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RECEIVED 10 December 2024

ACCEPTED 18 February 2025

PUBLISHED 07 March 2025

CITATION

Yong P and Peng Y (2025) Strategies for
enhancing the scholarship of teaching and
learning among primary and secondary
school teachers: a grounded theory analysis.
Front. Educ. 10:1542528.
doi: 10.3389/feduc.2025.1542528

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Strategies for enhancing the scholarship of teaching and learning among primary and secondary school teachers: a grounded theory analysis

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Introduction: This study explores the challenges and support needs faced by primary and secondary school teachers in enhancing their Scholarship of Teaching and Learning (SoTL).

Methods: Using a grounded theory approach, in-depth interviews were conducted with 16 teachers from City C, China. The data were systematically analyzed through open, axial, and selective coding.

Results: The study identifies key factors influencing SoTL enhancement, including teachers' professional development needs, policy pressures, resource constraints, and a lack of social support.

Discussion: The findings highlight the importance of strengthening teachers' professional identity, optimizing resource allocation, establishing peer support systems, and refining educational policies. This study offers actionable strategies to support teachers' professional growth and improve instructional practices.

KEYWORDS

primary and secondary school teachers, scholarship of teaching and learning, grounded theory, teacher professional development, enhancement strategies

Introduction

The Scholarship of Teaching and Learning (SoTL) refers to teachers' ability to apply academic research methods and critical thinking to improve their teaching practices, systematically reflect on their instructional strategies, and employ innovative approaches to enhance learning outcomes (Boyer, 1990). SoTL serves as a cornerstone for effective knowledge transfer and is a pivotal driver of teachers' professional development, particularly in primary and secondary education. With the increasing emphasis on educational quality, the development of SoTL has become a core component of teacher professional growth, enabling educators to better adapt to the rapidly changing educational environment, support the holistic development of students, and foster their own professional advancement.

Although the significance of SoTL has been widely acknowledged in higher education, research on its enhancement in primary and secondary education remains relatively scarce. Existing studies predominantly focus on theoretical frameworks, often lacking in-depth exploration of concrete pathways and strategies for improvement (Hutchings and Shulman, 1999; Prosser, 2008). In China, most SoTL research is concentrated in higher education, with relatively little attention given to primary and secondary school teachers. For example, Xu (2025) examines SoTL development in Chinese universities, emphasizing faculty engagement

and institutional support. Similarly, [Liu et al. \(2025\)](#) explore the development pathways of SoTL in local universities, while [Xu and Yuan \(2024\)](#) analyze strategies for improving university faculty's SoTL capabilities. Collectively, these studies indicate that SoTL research in China is primarily focused on higher education. However, primary and secondary school teachers face various challenges in their daily teaching, such as heavy workloads, resource constraints, policy pressures, and inadequate social support, all of which hinder their ability to enhance their SoTL ([Li, 2020](#)). Despite these barriers, these issues have not been comprehensively examined in the literature, particularly within the context of China's education system.

Therefore, this study adopts a grounded theory approach to conduct in-depth interviews with 16 teachers from City C, China, in order to explore the key factors and mechanisms influencing the enhancement of SoTL among primary and secondary school teachers. The research aims to develop a theoretical model that reveals the interactions among various factors involved in SoTL enhancement. By identifying these influencing factors, this study not only addresses a gap in the existing literature on SoTL in primary and secondary education but also provides theoretical and practical support for educational policymakers, particularly in areas such as policy formulation, resource allocation, and teachers' career development pathways.

Literature review and research question

The Scholarship of Teaching and Learning (SoTL), first introduced by [Boyer \(1990\)](#), conceptualizes teaching as a form of academic scholarship that involves critical reflection on teaching practices, the application of research methods to enhance pedagogy, and the systematic study of learning outcomes. Boyer's framework encourages educators to perceive teaching as an intellectual endeavor in which teaching and research are intrinsically connected. In this view, teaching is not merely the transmission of knowledge but also a process of knowledge creation, subject to study, reflection, and continuous improvement. This perspective significantly redefines the role of educators, positioning them not just as content deliverers but as active researchers engaged in reflective practice. Building on Boyer's foundational framework, [Hutchings and Shulman \(1999\)](#) expanded the scope of SoTL by emphasizing the role of research and peer evaluation in fostering the improvement of teaching practices. They argued that SoTL should extend beyond individual teaching enhancement to influence the broader academic community, advocating for the concept of "public scholarship" in teaching, which has led to a more inclusive understanding of SoTL, integrating community-based knowledge and collaborative efforts among educators to enhance learning outcomes. [Prosser \(2008\)](#) further asserted that SoTL should be evidence-based, relying on rigorous research and peer review to ensure the continuous refinement of teaching practices. In alignment with this, [Malaney \(2002\)](#) contended that SoTL should adopt an interdisciplinary approach, drawing insights from education, psychology, and sociology to drive pedagogical innovation. Such interdisciplinary collaboration fosters a more holistic understanding of teaching and learning, ensuring that educational research remains both contextually relevant and practically applicable. While these foundational works have

