teachers during the one-and-a-half-year internship. This study aims to explore the following questions:

- (1) What are the contents of the practical knowledge construction of Chinese as a foreign language teacher?
- (2) What are the factors influencing the construction of practical knowledge of Chinese as a foreign language teacher?

- (3) What is the mechanism that affects the construction of practical knowledge of Chinese as a foreign language teacher?

2. Literature Review

2.1. Teacher's Practical Knowledge

Elbaz (1981) was the first to propose “teacher practical knowledge”, defining it as highly individualized and experiential knowledge formed by teachers in specific teaching contexts, covering five aspects: subject matter, curriculum, teaching methods, self-awareness, and school background. Clandinin and Connelly (1996) further emphasized its “embedded in practice” tacit nature. Shulman (1986, 1987) proposed seven types of teacher knowledge, among which “subject matter teaching knowledge” is regarded as the key to distinguishing experts from novices. Fenstermacher (1994) further problematized the distinction between propositional knowledge and practical knowledge, arguing that teachers’ knowledge cannot be reduced to formal propositions. Verloop et al. (2001) pointed out that various types of knowledge are intertwined in practice and deeply influenced by specific contexts. Korthagen (2004) emphasised that practical knowledge is not merely theory application, but a holistic integration of teachers’ beliefs, experiences, and contextual understanding.

Existing studies have shown that the construction of teacher practical knowledge is a dynamic and gradual process, with reflection playing a core role (Schön, 1983; Korthagen, 2004). However, most existing research focuses on experienced teachers and pays insufficient attention to the internship stage, especially for foreign language teachers. Moreover, although “key events” are recognized to have the potential to promote reflection, most studies have failed to integrate them with transformative learning or reflective practice theories systematically. Based on the above, this study focuses on the key events of foreign language internship teachers, exploring the content, influencing factors, and internal mechanisms of their practical knowledge construction.

2.2. Factors Influencing Teachers' Practical Knowledge

Previous studies have shown that the construction of teachers’ practical knowledge is influenced by multiple factors. Glatthorn (1995) summarized these factors into three aspects: factors related to the teachers themselves (such as cognitive development, career development, self-development, motivation, etc.), factors related to the working environment, and factors related to special activities that promote teachers’ development. Lampert (2010) pointed out that pre-service training and on-the-job training are important external conditions that affect practical knowledge.

Further, researchers have classified the influencing factors into internal factors and external factors. Internal factors include the teachers’ personal life experiences, teaching experience, reflection ability, professional motivation, teaching beliefs, etc.; external factors cover school management, school culture, educational policies, social expectations, etc., as synthesised in the literature on teacher professional development (e.g., Glatthorn, 1995; J. Wang, 2004; Zhao, 2011). In addition, the experiences during the student period (including observational learning as a student) and the course settings in pre-service training also have a profound impact on the initial construction of teachers’ practical knowledge.

It is worth noting that “key events” as a special external stimulus are considered to be able to have a significant promoting or reconstructing effect on teachers’ practical knowledge through the mediating role of their reflection (Tripp, 1994). However, existing research mostly focuses on listing the influencing factors, rarely delving into the interaction mechanisms among these factors, and lacks a systematic examination of this special group of foreign language teaching interns.

Based on the above, this study builds upon the existing classification framework of practical knowledge. Through a detailed analysis of key events during the internship stage, we aim to further explore the internal and external factors that affect the construction of practical knowledge among CFL intern teachers, as well as the interaction between these factors.

3. Theoretical Frameworks

3.1. Teacher Cognition Theory

Teacher cognition theory posits that teachers do not simply “apply” the acquired theoretical knowledge to teaching practice; instead, they are involved in a complex and context-specific cognitive-driven process (Borg, 2006). The classroom decisions of teachers are influenced by a multitude of factors such as their personal teaching theories, the way they represent subject knowledge, the classroom environment, student feedback, and unexpected events. In other words, a teacher’s teaching behavior is the result of the continuous interaction between their internal cognition and the external context. This perspective is particularly applicable to understanding novice teachers—they have not yet formed stable practical knowledge, and their teaching behaviors are more susceptible to the impact and reshaping of “unexpected events” in the classroom.

3.2. Theoretical Integration

As mentioned earlier, teacher’s practical knowledge is a highly personalized and experiential knowledge system formed by teachers in specific teaching situations (Elbaz, 1981), while teacher cognition theory focuses on how teachers perceive, interpret, make decisions and adjust their teaching behaviors in complex classroom environments (Borg, 2006). The two concepts are not opposing or parallel, but rather a relationship between process and result, mechanism and product: Teacher cognition is the psychological process and dynamic mechanism for the construction of practical knowledge, while practical knowledge is the relatively stable cognitive structure that accumulates and stabilizes during this process.

Specifically, teacher cognition theory provides three key mechanisms for understanding the construction of practical knowledge. First, selective attention: In the classroom, teachers encounter a vast amount of information, and their existing beliefs and knowledge structures will guide them to prioritize which events to focus on (such as a student’s unexpected answer or a classroom chaos). This selective attention determines which “key events” can enter the reflection process. Second, the explanatory framework: how teachers interpret the same event depends on their existing cognitive schemas. For example, when two trainee teachers face the same unresponsive student question, one might attribute it to their own teaching incompetence, while the other might attribute it to cross-cultural communication differences, which will lead to completely different directions of knowledge reconstruction. Third, memory and integration: The event experiences that have been reflected and processed will be incorporated into long-term memory and undergo assimilation or accommodation with existing knowledge, ultimately forming new practical knowledge (Piaget, 1970).

In this study, we use the teacher cognition theory as an integration framework, regarding “key events” as the stimulus source triggering cognitive reconstruction, reflecting practice as the core way of cognitive processing, and changes in practical knowledge as the result of cognitive reconstruction. This integration avoids regarding the construction of practical knowledge as a simple “accumulation of experience” or “application of theory”, but reveals the complex cognitive processing process involved. The theoretical framework in Figure 1 is precisely constructed based on this integration.

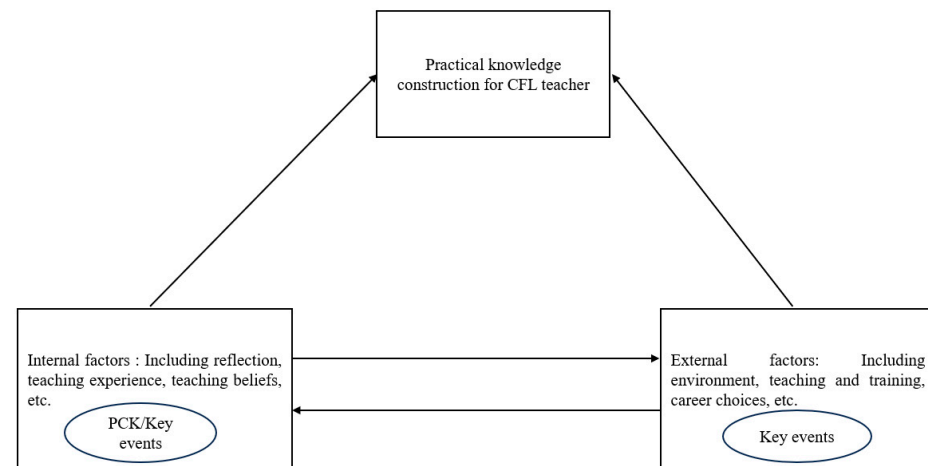


Figure 1. Theoretical Framework of the Study.

To avoid confusion of concepts, this study makes the following clear distinction between “teacher cognition” and “practical knowledge”: Teacher cognition refers to the dynamic psychological process of perception, interpretation, decision-making, and reflection in the classroom context (Borg, 2006); Practical knowledge is the relatively stable knowledge structure accumulated and stabilized during this process (Elbaz, 1981). In short, teacher cognition is “how to think”, and practical knowledge is “what is known”. Although the two are closely related, they should not be used interchangeably. In this study, “constructing practical knowledge” refers to the change in the knowledge structure, and “cognitive process” refers to the psychological mechanism that leads to this change. In the following text, this distinction will be strictly followed.

3.3. Key Events as Catalysts: Supplementary Theoretical Perspectives

While teacher cognition theory provides the core analytical framework for this study, two additional theoretical perspectives—transformative learning (Mezirow, 1991) and reflective practice (Schön, 1983)—serve as supplementary lenses for understanding the specific mechanisms through which key events trigger cognitive change.

Mezirow’s (1991) concept of the “disorienting dilemma” helps explain why negative key events are particularly effective in prompting deep reflection: they challenge teachers’ existing meaning structures and force a fundamental reorganisation of beliefs. In this study, when intern teachers encountered teaching failures, cross-cultural misunderstandings, or classroom management crises that contradicted their prior assumptions, they were compelled to question their existing beliefs and reconstruct their practical knowledge—a process that aligns with Mezirow’s transformative learning framework.

Schön’s (1983) distinction between “reflection-in-action” and “reflection-on-action” provides a vocabulary for describing the different temporal modes of teacher reflection observed in our data. For instance, teachers’ immediate adjustments during classroom teaching (such as modifying questioning strategies when students showed disinterest) exemplify “reflection-in-action,” while their retrospective analysis of critical incidents after class (such as re-evaluating their teaching presuppositions) exemplifies “reflection-on-action.”

However, these perspectives are used as interpretive tools rather than as independent theoretical frameworks. The integrative lens remains teacher cognition theory (Borg, 2006), which subsumes these mechanisms within its broader account of how teachers’ beliefs, knowledge, and contextual factors interact in the construction of practical knowledge. In other words, we draw on Mezirow and Schön selectively and strategically to illuminate specific aspects of the knowledge construction process, but we do not treat them as parallel or competing frameworks. Figure 1 illustrates this integrated theoretical structure.

4. Methodology

4.1. Participants

This study focused on 7 postgraduate students majoring in Teaching Chinese as a Foreign Language. Their internship period ranged from January 2021 to July 2022. All seven respondents had bachelor’s degrees in Teaching Chinese as a Foreign Language or related fields, and none had prior teaching experience in primary or secondary schools. They all directly entered the postgraduate program from their undergraduate studies (the second-year students were admitted as L2 teachers). They were selected based on the principle of maximizing information. As shown in Table 1.

Table 1. Research object.

Participants	Internship-Duration	Teach Courses
Teacher W1	January 2021–July 2022	Cultural courses, head teacher
Teacher H	January 2021–July 2022	One-on-one tutor sessions
Teacher L2	January 2021–July 2022	Science and technology Chinese course, head teacher
Teacher M	January 2022–July 2022	HSK course
Teacher L1	January 2021–July 2022	Vocabulary and reading course, head teacher
Teacher W2	January 2021–June 2022	Practical Chinese language course, head teacher
Teacher Z	July 2021–July 2022	One-on-one tutor sessions

4.2. Data Collection

This study was reviewed and approved by the Ethics Committee of Northeast Normal University (Approval Number: 202402037). All participants provided written informed consent prior to data collection and were assured of their right to withdraw at any time. All identifiable personal information was anonymised during transcription and analysis, with participants assigned codes (W1, H, L2, M, L1, W2, Z) and any identifying details deleted or replaced with generalised descriptions.

This study explores “key events” in the teaching practices of trainee teachers, some of which are negative experiences (such as teaching failures, classroom conflicts, professional frustration, etc.). To minimize the psychological risks of the participants, the researchers maintained a neutral and non-judgmental attitude during the interviews, using open-ended questions (such as “Please describe an impressive classroom event”) instead of leading questions (such as “Have you ever experienced teaching failure”). The researchers clearly informed the participants that they could skip any questions they did not want to answer and could terminate the interview at any time. During the transcription and reporting stages, further obfuscation was carried out for potentially identifying the identity of the participants in sensitive situations (for example, “A student from country X openly questioned my teaching in the classroom” was changed to “A student from a foreign country raised an opinion in the classroom”), ensuring that even if negative events were cited, it would not be possible to trace back to a specific teacher, student, or teaching institution. All original data (audio files, transcription texts, observation notes, development curve charts) were stored in the researcher’s personally encrypted computer, accessible only to the research team members. After the study, all data would be destroyed or permanently sealed as required by the ethics committee upon the conclusion of the study.

This study conducted non-participatory classroom observations of the courses of seven teachers at different internship stages (pre-internship, mid-internship, and post-internship), totaling 83 class hours of observation. The researchers informed the teachers in advance that the purpose of the observation was only for research, not for evaluation of teaching, and not to interfere with the teaching process, in order to minimize the Hawthorne effect. During the observation, a classroom observation record sheet was used, distinguishing

between “objective description” (such as “The teacher paused for 5 s” “The student raised their hand to answer”) and “subjective inference” (such as “The teacher seemed confused”), the latter needed to be marked and verified with the teacher in the subsequent interview. Electronic records were completed within 24 h after each observation, and an electronic file bag was established for classification storage. The classroom observation data was named “L-OB-12.08”, that is, L teacher’s classroom observation record on 8 December. After completing at least 3 classroom observations with each teacher, the researchers conducted the first semi-structured interview, which lasted for 45 to 60 min. The content covered the teacher’s basic information, internship experiences, memorable classroom events, and reflections. The interview outline was designed based on the literature review and the initial classroom observation results. All questions were expressed in an open-ended manner. The interviews were conducted online (as all internships were conducted online), and the entire process was recorded. Subsequently, supplementary interviews were conducted for specific events in the classroom recordings and key events mentioned by the teachers in the first interview but not fully elaborated upon. Each interview lasted approximately 35 min and was conducted by the same researcher to maintain a consistent questioning style. After the supplementary interviews, the researchers showed Scherer (1999)’s sample development curve diagram (as shown in Figure 2) to each teacher and explained that the diagram was only for understanding purposes and was not required to be imitated. The teachers were asked to draw their own development curve based on their teaching mood, teaching ability, and changes in their own cognition throughout the internship period, and to mark the corresponding key events. After collecting the curve diagrams, the researchers used them as auxiliary materials for analyzing the mechanism of practical knowledge construction.

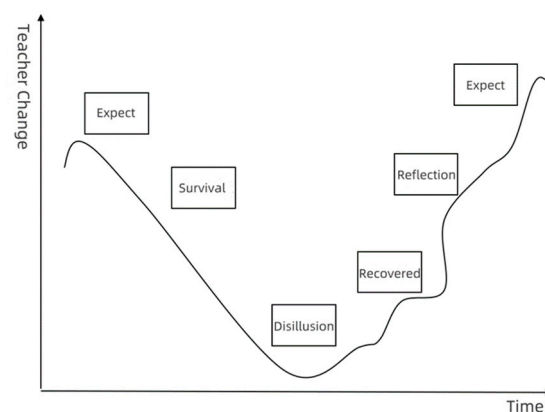


Figure 2. Sample of the development curve (Scherer, 1999).

All interview recordings were transcribed into text by a third-party transcription service company. The researchers then checked and corrected the transcribed text sentence by sentence. The interview data were named “H-I” (i.e., the first interview data of Teacher H); the supplementary interviews were named “H-SI”. Approximately 50,000 words of analyzable text were obtained. All electronic materials (observation records, interview transcripts, photos of the curve diagrams) were stored on encrypted computers and archived by participant code.

4.3. Data Analysis

This study employed a qualitative analysis method, using NVivo 12 software to conduct three-level coding on the transcribed interview texts and classroom observation records. Specifically, we adopted a thematic analysis approach (Braun & Clarke, 2006, 2022) to identify, analyse, and report patterns (themes) within the data. Thematic analysis is particularly suitable for this study because it provides a flexible yet systematic method for

identifying both explicit and implicit meanings in qualitative data, making it well-suited for exploring the complex and multifaceted nature of teachers' practical knowledge construction (Nowell et al., 2017). To operationalise the analytical process, we borrowed and adapted the coding terminology—open coding, axial coding, and selective coding—from the Grounded Theory tradition (Glaser & Strauss, 1967; Corbin & Strauss, 2015) as an analytical heuristic. This adaptation is not intended to claim a full Grounded Theory design, which would require theoretical sampling and constant comparative analysis aimed at generating a substantive theory from the ground up (Charmaz, 2006). Instead, we use these coding procedures as systematic tools for data reduction, organisation, and theme development, which aligns with established practices in qualitative teacher cognition research (Borg, 2006; Fereday & Muir-Cochrane, 2006). The epistemological stance underlying this analysis is interpretivist/constructivist: we assume that teachers' practical knowledge is socially constructed, contextually situated, and subjectively experienced, and that the researcher's role is to interpret participants' meaning-making processes rather than to uncover objective truths (Lincoln & Guba, 1985; Denzin & Lincoln, 2018). The specific steps are as follows.

Step 1: Primary coding (open coding). The researchers repeatedly read the interview texts and classroom observation notes from each teacher, marking the content fragments related to the teachers' practical knowledge construction from a "third-person" perspective—that is, approaching the data as an external analyst rather than as a participant, thereby maintaining analytical distance and minimising the influence of the researchers' own teaching experiences on the coding process. When coding, they used the respondents' original words or concise phrases that were close to the original meaning as free nodes. For example, Teacher H mentioned in the interview, "The online teaching software couldn't initiate the class, so I had to live-stream while teaching. Later, I learned to make appointments in advance," and the researcher marked this as "Adaptation of Online Teaching Technology". A total of 127 initial free nodes were generated.

The purpose of this step is to break down the raw interview data into discrete meaningful units and label them with preliminary concepts. This initial coding phase is exploratory and inductive—the researchers approach the data without preconceived categories, allowing themes to emerge naturally from the participants' own words. The goal is to identify all potentially relevant content fragments related to teachers' practical knowledge construction, ensuring that no meaningful data is overlooked at this early stage.