predominantly focused on SoTL in higher education, its application in primary and secondary education remains relatively underexplored. In these settings, teachers are expected to develop not only discipline-specific expertise but also critical thinking and reflective inquiry skills that contribute to more effective teaching ([Wang, 2005](#)). Within this context, SoTL serves as a crucial framework for systematically enhancing instructional practices, equipping educators with research-informed strategies to optimize student learning outcomes.

Existing research highlights several challenges that primary and secondary school teachers face in developing their SoTL. These challenges include heavy teaching workloads, lack of time for reflective practice, and insufficient professional development opportunities ([Li, 2020](#)). Teachers in these settings are often burdened with a wide range of responsibilities beyond teaching, such as administrative tasks, student management, and extracurricular activities, leaving limited time and energy for engaging in SoTL activities. Many teachers struggle to balance their academic development with these demands, particularly in the absence of institutional and societal support ([Yong and Long, 2024](#)). Moreover, resource constraints are a significant barrier to SoTL development in primary and secondary schools. Teachers in many schools, particularly in rural areas, face limited access to research materials, professional training programs, and peer collaboration opportunities ([Yang, 2023](#)). These constraints can hinder teachers' ability to engage in scholarly activities that are central to the SoTL framework. The lack of institutional support and inadequate social recognition of teaching as a scholarly activity further exacerbate these challenges. Another critical challenge is the pressure of educational policies. Many teachers report that national or local education policies, such as curriculum reforms and standardized testing, place significant pressure on their teaching practices, often making it difficult to prioritize reflective practices or engage in educational research. These policies may emphasize student performance on assessments, leaving little room for teachers to focus on long-term pedagogical improvements or academic inquiry ([Li, 2020](#)).

While SoTL has been well-studied in the context of higher education, research focusing on its application in primary and secondary education is relatively scarce. Most studies in this area tend to be theoretical or conceptual, lacking practical frameworks for how teachers can effectively enhance their SoTL. Some studies have acknowledged the importance of reflective teaching practices in primary and secondary schools, but few have explored the specific challenges and strategies for SoTL enhancement within these contexts ([Li, 2020](#); [Wang, 2005](#)). Recent research by [Yang \(2023\)](#) highlights the growing recognition of SoTL among primary and secondary school educators in China, noting that while the concept has gained traction, teachers face considerable barriers, such as heavy workloads, limited resources, and insufficient support from educational institutions. Addressing this gap, [Yong and Long \(2024\)](#) underscore the critical role of schools and society in fostering a supportive environment for teachers, particularly in enhancing their teaching scholarship abilities. This suggests a need for more empirical studies that focus on identifying specific factors influencing SoTL enhancement in primary and secondary schools.

Despite the increasing recognition of the importance of SoTL in primary and secondary education, there remains a significant gap in the literature regarding how primary and secondary school teachers can effectively enhance their SoTL. Existing studies have largely ignored the specific strategies that can be employed to address the challenges teachers face in improving their teaching practices and

integrating scholarly research into their daily teaching routines. This study aims to fill this gap by addressing the following research question: How can primary and secondary school teachers enhance their Scholarship of Teaching and Learning (SoTL) in the face of practical challenges such as heavy workloads, policy pressures, resource constraints, and limited social support?

In addressing this question, the study will explore the key factors influencing SoTL enhancement among primary and secondary school teachers, identify the strategies that teachers employ to overcome these challenges, and propose concrete recommendations for policy and practice. By doing so, this study will contribute to the literature by providing a theoretical model for SoTL enhancement that is grounded in empirical data from the experiences of teachers in China.

Methodology

Research design

This study adopts grounded theory as its primary research methodology. Grounded theory is a qualitative approach that allows for the generation of theoretical frameworks through systematic analysis of empirical data, making it particularly suitable for exploratory studies that lack pre-existing theoretical framework (Glaser and Strauss, 1999).