Step 2: Secondary coding (axial coding). Based on the primary coding, the researchers classified and merged similar or related free nodes. For example, "Adaptation of Online Teaching Technology", "Network congestion causing teaching interruption", "Making appointments in advance to avoid accidents" and other nodes were grouped under the secondary category "Online Teaching Environment". At the same time, they constantly compared the similarities and differences between different nodes and deleted those with low frequency (less than 2 mentions) or irrelevant to the research question. Eventually, 22 secondary categories were formed. (As shown in Table 2).

The purpose of this step is to organise and synthesise the large number of open codes by identifying relationships, patterns, and connections among them. Similar or related open codes are grouped together into more abstract conceptual categories. This step reduces data complexity and begins to establish a hierarchical structure. The goal is to move from fragmented descriptions to coherent conceptual groupings that capture recurring themes across participants.

Table 2. Complete list of secondary categories (axial coding).

No.	Secondary Category (Axial Code)	Related Primary Coding Examples
1	Teaching style and characteristics	Self-perception of personality; teaching approach
2	Self-awareness of strengths and weaknesses	Recognition of teaching advantages; identification of limitations
3	Self-efficacy	Teaching confidence; sense of achievement; teaching anxiety
4	Course content knowledge	Understanding of different course types (Basic Chinese, Practical Chinese, etc.)
5	Pedagogical content knowledge	Matching teaching methods to content; adaptation to different courses
6	Linguistic knowledge (phonetics, vocabulary, grammar)	Application of textbook knowledge to real teaching; student-inspired explanations
7	Student background knowledge	Nationality; cultural background; language proficiency; prior learning experience
8	Student learning characteristics	Learning styles; motivation; classroom participation patterns
9	Student psychological states	Learning pressure; emotional needs; cross-cultural adaptation
10	Classroom teaching strategies	Questioning techniques; error correction methods; interactive activities
11	Classroom management strategies	Discipline management; student engagement; handling unexpected incidents
12	Student management strategies	Dealing with problem students; “three-level reporting system”; motivational strategies
13	Reflection on linguistic knowledge	Identifying gaps in content knowledge; post-lesson self-correction
14	Reflection on teaching practice	Reflecting on teaching style; teaching effectiveness; teaching adjustments
15	Self-reflection	Reflective diary; overall reflection; metacognitive awareness
16	Beliefs about linguistic and cultural knowledge	Importance of cultural teaching; beliefs about error correction; beliefs about theoretical knowledge
17	Beliefs about teaching	Equal opportunity beliefs; technology-supported teaching; teaching style; educational values
18	Beliefs about learning	Technology training; supportive learning environment
19	Beliefs about career	Reasons for choosing the major; future career plans
20	Online teaching environment	Technical challenges; platform proficiency; online classroom management
21	Offline teaching environment	Classroom atmosphere; non-verbal communication; seating arrangement
22	Socio-cultural context	Institutional requirements; cross-cultural sensitivity; cultural conflicts

Step 3: Tertiary coding (selective coding). Based on the existing classification of practical knowledge in the literature (Elbaz, 1981; Shulman, 1987) and the core themes repeatedly appearing in this study, the secondary categories were further summarized into higher-level tertiary categories. For example, “Online Teaching Environment”, “School Culture”, “Cross-cultural Interaction between Teachers and Students” and other secondary categories were classified under “Teaching Context Knowledge”; “Understanding of Students’ Background”, “Attention to Students’ Psychological State” were classified under

“Students’ Knowledge”. Finally, seven categories of practical knowledge were determined (As show in Tables 3–5).

Table 3. Mapping of tertiary categories to secondary categories.

Tertiary Category (Selective Code)	Corresponding Secondary Categories
Self-knowledge	(1) Teaching style and characteristics; (2) Self-awareness of strengths and weaknesses; (3) Self-efficacy
Chinese subject knowledge	(4) Course content knowledge; (5) Pedagogical content knowledge; (6) Linguistic knowledge
Student knowledge	(7) Student background knowledge; (8) Student learning characteristics; (9) Student psychological states
Strategic knowledge	(10) Classroom teaching strategies; (11) Classroom management strategies; (12) Student management strategies
Reflective knowledge	(13) Reflection on linguistic knowledge; (14) Reflection on teaching practice; (15) Self-reflection
Teaching belief knowledge	(16) Beliefs about linguistic and cultural knowledge; (17) Beliefs about teaching; (18) Beliefs about learning; (19) Beliefs about career
Teaching context knowledge	(20) Online teaching environment; (21) Offline teaching environment; (22) Socio-cultural context

Table 4. Summary of coding hierarchy.

Tertiary Categories (Selective Coding)	Number of Secondary Categories	Number of Primary Coding References
Self-knowledge	3	48
Chinese subject knowledge	3	48
Student knowledge	3	52
Strategic knowledge	3	32
Reflective knowledge	3	37
Teaching belief knowledge	4	61
Teaching context knowledge	3	20
Total	22	298

Table 5. Teacher practical knowledge node frequency table.

Primary Coding	The Number of Encoded Reference Points	Percentage of Total Coded Points
self-knowledge	48	16.1%
Chinese subject knowledge	48	16.1%
student knowledge	52	17.5%
strategic knowledge	32	10.7%
reflective knowledge	37	12.4%
teaching belief knowledge	61	20.5%
teaching context knowledge	20	6.7%
Total	298	100%

The purpose of this step is to integrate and refine the axial categories into a smaller set of higher-order, theoretically grounded themes that directly address the research questions. This step is guided by the study’s theoretical framework and existing literature on practical knowledge classification (Elbaz, 1981; Shulman, 1987). The goal is to produce the final set of knowledge categories that represent the core findings of the study, ensuring that the coding outcomes are both empirically grounded and theoretically coherent. (As show in Figure 3).

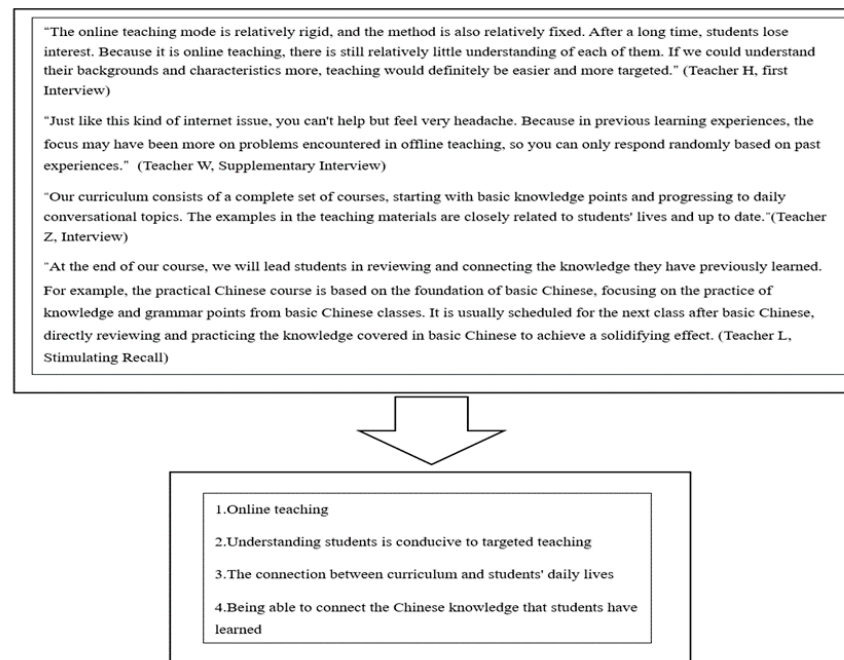


Figure 3. An example of open-coding of first-level themes from raw data.

Consistency assessment of coders. To ensure the reliability of the coding, this study invited another doctoral student with qualitative research experience in education as the second coder. 20% of all interview materials (approximately 10,000 words) were randomly selected, and the two coders independently coded according to the above coding scheme. The coding consistency percentage was 87.6%, and the Kappa coefficient was 0.83 ($p < 0.01$), indicating a high degree of consistency in coding. For conflicting coding items, the two coders reached consensus through discussion. We conducted code-by-code comparison queries in NVivo, which revealed the highest agreement for concrete knowledge types such as "teaching context knowledge" (92.1% agreement) and "Chinese subject knowledge" (89.7% agreement), while the lowest—though still acceptable—agreement was for more inferential categories such as "teaching belief knowledge" (84.2% agreement) and "reflective knowledge" (83.5% agreement). This gradient is expected in qualitative research, as more abstract and inferential categories inherently involve greater interpretive flexibility (Lincoln & Guba, 1985). We acknowledge the epistemological tension between reporting inter-coder reliability statistics and the interpretivist/constructivist stance of this study. While Kappa coefficients and percentage agreement are traditionally associated with positivist research paradigms, we report them here not as claims to objective truth or statistical generalisability, but as procedural transparency measures that demonstrate the systematic and rigorous nature of our coding process. In qualitative inquiry, such consistency checks serve to enhance the dependability and confirmability of the analysis (Lincoln & Guba, 1985), rather than to establish universal validity. We therefore present these figures as evidence of researcher reflexivity and analytical diligence, not as positivist validation of immutable facts. This approach is consistent with established practices in qualitative teacher cognition research (Borg, 2006), where methodological transparency is valued as a marker of trustworthiness. We explored this possibility using NVivo's cluster analysis function (based on Pearson's correlation coefficient). However, given our modest sample size (seven participants) and the resulting uneven coding frequencies across teachers, we found that the cluster analysis output was insufficiently stable to support robust conclusions. In qualitative research with small samples, cluster analysis can produce patterns that are heavily influenced by individual participant responses rather than reflecting genuine

underlying structures (Bazeley & Jackson, 2013). We therefore chose not to include cluster analysis results in the main text. Instead, we have addressed the relationships between knowledge types qualitatively throughout Section 5, particularly through our analysis of the mediating role of reflection and the developmental trajectories presented in the development curve diagrams (Figures 4–10).

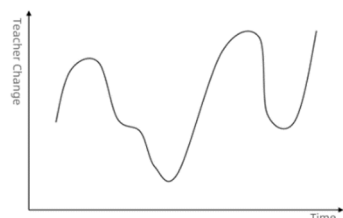


Figure 4. W1's and Teacher H's double N-type development curve chart.

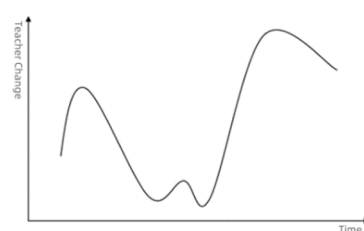


Figure 5. W1's and Teacher H's double N-type development curve chart.

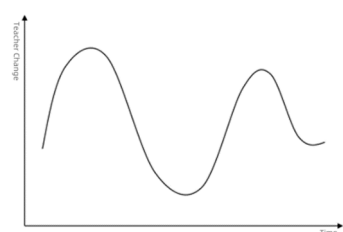


Figure 6. Teacher W2's and Teacher L1's M-shaped development curve chart.

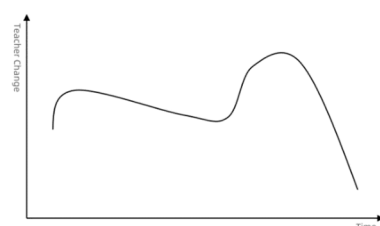


Figure 7. Teacher W2's and Teacher L1's M-shaped development curve chart.

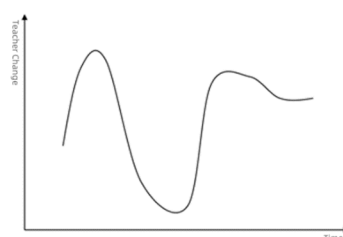


Figure 8. Teacher M's M-shaped and Teacher Z's W-shaped development curve chart.

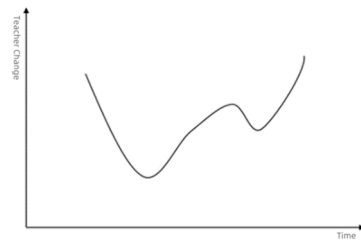


Figure 9. Teacher M's M-shaped and Teacher Z's W-shaped development curve chart.

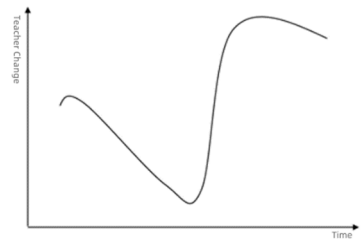


Figure 10. Teacher L2's V-shaped development curve chart.

Measures to reduce bias. In the data collection and analysis process of this study, the following measures were taken to control bias: (1) Control of classroom observation bias: The researchers entered the classroom as non-participating observers, informing the teachers that the purpose of the observation was only for the research and not for evaluation of teaching, minimizing the Hawthorne effect as much as possible; each teacher observed 3–4 different stages of classes, avoiding the randomness of a single observation; during the observation records, “objective description” and “subjective inference” were distinguished, for example, “The teacher paused for 5 s” was an objective description, while “The teacher seemed confused” was marked as an inference and needed to be verified through subsequent interviews. (2) Control of interview bias: The interview outline was determined through discussion by the research group, and open-ended questions were used during the interviews, avoiding leading questions; all interviews were conducted by the same researcher, maintaining a consistent questioning style. (3) Control of coding bias: In addition to the above coder consistency test, the researcher re-coded the same text after two weeks of completing all coding, with a consistency of 91.2%, indicating internal stability of the coding.

Test of theoretical saturation. Following the principles of qualitative methodology (Glaser & Strauss, 1967; Charmaz, 2006), theoretical saturation was assessed through an iterative process. After completing the initial coding of all seven teachers' interview data, the research team engaged in ongoing comparative analysis. When no new conceptual categories or thematic patterns emerged from the analysis of the sixth and seventh participants' data, the researchers conducted a systematic re-coding of one participant's complete interview materials. This re-coding confirmed that all emergent themes had been captured in the existing coding scheme. Additionally, interview data from an informal respondent (a CFL intern teacher who met the same selection criteria but was not among the seven participants) was coded and analyzed; no new themes beyond those already identified were discovered. Based on this systematic process, we concluded that theoretical saturation had been achieved. We acknowledge that our sample size is modest and that saturation claims in qualitative research are always provisional and context-dependent; however, the iterative coding process described above provides reasonable evidence that the core categories identified in this study are sufficiently grounded in the data.

5. Findings

5.1. The Content of the Practical Knowledge Construction for Chinese as a Foreign Language Teachers

Based on the results of the three-level coding and in combination with existing literature (Elbaz, 1981; Shulman, 1987), this study classified the practical knowledge of Chinese as a foreign language (CFL) teaching assistants into seven categories. Through repeated reading, refinement, and classification of the interview texts of seven teachers, it was found that the original cognitive knowledge of teachers in the teaching process could not be fully applicable to the classroom, resulting in varying degrees of opposition and conflict. These difficulties and conflicts can be regarded as “key events” that promote the growth of teachers. In the opposition and conflict, implicit thoughts and teaching concepts can be discovered, the existing problems in the teaching behavior can be faced squarely, and thus the construction type of practical knowledge can be clarified.

Table 5 presents the frequency distribution of nodes of the seven types of practical knowledge. As shown in Table 5, teaching belief knowledge was the most frequently coded category in our data (61, 20.5%). This frequency may reflect the intensive belief fluctuations characteristic of the internship stage, rather than indicating an inherent hierarchy of knowledge importance.” The relatively low frequency of teaching context knowledge coding references (20, accounting for 6.7%) should be understood in light of the online teaching context in which all internships were conducted, which limited interns’ exposure to the full richness of physical classroom environments and face-to-face cross-cultural interactions.

The operational definitions and coding bases for the above seven types of knowledge are as follows:

Self-knowledge: Teachers’ understanding of their own personality traits, teaching strengths and weaknesses, emotional states, and professional values. The coding basis includes teachers’ statements about aspects such as “teaching style”, “the influence of personality on teaching”, “self-efficacy”, and “professional identity” (e.g., “I am more gentle in personality, so I am not good at managing classroom discipline”).

Chinese language subject knowledge: Teachers’ mastery of the subject matter of Chinese language (phonetics, vocabulary, grammar, Chinese characters) and its teaching content. The coding basis includes descriptions by teachers about “explanations of language points”, “error analysis”, “comparison between Chinese and the native language of international students” (e.g., “I spent a lot of time preparing the grammar rules of the ‘put’ sentence”).

Student knowledge: Teachers’ understanding of the learning background, language proficiency, learning motivation, learning style, psychological state, and cross-cultural characteristics of international students. The coding basis includes mentions by teachers about aspects such as “nationality and cultural background of students”, “learning difficulties”, “classroom responses”, “individual differences” (e.g., “I found that African students are actually very hardworking, unlike what I imagined”).

Strategic knowledge: Specific teaching methods, classroom management skills, strategies to motivate students, and contingency strategies for handling unexpected problems used by teachers in the teaching process. The coding basis includes descriptions by teachers about “adjustment of teaching steps”, “design of classroom activities”, “discipline management”, “use of technical tools” (e.g., “Later, I learned to reserve online classes in advance to avoid software crashes”).

Reflective knowledge: Teachers’ ability and awareness to review, analyze, evaluate their own teaching practice, and thereby improve it. The coding basis includes reflection behaviors mentioned by teachers such as “post-class review”, “identifying the causes of problems”, “trying new methods”, “comparing with others’ teaching” (e.g., “I realized that

assuming the difficulties of international students based on Chinese thinking was wrong. I will do as I like based on what I like about my teachers”).

Teaching belief knowledge: Deep-seated concepts and value orientations in the mind of teachers regarding teaching, students, learning, and the role of teachers. The coding basis includes statements by teachers about “standards of good teachers”, “teacher-student relationship”, “teaching philosophy”, “stereotypes or changes in perceptions of international students” (e.g., “I think that beliefs and ideas have been influenced comprehensively. I will act in the way I like based on what I like about my teachers”).