Grounded theory has been widely applied in educational research to explore complex phenomena, particularly when addressing context-specific challenges. For instance, previous studies have demonstrated its value in understanding teacher-student interactions (Yuan and Zheng, 2023) and uncovering the factors influencing teaching practices (Shen and Lu, 2018). These studies highlight grounded theory's ability to generate actionable insights by analyzing data in an iterative and inductive manner.

In this study, grounded theory is particularly well-suited for exploring the experiences and challenges faced by primary and secondary teachers in enhancing the Scholarship of Teaching and Learning (SoTL). The method allows for a deep investigation into the diverse contexts of teaching, including varying levels of resources, policy constraints, and professional expectations, providing a robust framework to generate both theoretical and practical insights.

The study uses three main stages of coding—open, axial, and selective coding—to identify key factors influencing SoTL development. In the open coding phase, raw data are categorized into themes such as “workload pressure” and “peer support.” Axial coding then connects these themes to reveal patterns and relationships, while selective coding synthesizes the findings into a theoretical model centered on “Optimizing Professional Growth through SoTL.” This process enables the study to construct a comprehensive framework that integrates theoretical insights with practical strategies for enhancing SoTL.

Participants and sampling

Grounded theory uses theoretical sampling, selecting participants who are theoretically relevant to the study's focus (Chen, 2000; Glaser and Strauss, 1999). To ensure broad representation, this study employed purposive sampling to interview 16 teachers from different districts in

City C, China. These teachers represent diverse backgrounds and teaching environments, including urban and rural settings, and encompass both experienced and less experienced teachers. This diversity allows for a more comprehensive understanding of teachers' various needs and challenges in SoTL enhancement. The sample includes six male and 10 female teachers, with five teaching in model public schools, four in private schools, and seven in regular public schools. Twelve participants work in urban areas, while four are rural-based, ensuring perspectives from various educational contexts. Additionally, participants have more than 3 years of teaching experience across multiple primary and middle school subjects, providing a multidisciplinary teaching context. Table 1 presents detailed information on the participants.

Interview guide

The interview guide includes the following questions:

- 1 Have you engaged in academic research related to teaching? If so, in what areas? This question aims to understand teachers' involvement in SoTL activities and how they apply research methods in teaching. Drawing from Boyer's (1990) concept of SoTL, this question provides background for subsequent inquiries.
- 2 Based on your experience, what are the most critical factors for enhancing SoTL? What challenges have you encountered? This question seeks to identify the main challenges and motivators teachers face in developing SoTL. Inspired by Kreber's (2003) work on “teaching reflection,” this question guides teachers to reflect on their SoTL practices and understand the influence of factors such as teaching pressures and resource limitations.
- 3 In what additional ways do you think SoTL could be further supported? This question focuses on teachers' needs for external support, particularly regarding policies and school resources. Based on Hutchings and Shulman's (1999) research on SoTL, this question collects teachers' specific expectations for educational policy, resource allocation, and peer support, analyzing how external factors support or hinder teachers' professional growth.

Data collection

The study utilized in-depth, semi-structured interviews with participants, conducted in a conversational manner. Each interview lasted approximately 60 to 90 min and was conducted using both online and in-person formats. With participants' consent, all sessions were recorded. Following each session, participants' statements were transcribed verbatim, with attention given to tone, body language, and facial expressions when relevant, to capture nuanced insights into specific issues. For clarification or verification of ambiguous points, brief follow-up interviews of about 15 min each were conducted to ensure data accuracy. The data were coded and analyzed using MAXQDA 2020 software, with 75% of the interview data organized in the order of interviews conducted. The remaining 25% was reserved for testing theoretical saturation following the initial coding analysis.

This study was conducted with the approval of the Institutional Review Board of Sehan University in South Korea. To address

TABLE 1 Information of participating teachers.

Participant (Gender)	Years of experience	Age	School type	Subject	Region	Teaching Title
Teacher 1 (F)	5	30	Demonstration school	Elementary (Math)	Urban	Junior
Teacher 2 (M)	6	31	Regular private school	High school (Geography)	Urban	Intermediate
Teacher 3 (F)	6	31	Demonstration school	Elementary (English)	Urban	Intermediate
Teacher 4 (M)	24	46	Demonstration school	Elementary (Chinese)	Urban	Intermediate
Teacher 5 (M)	38	59	Regular public school	High school (Chemistry)	Rural	Associate senior
Teacher 6 (F)	3	28	Demonstration school	Middle school (English)	Urban	Intermediate
Teacher 7 (M)	2	26	Regular private school	Elementary (English)	Urban	Junior
Teacher 8 (M)	2	27	Demonstration school	Middle school (English)	Urban	Junior
Teacher 9 (F)	11	32	Regular public school	Elementary (Chinese)	Urban	Junior
Teacher 10 (F)	5	30	Regular public school	Elementary (Chinese)	Urban	Junior
Teacher 11 (F)	3	26	Regular public school	High school (English)	Rural	Intermediate
Teacher 12 (F)	3	27	Regular public school	High school (Geography)	Rural	Intermediate
Teacher 13 (F)	6	32	Regular public school	Middle school (Chinese)	Urban	Intermediate
Teacher 14 (F)	3	25	Regular public school	Middle school (English)	Urban	Junior
Teacher 15 (F)	3	24	Regular private school	Elementary (English)	Urban	Junior
Teacher 16 (M)	4	28	Regular private school	Middle school (Politics)	Rural	Intermediate

potential ethical issues in the research process, the researcher thoroughly explained the study's purpose, interview methods, confidentiality measures, anonymity, voluntary participation principles, and the possibility of withdrawing from the study before the interviews. All collected data will be destroyed after the conclusion of the study. At the start of the interviews, the researcher reiterated that the interview content would not be used for purposes other than research and reaffirmed participants' rights to anonymity, confidentiality, and the option to withdraw at any time.

Data analysis

Open coding

The open coding process involved a rigorous and systematic analysis of interview data, wherein raw narratives were segmented into smaller units of meaning to identify key concepts. Through constant comparison and iterative analysis, recurring themes and patterns emerged, reflecting teachers' diverse experiences, challenges, and motivations in enhancing the Scholarship of Teaching and Learning (SoTL).

During this phase, initial concepts were synthesized into broader categories based on semantic and contextual similarities. For instance, keywords such as "Sense of Mission," "Passion for the Profession," and "Sense of Responsibility" were grouped under the category of Professional Identity, highlighting teachers' intrinsic dedication and work ethics. Similarly, terms like "Career Development," "Professional Development," and "Personal Growth" formed the category of Professional Motivation, which emphasized teachers' drive for continuous improvement and academic advancement.

Challenges within teachers' professional environments were also prominent. Statements describing "Heavy Teaching Tasks" and "Burden of Non-Teaching Work" were grouped under the category of Workload, illustrating the significant pressures arising from

instructional and administrative responsibilities. Additionally, challenges in the Home-School Relationship category, such as "Lack of Parental Cooperation" and "Contradictory Views of Parents," revealed the complexities of family-teacher communication.

Peer Support and Experiential Reflection emerged as critical components for professional growth. Keywords like "Peer Evaluation," "Collective Lesson Planning," and "Guidance and Mentorship" demonstrated the importance of collegial collaboration in fostering reflective teaching practices. At the same time, external factors such as Policy Influence and School Resources were identified through terms like "Policy as a Double-Edged Sword," "Training and Lectures," and "Evaluation and Guidance," indicating both the opportunities and constraints embedded in teachers' professional environments.

This open coding process served as the foundation for the subsequent Axial Coding phase, where relationships between categories were explored in greater depth. For example, the interplay between Workload and Professional Motivation revealed that excessive professional responsibilities often constrained teachers' reflective practices while simultaneously driving them to seek innovative strategies for improvement. Likewise, the alignment of Peer Support and Professional Identity demonstrated how mentorship and collaborative experiences strengthened teachers' sense of belonging and professional efficacy.

Ultimately, the open coding analysis provided an evidence-based framework that enabled the identification of core categories and their interconnections, paving the way for a deeper exploration of causal relationships, strategies, and outcomes during the Axial Coding phase.

Axial coding

Axial coding is the process of connecting categories and sub-categories, organizing the coding around a central axis of each

category. It reveals the various conditions, actions/interactions, and outcomes related to the phenomenon by linking categories. The purpose of axial coding is to explore and establish the relationships between main categories, illustrating the organic connections among different dimensions.

In the study of enhancing the Scholarship of Teaching and Learning (SoTL) among primary and secondary school teachers, causal conditions include teachers' professional development needs and the drive for career advancement, which fuels their desire to improve their SoTL. The central phenomenon focuses on the "enhancement of SoTL," reflecting teachers' pursuit of higher teaching performance and academic recognition within the education profession. Contextual conditions encompass teaching workloads and parent-teacher relationships, which have complex effects on teachers' academic development and place pressure on them to balance daily teaching responsibilities with their academic growth.