Teaching context knowledge: Teachers’ cognition and adaptability to the specific environment in which teaching occurs (including online/offline teaching platforms, school culture, cross-cultural communication atmosphere, class atmosphere, etc.). The coding basis includes descriptions by teachers about “online teaching environment”, “cross-cultural interaction”, “school support”, “classroom atmosphere” (e.g., “When the network is bad, you are explaining something very interesting, but they don’t hear clearly. I don’t want to repeat it a second time”).

The operational definitions of each of the above types of knowledge are derived from the corresponding secondary categories in the three-level coding of this study, ensuring consistency and reproducibility of the coding. The following will further analyze the internal and external factors influencing their construction based on these seven types of knowledge.

5.2. *The Influencing Factors of Chinese as a Foreign Language Teachers’ Practical Knowledge Construction*

5.2.1. Internal Influencing Factors

The operational definitions of each of the above categories of knowledge are all derived from the corresponding secondary categories in the three-level coding of this study, ensuring the consistency and repeatability of the coding. In the following text, based on these seven categories of knowledge, we will further analyze the internal and external factors that influence their construction.

Reflection

The seven teachers repeatedly mentioned that the reflection mainly stemmed from negative experiences. Using a Chinese way of thinking, Teacher M hypothesized that the difficulties faced by international students led to poor classroom outcomes, prompting reflection on teaching methods. Due to not understanding the psychological changes of students, Teacher W1 caused excessive stress for the students and reflected on the insufficiency of her own psychological knowledge. After reflection, the teachers generally proposed improvement measures, such as strengthening the study of language points, improving teaching styles, and learning more about the students’ backgrounds, etc. Positive experiences can also trigger reflection. For example, Teacher H discovered that students were interested in the topic of “food”, so she actively designed related interactive content after class.

Reflection on the Growth of Teaching Practice

After the internship, the teacher’s ability to match teaching content with methods improved significantly, their grasp of key textbook points became more accurate, and their teaching anxiety decreased. L2 teacher mentioned: “The biggest improvement after the internship was in the grasp of the course. Seeing the textbooks, I could better master the key points and difficulties.” Teacher H adjusted his teaching style through a positive event (students expressed their love for the gentle teacher) and encouraged students more, especially helping the underperforming students build confidence.

Teaching Experience

Five teachers felt that the first class was very impressive. Teacher Z's first class was dull and frustrating, which led to her long-term lack of interest in teaching and even a sense of frustration; while Teacher W2's first class received positive responses from the students, which greatly encouraged her and kept her teaching state consistently positive. Teacher H gained a positive experience by helping a student with poor foundation improve their listening scores, expressing that "it was quite inspiring for the teacher". Different teaching experiences significantly affect teachers' teaching enthusiasm, confidence and subsequent attitudes.

Teaching Beliefs

Teaching beliefs are influenced by various factors such as previous teachers, peers, expert teachers, and students. L1 teacher said, "I will do as I think the teachers I admire do." This statement reflects how intern teachers' teaching beliefs are shaped by their admiration for and identification with significant others in their learning history. Under the guidance of an expert teacher, M teacher abandoned the original belief of "explaining every sentence thoroughly" and instead focused on key vocabulary words, saving time. L2 teacher and Z teacher changed their stereotypes of international students: L2 teacher discovered that "Africans are not as poor as we imagined; they respect teachers very much"; Z teacher realized that the difference in countries does not affect the smoothness of teaching. Z teacher also found that theoretical knowledge is rarely used in actual teaching, and communicative exercises are not applicable to students with poor foundations.

Previous Professional Knowledge Learning Experience

Professional studies at the undergraduate and postgraduate levels provide theoretical guidance and a foundation for teaching. Teacher W1 believes that "these fundamental knowledges were all gradually discovered by previous teachers through trial and error." At the same time, the teaching styles of previous teachers will be unconsciously imitated. As L1 teacher noted in a different interview context, "the way I teach is often influenced by the teachers I liked during my own student years." Previous experiences laid the foundation for the initial stage of the internship. Based on this, teachers continuously added, reduced, and adjusted, gradually constructing their own practical knowledge.

5.2.2. External Influencing Factors

Position Held

Seven teachers hold different positions: full-time classroom teachers, one-on-one tutoring teachers, and class advisors. Different positions bring about different practical experiences. Teacher W2, who is the class advisor, stated that the responsibilities of a class advisor are greater, they handle more issues, and they have richer practical knowledge. Teacher L1, who used to be a full-time classroom teacher, confessed: "Before, as a classroom teacher, I had no idea about the learning styles and characteristics of students at all." One-on-one tutoring teacher Z is better at identifying and correcting deficiencies for students of different types.

Auxiliary Teaching Methods

The teaching log helps teachers identify their own problems, but most teachers lack the habit of keeping logs (Teacher L1 stated, "I usually don't write teaching logs. I'm rather lazy"). In terms of educational technology, Teacher H learned to make appointments in advance when the software couldn't start the class during online teaching, thus

avoiding accidents. The application of online technology has helped teachers accumulate technical experience.

Environment

The cross-cultural working environment leads to the emergence of particularities in teacher-student relationships and the status of teachers. The online teaching during the pandemic has had a significant impact: Teacher L2 mentioned, “When the network is poor, you speak passionately but they don’t understand. You don’t even want to repeat it a second time.” The online environment affects the teaching state and thereby hinders the construction of practical knowledge.

Teaching Training

The training provided new teachers with initial support and reference. The L1 teacher said, “The learning community (collective lesson preparation) has been very helpful to me.” They worked together to solve classroom problems and gained experience. The W2 teacher suggested adding practical lectures on students’ psychology, teacher-student relationships, etc., to help alleviate anxiety and build confidence.

The Influence and Help of Others

Five types of external influences: apprenticeship training by mentors, other teachers, graduate supervisors, expert teachers’ guidance, and observation of expert teaching sessions. Teacher W1 truly realized the importance of theoretical support during the graduate stage through V’s classes. The observation and feedback from expert teachers had a significant impact on trainee teachers. Teacher H said, “Because he came to listen to your class, you would be extremely nervous, and he would give you feedback... You would correct according to the suggestions of the expert teacher.” Observing the same teaching content courses by expert teachers prompts trainee teachers to reflect and compare, accumulating experience.

Student

In a cross-cultural context, the influence of students on teachers’ practices is particularly prominent. Specifically, it is manifested as follows: (1) Understanding students’ backgrounds and learning situations is conducive to targeted teaching; (2) Paying attention to students’ psychological states, such as when a L2 teacher notices that an international student is copying homework, it might indicate excessive pressure; (3) Learning attitudes and classroom feedback affect teachers’ teaching experiences; (4) Positive student evaluations give teachers confidence, as L2 teacher noted, “He is particularly active in class, and all of this affects me”; (5) Students’ novel explanations broaden teachers’ knowledge frameworks, as a W2 teacher called it “an unexpected delight”; (6) After the teacher-student relationship shifts from “ordinary teachers and students” to “friend-like”, the classroom atmosphere and interaction have significantly improved (Z teacher, H teacher).

Career Choice

Most teachers choose to become primary and secondary school teachers rather than teaching Chinese as a foreign language due to the pandemic and family pressure. The L1 teacher said, “In the future, I prefer to be a primary and secondary school teacher. Due to the pandemic, it’s not convenient to go abroad.” This career choice led the intern teachers to pay more attention to the methods and models of primary and secondary school teaching during their internships (W2 teacher), influencing the direction of the construction of their practical knowledge.

5.3. *The Influence Mechanism of Chinese as a Foreign Language Teachers' Practical Knowledge Construction*

By classifying the development curves of the seven CFL intern teachers' internships (all selected at the same internship stage), four types were summarized: the Double N type, the M type, the W type, and the V type. The development curves of Teacher W1 and Teacher H are of the Double N type (Figures 4 and 5). The Double N type involves experiencing two processes of teaching enthusiasm and teaching confidence rising from low to high and then falling again and rising again throughout the internship. Teachers W1 and H have relatively high teaching enthusiasm and confidence in the early and late stages of the internship, with strong self-efficacy. There are two relatively obvious teaching trough periods in the middle and late stages, and during the first trough period, the teacher makes teaching adjustments, and the teaching enthusiasm recovers somewhat. However, soon after, there will be fluctuations and entering a trough period again. In the final stage of teaching, the teacher gradually recovers the teaching enthusiasm due to the influence of the school or personal factors. Teacher W2, Teacher L1, and Teacher M have the M type (Figures 6–8). The M-shaped curve indicates that teachers become less confident in the early stage of the internship but gradually gain teaching confidence as teaching progresses. Teaching enthusiasm gradually increases. However, in the middle and late stages of the internship, multiple trough periods appear, during which teaching enthusiasm is low and teachers lack confidence. Only Teacher Z drew the W-type development curve (Figure 9), which refers to the development curve that has experienced two trough periods. In the early and late stages of the internship, the teacher is highly enthusiastic, but during the middle stage, there is a significant trough period in teaching. In the later stage of the internship, the teacher regains teaching enthusiasm. Teacher L2 drew the V-type development curve (Figure 10). The V type is that the teacher has high teaching expectations in the early and late stages of the internship, but there is a significant trough period in the middle stage. CFL intern teachers' understanding of international students is particularly limited due to the cross-cultural nature of their teaching context. Unlike traditional educational environments, foreign language teaching faces students from different countries with different languages and cultural backgrounds. Although foreign language teachers have undergone systematic learning and training, their understanding of international students is more limited to textbooks and second-hand materials. They have limited understanding of the basic situations of different countries. Therefore, when predicting the thoughts of international students based on their own experiences, there are often significant differences. The teaching objects of foreign language teachers are adult students, and they also have expectations and teaching requirements for students, resulting in a great deal of teaching pressure for the teachers. To avoid unnecessary cultural conflicts in and outside the classroom, the focus of foreign language teachers during the entire internship period is more on students.