The mediating conditions of actions/interactions involve policy influences, resource limitations, and conflicts between social support and teachers' expectations, factors that either restrict or support teachers' SoTL to varying extents. In terms of actions strategies, teachers primarily employ several coping methods: "peer support," "teaching reflection," "integration of research and teaching," "teaching seminars and training," and "repetition and instructional adjustment." These strategies not only help teachers progressively improve their teaching capabilities but also allow them to continually adjust and optimize their educational approaches during teaching.

Ultimately, the outcomes are manifested in "teaching innovation," "personal professional growth," and "realization of professional identity." These outcomes signify teachers' self-development in their journey to enhance SoTL, leading to a deeper understanding and appreciation of their educational profession (Figure 1).

Selective coding

Selective coding is the process of distilling a core category from the themes and analyzing the intrinsic connections between various categories to build an overarching narrative that describes the overall behavior phenomenon. Building on the axial coding phase, selective coding allows us to extract a core phenomenon and integrate other categories within an explanatory framework that refines and elaborates on the core category.

The core category is ultimately derived during the selective coding process, representing the central theme of the study. In grounded theory research, the selection criteria for the core category must ensure that it is connected to all other categories and frequently appears in the data. The category must be coherent and logically consistent as it develops (Glaser and Strauss, 1999). In this study, the core category derived from selective coding is "Promoting Self-Professional Development through Optimizing the Scholarship of Teaching and Learning (SoTL) Cognition." This core category pervades the interview data, reflecting the central theme of SoTL enhancement. Within the current educational context, teachers recognize that foundational teaching skills alone are insufficient to meet high-quality education standards. As they enhance their SoTL, they gradually reshape their teaching perspectives, viewing it as a key pathway to self-professional growth. Through teaching reflection, participating in academic exchanges, and integrating research

practices, teachers continuously refine their understanding of teaching, achieving their professional development goals.

The core category "Promoting Self-Professional Development through Optimizing SoTL Cognition" uncovers the driving mechanism in teachers' career development. This theme illustrates how teachers make continuous progress on their professional growth paths by deepening their understanding and cognition of SoTL. Behind this category lies a dynamic, coordinated system of self-reflection, external support, and multiple contextual and action strategies, which propel teachers forward in their professional journeys through continual cognitive optimization.

Causal Conditions: The Internal Drive to Optimize Cognition. Teachers' careers often stem from a blend of intrinsic motivations and external demands. Causal conditions reveal that teachers' desire to optimize their SoTL cognition stems from an unwavering commitment to improving teaching effectiveness and advancing in their profession. Professional development needs and the pressures of career advancement serve as significant causal factors, creating an internal drive for cognitive optimization. Teachers recognize that only by incorporating deeper academic thinking into their teaching can they truly improve instructional quality and gain professional recognition.

"Teaching competitions are designed to support teacher growth. They primarily focus on personal development, offering teachers a transformative experience within a short period, sparking shifts in perspectives, educational approaches, and teaching methods. Such transformations carry over to daily teaching, enabling teachers to foster student growth... These are indeed internal motivators. Of course, they're also linked to career advancement, as achievements in teaching and research weigh significantly in our school's promotion criteria. Research outputs are often valued at the district level or higher, and personal projects or awards—especially at provincial or national levels—receive considerable points..." (Teacher 6, August 16, first online interview).

Contextual Conditions: Interplay of Teaching and External Pressures. In their pursuit of cognitive optimization, teachers are situated in specific contextual conditions that pose both challenges and opportunities for growth. Teachers frequently face pressures related to teaching workloads and parent-teacher relationships, which prompt them to reflect on their methods and seek solutions through optimizing their SoTL cognition. In this context, cognitive optimization serves not only as a tool for problem-solving but also as a pathway to self-realization.

"Firstly, there's student-related pressure. Some students lack the motivation to learn, making teaching difficult. Additionally, some students have psychological issues, so teachers avoid being overly strict. Secondly, there's pressure from parents. Parents want improved academic performance but don't want teachers to interfere too much with their child, especially when some parents are unreasonable, making communication challenging. Thirdly, there's school-related pressure from tasks such as student management, district inspections, teaching, and research responsibilities. Balancing teaching and research pressure is challenging... Schools or districts should reduce these pressures