To further illuminate the mechanism, we conducted a comparative analysis of positive and negative key events, which revealed three key differences in their mechanisms of influence. Among the 63 key events extracted, 45 were negative (accounting for 71.4%), and 18 were positive (accounting for 28.6%). Negative events dominated in terms of quantity, and teachers described negative events in more detail and had stronger emotional reactions during the interviews. The comparative analysis revealed the following differences in the mechanisms of influence:

First, the triggering mechanisms are different. Negative events usually occur in the form of “problems” or “conflicts” (such as preset failures, classroom chaos, and teacher-student misunderstandings), directly challenging the teacher's original cognitive schema and forcing the teacher into a “confused dilemma” (Mezirow, 1991), thereby triggering deep

reflection. Positive events, on the other hand, often occur in the form of “pleasant surprises” (such as students’ positive feedback and successful teaching cases). They are more about verifying or reinforcing the teacher’s existing effective behaviors rather than overturning the existing cognition. For example, the positive event that Teacher H obtained from the students’ interest in the “food” topic only prompted her to adjust her content preferences within the existing teaching framework rather than reconstructing her teaching beliefs.

Second, the depth of reflection is different. Negative events trigger reflection that often involves fundamental questioning of the teacher’s teaching philosophy, students’ cognitive styles, and even professional identity (such as M teacher questioning her teaching presuppositions, and Z teacher experiencing frustration with teaching). This kind of reflection is more likely to lead to the substantial reconstruction of practical knowledge. Positive events trigger reflection that is more about minor adjustments at the strategic level (such as adjusting the questioning method and adding interesting topics), and the “increment” of knowledge construction is relatively smaller.

Third, the persistence of the impact is different. The impact of negative events is often more lasting. Many teachers mentioned in the interviews that the negative experience in the first class led them to lack interest and confidence in teaching for a long time (such as Z teacher); while the inspiring effect of positive events is relatively short-lived, and teachers will quickly enter a low point period as they encounter setbacks in subsequent teaching (such as W2 teacher, although she was inspired in the first class, she still experienced multiple declines in teaching enthusiasm in the later stage of the internship).

In conclusion, negative key events exceeded positive events in quantity, depth of reflection, and impact persistence, which explains their dominance in this study. However, this does not mean that positive events are not important—positive events have a positive effect on maintaining teachers’ self-efficacy and consolidating effective teaching strategies. In future teacher training, we should consciously guide novice teachers to focus on and reflect on positive events to balance the excessive frustration that negative events may bring.

To further interrogate the relationship between event valence and knowledge construction, we conducted a matrix coding query in NVivo to examine the co-occurrence of negative versus positive key events across the seven knowledge types (Table 6). The results reveal that negative events were most frequently associated with teaching belief knowledge (18 references, 40.0% of all negative event references), followed by student knowledge (12 references, 26.7%) and self-knowledge (10 references, 22.2%). In contrast, positive events were most frequently associated with strategic knowledge (7 references, 38.9% of all positive event references) and teaching belief knowledge (5 references, 27.8%). This pattern suggests that negative events predominantly challenge teachers’ deep-seated beliefs and their understanding of students and themselves, whereas positive events tend to reinforce and consolidate specific teaching strategies.

Table 6. Co-occurrence of event valence with knowledge types.

Knowledge Type	Negative Events (<i>n</i> = 45)	Positive Events (<i>n</i> = 18)
Teaching belief knowledge	18 (40.0%)	5 (27.8%)
Student knowledge	12 (26.7%)	3 (16.7%)
Self-knowledge	10 (22.2%)	2 (11.1%)
strategic knowledge	3 (6.7%)	7 (38.9%)
reflective knowledge	2 (4.4%)	1 (5.6%)

Note: Percentages represent proportions within each event valence category. Numbers indicate coding references. Only knowledge types with at least one co-occurrence are shown.

As shown in Table 7, class advisors generated substantially more references to student knowledge (19.2% vs. 13.2%) and teaching belief knowledge (21.9% vs. 17.1%) than

one-on-one tutors. This pattern suggests that the broader responsibilities of class advisors—including classroom management, inter-teacher coordination, and student affairs—exposed them to a wider range of student behaviours and challenges, thereby deepening their understanding of individual learners and prompting more frequent reflection on their professional beliefs. Conversely, one-on-one tutors showed higher proportions of teaching context knowledge (10.5% vs. 5.5%) and strategic knowledge (13.2% vs. 10.0%), reflecting the adaptive and individualised nature of remedial teaching, which requires tutors to flexibly adjust their instructional strategies to address diverse learner needs in varied learning situations. These findings confirm that different internship roles afford qualitatively different learning opportunities and shape distinct practical knowledge profiles.

Table 7. Distribution of knowledge type references by teacher role.

Knowledge Type	Class Advisors (<i>n</i> = 4)	One-on-One Tutors (<i>n</i> = 2)
Teaching belief knowledge	48 (21.9%)	13 (17.1%)
Student knowledge	42 (19.2%)	10 (13.2%)
Self-knowledge	35 (16.0%)	13 (17.1%)
Chinese subject knowledge	34 (15.5%)	14 (18.4%)
Reflective knowledge	26 (11.9%)	11 (14.5%)
strategic knowledge	22 (10.0%)	10 (13.2%)
Teaching context knowledge	12 (5.5%)	8 (10.5%)
Total	219	76

Note: Percentages represent proportions within each role category. Total coding references differ due to varying numbers of participants (4 class advisors vs. 2 one-on-one tutors).

To visualise the developmental trajectory of practical knowledge construction, we disaggregated the coding frequencies by internship stage (early, middle, and late). As shown in Table 8, teaching belief knowledge and student knowledge showed the most substantial growth from early to late internship (increases of 27.8 and 30.8 percentage points, respectively), indicating that these two knowledge domains are most sensitive to practical teaching experience. Reflective knowledge also showed considerable growth (+35.1 percentage points), confirming that interns' reflective capacity develops substantially through the accumulation of classroom experience. Teaching context knowledge remained relatively stable (+5.0 percentage points), reflecting the consistent online teaching environment throughout the internship period. Strategic knowledge showed the greatest increase during the middle stage (from early to middle: +25.0 percentage points), reflecting interns' rapid accumulation of practical teaching techniques as they gained classroom experience. This staged pattern suggests that practical knowledge construction is not linear but follows distinct developmental rhythms across different knowledge domains.

Table 8. Distribution of knowledge type references by internship stage.

Knowledge Type	Early Stage	Middle Stage	Late Stage	Change (Early to Late)
Teaching belief knowledge	12 (19.7%)	20 (32.8%)	29 (47.5%)	+27.8 pp
Student knowledge	10 (19.2%)	16 (30.8%)	26 (50.0%)	+30.8 pp
Self-knowledge	12 (25.0%)	18 (37.5%)	18 (37.5%)	+12.5 pp
Strategic knowledge	6 (18.8%)	14 (43.8%)	12 (37.5%)	+18.7 pp
Reflective knowledge	5 (13.5%)	14 (37.8%)	18 (48.6%)	+35.1 pp
Teaching context knowledge	6 (30.0%)	7 (35.0%)	7 (35.0%)	+5.0 pp
Chinese subject knowledge	11 (22.9%)	17 (35.4%)	20 (41.7%)	+18.8 pp

Note: Percentages represent proportions within each knowledge type across the three internship stages. pp = percentage points. Early stage = first 1/3 of internship; Middle stage = middle 1/3; Late stage = final 1/3.

Additionally, we conducted a coding query examining the co-occurrence of “reflection” with the seven knowledge types. The results show that reflection references most frequently

co-occurred with teaching belief knowledge (23 co-occurrences) and student knowledge (19 co-occurrences), followed by self-knowledge (14 co-occurrences), strategic knowledge (11 co-occurrences), Chinese subject knowledge (9 co-occurrences), reflective knowledge (8 co-occurrences, which is largely a methodological artifact of nested coding), and teaching context knowledge (5 co-occurrences). This gradient further confirms that reflection serves as the primary mediating mechanism through which key events—particularly negative ones—drive the reconstruction of teachers’ foundational beliefs and their understanding of learners. The relatively low co-occurrence with teaching context knowledge may be attributable to the online teaching environment, which limited interns’ exposure to the full richness of physical classroom contexts and thus constrained opportunities for context-related reflection.