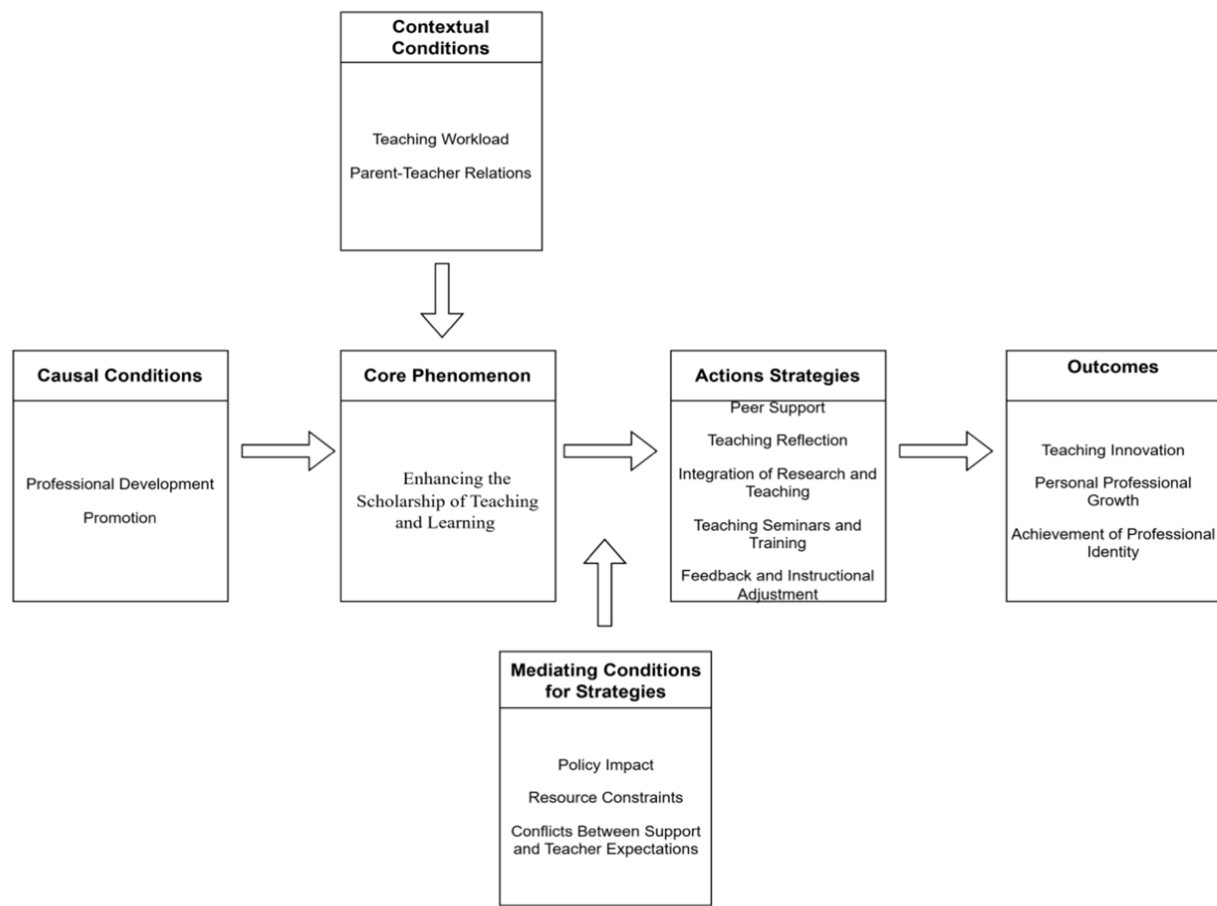


FIGURE 1
Paradigm model of the scholarship of teaching and learning (SoTL) for primary and secondary school teachers.

on teachers and implement policies that protect teachers' basic interests..." (Teacher 13, September 7, first online interview).

Mediating Conditions: Multifaceted Support and Obstacles. Teachers' cognitive optimization is influenced by various mediating conditions, which include both supportive factors and external obstacles. Policies, resource limitations, and societal expectations often serve as mediating conditions. While policy guidelines clarify professional development directions, they also impose high standards for integrating SoTL with teaching. Resource constraints act as barriers, requiring teachers to find innovative ways to overcome these limitations. Furthermore, societal expectations of teachers—often high but accompanied by limited support—motivate them to balance personal cognition with practical teaching, driving further professional growth.

"The enthusiasm of primary and secondary teachers for teaching is closely tied to the educational environment within society. A society that respects knowledge, values teachers, and prioritizes education can inspire teachers' passion and drive. Conversely, a society that undervalues education and teachers may weaken their motivation. Therefore, we need to collectively foster a positive educational atmosphere to support teachers' work and growth..." (Teacher 15, September 7, first online interview).