Through the analysis of key events, three characteristics of CFL intern teachers’ practical knowledge construction can be summarized as follows:

First, the occurrence of key events often becomes the starting point of “epiphany” for pre-service teachers. Key events enable teachers to discover problems that they were not aware of before and change their understanding and concepts of teaching. Key events for Chinese as a foreign language teachers play a crucial role in the construction of practical knowledge. The teacher’s teaching beliefs, knowledge accumulation, and the construction and development of practical knowledge is a gradual process. However, key events often have a disruptive impact on teachers’ teaching, which indicates that the construction and development of teachers’ practical knowledge also has another “epiphany” approach. This epiphany often occurs when teachers encounter “unexpected” situations, break through their original cognition, and solve problems, “quickly” improving their teaching practice ability and generating practical knowledge “immediately”.

Second, different key events have different positions in the construction and development process of practical knowledge for Chinese as a foreign language teacher. Compared with positive key events, negative key events have a greater and deeper impact on the accumulation of practical knowledge and the speed and direction of pre-service teachers’ practical knowledge construction.

Thirdly, key events can truly influence teaching practice and thereby affect the construction of practical knowledge only through the reflection of the teachers themselves. There is an intermediary factor between key events and the construction and development of teachers’ practical knowledge, which is the reflection of the teachers on these events. Without reflection, key events would merely be a minor incident that occurred regularly but was not noticed. Negative key events have a greater impact because they are more likely to prompt teachers to think. The reflection of prospective teachers on key events will inevitably deepen their understanding of teaching and promote the construction of teachers’ practical knowledge.

6. Discussion

This study conducted a qualitative analysis of the key teaching events of seven CFL intern teachers, revealing the composition, influencing factors, and construction mechanism of their practical knowledge. The following will discuss the core findings in depth, combining existing theories and related research.

6.1. Content of Practical Knowledge Construction: The Specificity and Contextuality of the Seven Types of Knowledge

This study found that CFL intern teachers formed seven types of practical knowledge, with “teaching belief knowledge” having the highest coding frequency (20.5%) and “teaching situational knowledge” the lowest (6.7%). This distribution overlaps and differs

from the teacher knowledge classification in existing studies (Elbaz, 1981; Shulman, 1987). Compared to experienced teachers, the “teaching belief knowledge” of interns is more susceptible to the influence of external others (such as previous teachers, peers, and expert teachers) and key events, and is in a state of rapid change. This finding supports a core tenet of teacher cognition theory: teachers’ beliefs are not static but are constantly tested, revised, and even reconstructed in practice (Borg, 2006). The internship stage is a “sensitive period” of intense belief fluctuations, which warns us that teacher education should not only impart skills but also focus on and guide the healthy development of interns’ beliefs.

It is notable that “teaching situational knowledge” was generated the least in this study (accounting for only 6.7%). This phenomenon is closely related to the online teaching environment during the pandemic. Interns conducted teaching entirely online, lacking face-to-face cross-cultural interaction with international students, and had extremely limited perception of the school’s physical environment, the real classroom atmosphere, and non-verbal communication (such as body language, cultural rituals, etc.). Although online teaching provides technical convenience, it also weakens the richness and complexity of the teaching situation, thereby limiting teachers’ in-depth understanding of “the situation”. This finding suggests that future research can compare the differences in practical knowledge construction in online and offline internship environments to better understand the role of the teaching situation.

It should be noted that the frequency counts reported in this study are descriptive statistics that reflect the distribution of coding references within our specific sample. They should not be interpreted as inferential statistics that measure the “importance” or “significance” of different knowledge types in any absolute sense. The higher frequency of teaching belief knowledge references indicates that this knowledge type was more frequently discussed by participants in relation to key events, which may reflect the intensive belief fluctuations characteristic of the internship stage rather than an inherent hierarchy of knowledge importance.

6.2. Mechanism of Impact of Key Events: Dominance of Negative Events and Supplementary Role of Positive Events

Among the 63 key events extracted in this study, negative events accounted for 71.4%, and their depth and duration of impact were significantly greater than those of positive events. This finding is consistent with Tripp’s (1994) classic discussion on key events, which states that negative events tend to trigger teachers’ reflection and professional growth more effectively. However, this study further reveals the internal mechanism of the greater impact of negative events: Negative events directly challenge teachers’ original cognitive schemas, triggering the “confused dilemma” in transformative learning (Mezirow, 1991), forcing teachers to conduct in-depth reflection, thereby leading to the substantive reconstruction of practical knowledge. In contrast, positive events more often validate and reinforce existing effective behaviors, resulting in a smaller “incremental” change in practical knowledge.

This discovery does not negate the value of positive events. Positive events play a positive role in maintaining teachers’ self-efficacy and consolidating effective teaching strategies (Christ et al., 2017a). However, this study shows that the reflections triggered by positive events are mostly “confirmatory reflections” rather than “questioning reflections”, and this aspect has been discussed less in existing literature. In future teacher training, we should consciously guide trainee teachers to conduct equally in-depth analyses of positive events (such as “Why was this class successful?” “Which behaviors are worth consolidating?”), in order to balance the excessive sense of frustration that negative events may bring.

6.3. Reflection as an Intermediate Mechanism: Dialogue with Schön's Reflection Practice Model

This study reveals that reflection is the core intermediary mechanism connecting key events with the construction of practical knowledge. This finding aligns closely with Schön's (1983) "reflective practitioner" model. Schön distinguished between two forms of reflection: "reflection-in-action" and "reflection-on-action". In this study, the immediate adjustments made by the trainee teachers in the classroom (such as Teacher H adjusting the questioning strategy after noticing that students were interested in the "food" topic) are a specific manifestation of "reflection-in-action"; while the behavior of retrospectively analyzing key events, correcting subsequent teaching plans, and adjusting teaching methods after class (such as Teacher M questioning her own Chinese-style assumptions and adjusting the teaching method) belongs to "reflection-on-action". However, this study further reveals the particularity of the trainee teachers' reflection, providing a contextualized supplement to Schön's model. Firstly, the trainee teachers' "reflection-in-action" ability is significantly weaker than that of expert teachers. Due to a lack of sufficient practical experience and cognitive schemas, they often have difficulty effectively identifying problems and making quick adjustments in the classroom. Most deep reflection occurs after class (i.e., "reflection-on-action"). This finding supports Korthagen's (2004) view that reflection ability needs to be gradually cultivated in practice, with an initial focus on structured post-class reflection. Secondly, this study finds that positive events can also trigger reflection, but the reflection is mostly "confirmatory reflection" rather than "questioning reflection", a point that is less discussed in Schön's original model. Therefore, this study suggests dividing the trainee teachers' reflection practice into two subtypes: "problem-driven deep reflection" and "success-driven confirmatory reflection", to more accurately describe the path of their knowledge construction.

Furthermore, this study finds that the actual implementation of reflection shows significant individual differences. Although all teachers are aware of the importance of reflection, only a few can persist in systematic post-class reflection (such as writing teaching logs). This finding is consistent with Allas et al. (2020)'s research on guiding reflection procedures: structured, guided reflection is more effective in promoting practical knowledge construction than spontaneous, scattered reflection. Therefore, in teacher education, it is not only necessary to emphasize "the importance of reflection", but also to provide specific reflection tools and frameworks (such as reflection log templates, peer evaluation, video review, etc.) to help trainee teachers transform occasional reflection behaviors into institutionalized reflection practices.

6.4. Students as the Core Factor: Specificity in Cross-Cultural Contexts

This study finds that students are at the core of the trainee teachers' practical knowledge construction. The development curves and key event descriptions of the seven teachers all show that, whether at the peak or trough of teaching enthusiasm, the core triggering factors are students (such as student feedback, learning status, teacher-student relationship, etc.). This finding differs from the conclusions of general teacher education research (Beijaard et al., 2004): the latter usually indicates that novice teachers focus more on themselves and teaching content rather than students in the early stages of teaching. The reason why the CFL intern teachers exhibit an "early student-centered" characteristic is likely closely related to their cross-cultural teaching environment. Facing adult international students from different countries and language cultural backgrounds, the trainee teachers' uncertainty and curiosity about "foreign cultures" make them highly concerned about students' reactions and differences from the very beginning. This particularity suggests that the training of Chinese as a foreign language teachers should start by strengthening the cultivation of cross-cultural communication skills and students' analytical abilities, rather

than undergoing the gradual transformation from “concerning oneself” to “concerning students” as in ordinary teacher education.

6.5. *Interaction of Internal and External Factors: An Integrated Perspective of Teacher Cognition Theory*

The research results indicate that the factors influencing the construction of practical knowledge for Chinese as a foreign language teachers can be divided into internal factors (reflection, teaching experience, teaching beliefs, previous learning experiences) and external factors (position held, auxiliary teaching methods, environment, teaching training, influence from others, students, career choice). These factors do not exist independently but are intertwined through the teacher’s cognitive process. Teacher cognition theory (Borg, 2006) provides an integrated framework for understanding this interaction: The existing beliefs and knowledge structure of the teacher (internal factors) “filter” external information (such as training content, others’ suggestions, student feedback), determining which information is noticed, interpreted as meaningful, and integrated into practical knowledge. For example, in the same situation where expert teachers provide guidance, Teacher M chooses to change his teaching assumptions, while another teacher may only make superficial adjustments. This difference stems from the different internal cognitive schemas.