Action Strategies: Pathways to Cognitive Optimization. Under the influence of these conditions, teachers adopt various strategies to promote SoTL cognition as a means of self-professional development. These strategies include "peer support" (enhancing cognition through exchanges with other teachers), "teaching reflection" (deepening teaching insights through classroom reflection), "integration of research and teaching" (making SoTL more systematic by incorporating research into teaching), and "reflection and instructional adjustment" (adapting teaching methods based on ongoing cognitive refinement). These actions enable teachers to test and improve their SoTL cognition in practice, fueling continuous professional growth.

"I actively participate in school-organized teaching-related activities, such as training sessions, lectures, and seminars, which provide valuable learning opportunities and platforms for exchange. These allow me to stay updated on the latest trends and research in education, constantly enhancing my teaching skills. Attending seminars where I can share experiences with peers has significantly impacted my teaching abilities..." (Teacher 7, September 6, first online interview).

Outcomes: Achieving Self-Professional Development. Ultimately, through continuous cognitive optimization, teachers achieve notable professional outcomes. They realize teaching innovations, experience

personal professional growth, and build a solid professional identity. This self-professional development fosters a sense of accomplishment, bringing teachers greater satisfaction and balance in their teaching. They come to understand that teaching is not merely knowledge transfer but an art grounded in academic cognition, representing an ongoing enhancement of their professional capabilities.

“As a teacher with 38 years of experience, I love this profession, and it’s my passion that drives me to excel. I want my students to learn better, so I must delve deeply into my practice... Teaching and academic research are not contradictory but mutually reinforcing. New teaching methods and emerging issues in the classroom provide material and resources for research, while academic research results must be validated through the teaching process. Therefore, I collect and organize new discoveries and issues from my teaching, then research these topics... My time is mainly divided between classroom teaching and academic research...” (Teacher 5, August 11, second interview).

Saturation test

In this study, MAXQDA 2020 software was used to code and analyze 75% of the interview data in chronological order, while the remaining 25% of the interview data was reserved for theoretical saturation testing following the coding analysis. Theoretical saturation is a critical step in qualitative research, used to assess whether data collection has reached adequacy. It signifies that sufficient data has been gathered to construct the theory, and further data collection yields no new insights or categories. For this study, the reserved 25% of interview data was re-coded according to the established research procedures, with domain experts invited to discuss the coding results. The results indicated that no new categories or concepts emerged, and no new relationship structures were observed among the categories.

Results

This study is one of the first to explore the challenges and strategies involved in enhancing the Scholarship of Teaching and Learning (SoTL) among primary and secondary school teachers in China. Our findings suggest that several key factors play a significant role in the enhancement of SoTL in these educational settings. Teachers who expressed strong professional development needs, along with access to peer support and professional training, showed a higher degree of engagement with SoTL activities. However, the findings also reveal that heavy workloads, policy pressures, and limited access to resources hinder many teachers’ ability to fully engage in SoTL practices.

The findings of this study reveal several critical factors that influence the enhancement of the Scholarship of Teaching and Learning (SoTL) among primary and secondary school teachers. First, teachers expressed a strong desire for continuous professional development, particularly in integrating academic research into their teaching practices. However, the study found a significant gap in structured opportunities for professional growth, especially those focused on SoTL. Teachers acknowledged that access to research-based professional development would help them improve their

instructional practices and better support student learning outcomes. Without such opportunities, many teachers struggled to incorporate research into their daily routines.

Second, the study highlighted the considerable impact of heavy workloads and time constraints on teachers’ ability to engage with SoTL. Teachers reported that the demands of teaching, coupled with administrative duties, left them with insufficient time for reflection, scholarly inquiry, or professional development. This finding suggests that reducing teachers’ non-teaching responsibilities could create more space for them to focus on SoTL activities, thereby benefiting both their professional growth and students’ academic outcomes.

Another significant finding was the pressure teachers face from educational policies, which often prioritize short-term goals, such as improving student test scores, over long-term professional development. Many teachers felt constrained by policies like curriculum reforms and standardized testing, which limited their ability to engage in reflective practices and scholarly activities. As a result, teachers were unable to focus on SoTL, which requires a more holistic approach to teaching and learning. This underscores the need for a balance between policy demands and the professional autonomy of teachers to engage in research and continuous improvement.

The study also found that resource limitations, particularly in rural areas, significantly hindered teachers’ ability to enhance SoTL. Teachers in these areas lacked access to essential resources such as research materials, professional development programs, and peer collaboration opportunities. These constraints made it difficult for teachers to integrate scholarly practices into their teaching. Therefore, equitable resource distribution is crucial to ensuring all teachers, regardless of location, have access to the tools and support they need to engage in SoTL.

Finally, the importance of peer support and collaboration emerged as a key finding. Teachers who had access to peer collaboration, such as joint lesson planning and peer evaluations, reported greater engagement with SoTL and enhanced professional development. Peer support allowed teachers to share best practices, reflect on their teaching methods, and receive feedback from colleagues, creating a culture of continuous learning within schools. This finding highlights the need for schools to foster environments that encourage peer collaboration and mentorship, as these interactions significantly contribute to the development of SoTL.

Discussion

The findings of this study extend and contextualize existing literature on the Scholarship of Teaching and Learning (SoTL) by examining its enhancement among primary and secondary school teachers in China.

This study corroborates prior research that underscores professional motivation as a key driver of SoTL engagement (Kreber, 2002). Teachers’ desire for professional development and recognition aligns with Boyer’s (1990) concept of SoTL as a scholarly endeavor. However, this study uniquely highlights the tensions arising from heavy workloads and administrative burdens, which constrain teachers’ time for reflective practices. Furthermore, as Huber and Morreale (2002) emphasize, SoTL should not be confined to a single discipline but should evolve through interdisciplinary dialog and the integration of diverse research methodologies to enhance teaching

and learning. This notion aligns with Prosser's (2008) argument that a broader engagement with varied pedagogical approaches fosters deeper instructional insights and innovation. In agreement with Hutchings and Shulman's (1999) assertion that peer collaboration fosters reflective teaching, our findings demonstrate the critical role of peer support, mentorship, and joint lesson planning in promoting SoTL engagement.

This study identifies the dual impact of educational policies as both an enabler and a barrier to SoTL. While policies provide direction for professional growth, their focus on standardized testing and curriculum reforms creates pressure that limits teachers' autonomy and engagement. The findings further emphasize the unequal resource distribution in rural schools, which aligns with research on educational disparities (Yi et al., 2024). Resource constraints exacerbate teachers' challenges in integrating research into teaching. Policymakers and schools should consider reducing non-teaching administrative responsibilities to allow teachers more time for scholarly reflection and research. Educational policies should strike a balance between performance-based goals (e.g., test scores) and long-term professional development that supports reflective teaching and research. Equitable access to professional development opportunities, particularly in rural areas, is essential. Schools must invest in training programs, access to research materials, and platforms for knowledge exchange.

This study advances grounded theory research by proposing a paradigm model that interconnects causal, contextual, and mediating conditions with action strategies and outcomes. The model serves as a framework for understanding teachers' professional growth through SoTL enhancement. Practically, fostering professional learning communities can encourage peer collaboration, while targeted training programs can equip teachers with strategies for integrating research into instructional practice.

Conclusion

This study highlights the complex interplay of intrinsic motivations, external challenges, and strategic actions that shape SoTL enhancement among teachers. By addressing key challenges such as workload pressures, policy imbalances, and resource constraints, educational stakeholders can create an enabling environment that fosters reflective teaching, professional growth, and teaching innovation. The findings emphasize the importance of reducing non-teaching responsibilities for teachers, allowing them to engage more effectively in scholarly activities. A shift from test-based performance metrics to a more holistic evaluation system that prioritizes professional growth and innovation in teaching practices is essential. Furthermore, establishing professional learning communities can provide opportunities for peer collaboration and mentorship, creating a supportive atmosphere for teachers to engage in reflective practices and share innovative strategies. Ensuring equitable access to resources, particularly in rural and underfunded schools, is another critical step toward promoting professional development.

Future research should investigate the long-term impacts of SoTL practices on both teacher effectiveness and student outcomes. Longitudinal studies can offer deeper insights into the sustained benefits of these initiatives, while cross-cultural comparisons may reveal how diverse educational systems and cultural contexts influence

SoTL practices and outcomes. The study also underscores the logical connections between contextual challenges, mediating factors, and the core category of "Optimizing Professional Growth through SoTL." By aligning action strategies with desired outcomes, the research demonstrates how addressing key barriers and leveraging available opportunities can significantly enhance teachers' professional growth.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by The Institutional Review Board (IRB) of Sehan University in South Korea. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

Author contributions

PY: Data curation, Formal analysis, Investigation, Project administration, Resources, Software, Validation, Visualization, Writing – original draft. YYP: Methodology, Formal analysis, Conceptualization, Funding acquisition, Supervision, Writing – review & editing.

Funding

The author(s) declare that financial support was received for the research, authorship, and/or publication of this article. The author(s) declare that partial funding for this research was provided by the Sichuan International Studies University Graduate Education Reform Project: Research on the Pathways to Enhance the Academic and Teaching Abilities of Master's Degree Students in Education (Project No. 405019003).

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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