Among the many influencing factors, the coding frequency of “teaching belief knowledge” was the highest (20.5%), and teachers mention the “student” factor most frequently and emotionally in interviews. The reason why teaching beliefs have a stronger influence is that they constitute the “filter” of the teacher’s cognition—when teachers choose which events to pay attention to, how to interpret events, and whether to integrate experiences, they are guided by their existing beliefs. When beliefs are challenged (such as negative key events), the cognitive conflict is the most intense, thus more likely to lead to substantive reconstruction of practical knowledge. In contrast, the adjustment of strategy knowledge or Chinese subject knowledge is more of a technical repair, not involving deep beliefs, and thus has a relatively smaller influence. “Student” factors occupy a core position because of the cross-cultural nature of Chinese as a foreign language teaching: Facing adult international students from different language and cultural backgrounds, the intern teachers are highly concerned about students’ reactions from the very beginning, making students the most direct and frequent stimulus source influencing the teacher’s teaching enthusiasm, confidence, and behavioral adjustment.

The interaction of internal and external factors is bidirectional. Internal factors determine how external factors are processed, and the continuous effect of external factors will also reshape internal factors: The accumulation of multiple negative key events may gradually change the teacher’s teaching beliefs, shifting from “believing that theory guides everything” to “practicality outweighing theory”. This two-way interaction constitutes a dynamic cycle of practical knowledge construction: Internal factors → selective attention to external information → processing and generating new practical knowledge → new knowledge becomes the basis for the next cognitive filtering.

6.6. *The Theoretical Explanation of the Dynamic Nature of Practical Knowledge: The Perspective of Cognitive Schemas and Identity Recognition*

This study has repeatedly pointed out that the construction of practical knowledge for Chinese as a foreign language intern teachers is “dynamic”-manifested as alternating between gradual and sudden changes, fluctuating due to key events. This dynamic nature is not accidental but is determined by interrelated theoretical mechanisms. The dynamic nature of practical knowledge observed in this study can be attributed to the assimilation and accommodation mechanisms of cognitive schemas (Piaget, 1970), as well as the continuous negotiation process of teacher identity recognition (Beijaard et al., 2004; Coldron &

Smith, 1999). These perspectives are offered as possible explanatory angles for interpreting the developmental patterns observed in our data, rather than as independent theoretical frameworks. Consistent with our integrative approach, we draw on these perspectives only insofar as they help frame observed patterns; we do not claim to have empirically tested the schema mechanics or identity negotiation processes themselves.

6.7. Dynamicity of Practical Knowledge Construction: Interweaving of Gradual Change and Insight

This study found that the construction of practical knowledge for Chinese as a Foreign Language teachers is a “gradual and sudden alternation of a tortuous process”. The development curve graph shows that most teachers have experienced multiple periods of low points and rebounds in teaching enthusiasm and confidence (double N-type, M-type, W-type, V-type), indicating that the construction of practical knowledge is not linear growth but presents volatility. The phenomenon of “insight”—that is, the rapid cognitive restructuring brought about by key events—is particularly worthy of attention. Transformational learning theory (Mezirow, 1991) explains this insight as a “fundamental transformation of the meaning structure”. The contribution of this study lies in visualizing this insight through the development curve graph and pointing out that the insight often occurs after negative key events and requires teachers to actively engage in in-depth reflection to achieve it. This finding has direct guiding significance for teacher education practice: trainers should help intern teachers identify and utilize key events as “learning opportunities”, rather than merely regarding them as indicators of teaching failure.

In conclusion, this discussion moves beyond merely reiterating the findings, engaging in a substantive dialogue with teacher cognition theory, transformative learning theory, and Schön’s reflective practice model. The study reveals the particularity of practical knowledge construction for Chinese as a Foreign Language intern teachers within an online teaching environment. This particularity manifests as an integrated set of interrelated characteristics operating at three interconnected levels: the online teaching environment served as the overarching contextual condition; the cross-cultural teaching context shaped the specific content and focus of knowledge construction; and negative key events functioned as cognitive triggers for rapid, insight-based restructuring. These three dimensions are not independent findings but mutually reinforcing aspects of the same phenomenon—the dynamic construction of practical knowledge in a cross-cultural online internship context. The study further refines the types of reflection (confirmatory vs. questioning) within this integrated framework.

7. Limitations and Future Directions

This study conducted a qualitative exploration of the practical knowledge construction of CFL intern teachers through classroom observations and semi-structured interviews. However, it still has the following limitations.

First, the scope of the research subjects is limited. This study focused on seven CFL intern teachers from a single university who participated in the same online internship program. The study’s modest sample size (seven participants) limits the generalisability of the findings, as qualitative research with a small sample is not intended to produce statistically generalisable results but rather to provide in-depth, contextualised understanding. All participants lacked prior K-12 teaching experience and were trained within the same institutional context. Consequently, the findings of this study are context-specific and should not be generalised to all CFL teachers, particularly those teaching in different cultural contexts (e.g., overseas CFL teachers), offline teaching environments, or with different professional backgrounds. Future research should include a more diverse sample—

teachers from multiple institutions, with varied teaching experiences, and in both online and offline settings—to examine whether the patterns identified in this study hold across different contexts.

Second, the research method is single. This study employed a qualitative approach, which could deeply reveal the construction mechanism, but lacked the support of quantitative data. Future research can combine questionnaire surveys or experimental studies to conduct quantitative measurements of core variables (such as reflection frequency, changes in teaching beliefs), to enhance the generalizability of the conclusions.

Third, there are limitations in data collection. The number of classroom observations for each teacher was limited (a total of 83 class hours), making it difficult to capture all key events; and the research mainly relied on classroom observations and interviews, failing to fully explore the collected data. Future research can increase the frequency of observations and introduce video review, peer evaluation, etc., as diverse data sources.

Fourth, there are constraints imposed by the online teaching environment. All internships were conducted online, which not only prevented observation of non-verbal interactions such as body movements and expressions but also limited the generation of teaching context knowledge among the participants. The online environment reduced interns' exposure to physical classroom dynamics, spontaneous student-teacher interactions, and the full complexity of cross-cultural teaching contexts. Consequently, the relatively low frequency of teaching context knowledge coding references in this study should be interpreted as a consequence of this design constraint rather than as a generalisable finding about CFL intern teachers' practical knowledge. Future research conducted in offline environments may reveal richer and more diverse patterns of teaching context knowledge construction.

Fifth, the analysis of influencing factors is not comprehensive. This study only examined such factors from two dimensions: internal and external factors, without involving aspects such as teaching evaluation, teacher status, and policy support. Future research can explore the interactive relationships among various factors from more perspectives.

8. Conclusions

This study analyzed the key events of seven CFL intern teachers and reached the following conclusions.

First, the trainees generated seven types of practical knowledge in practice, among which the knowledge of teaching beliefs accounted for the highest proportion (20.5%), and the knowledge of teaching situations was affected by online teaching the least (6.7%). The operational definitions of these seven types of knowledge provided a basis for repeatable verification for this study.

Second, negative key events outnumbered positive events in terms of quantity (71.4%), the depth of reflection, and the persistence of impact. Negative events triggered deep reflection and knowledge reconstruction through the “confused dilemma” (Mezirow, 1991); positive events mainly played the role of verification and consolidation.

Third, reflection is the core mediating mechanism connecting key events and the construction of practical knowledge. The “reflection-in-action” ability of trainees is weaker than that of expert teachers, and the reflection is mostly “problem-driven” rather than “success-driven”. This suggests that teacher education should provide structured reflection tools rather than merely emphasizing the importance of reflection.

Fourth, student factors occupy a core position in the knowledge construction of CFL intern teachers, which is closely related to the cross-cultural teaching environment. Teacher training should strengthen the cultivation of cross-cultural communication and student analysis abilities from the beginning.

Fifth, the construction of practical knowledge is dynamic, manifested as “alternation between gradual and sudden changes”. This dynamic nature is intertwined with two contextual conditions: the cross-cultural teaching environment (which shapes the specific challenges interns face) and the online teaching mode (which constrains the richness of teaching context knowledge). Together, these conditions contribute to the “insight” effect triggered by key events—particularly negative ones—which prompt rapid cognitive restructuring. These aspects should be understood as an integrated set of interrelated findings rather than as separate contributions. The dynamic nature can be explained from two theoretical perspectives: assimilation/accommodation (Piaget, 1970) and the continuous negotiation of teacher identity recognition (Coldron & Smith, 1999).

In summary, the internship stage constitutes a critical and sensitive period for the construction of CFL intern teachers’ practical knowledge. By identifying and deeply reflecting on key events (especially negative events), trainees can effectively reconstruct their practical knowledge system. This study provides empirical evidence for optimizing the internship training of CFL intern teachers and lays a theoretical foundation for subsequent cross-cultural teacher education research.

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