# A Scientometric Review of Teachers' Professional Identity Research in China: Hotspots, Trends, and Future Directions

**[1]Sun Xu, [2]Hamidah Mohamad, [3]Cheok Mui Yee, [4]Azrul Fazwan Kharuddin**

[1]University Tun Abdul Razak (UNIRAZAK), Malaysia, Jilin Engineering Normal University, China ,504223923@qq.com

[2]Tun Razak Graduate School, Universiti Tun Abdul Razak, Kuala Lumpur, Malaysia, hamidah_mohamad@unirazak.edu.my

[3]Tun Razak Graduate School, Universiti Tun Abdul Razak, Kuala Lumpur, Malaysia, cheokmy@unirazak.edu.my, https://orcid.org/0009-0002-2641-4271

[4]Tun Razak Graduate School, Universiti Tun Abdul Razak, Kuala Lumpur, Malaysia, azrul.fazwan@ur.unirazak.edu.my, https://orcid.org/0000-0002-6100-6129

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**ABSTRACT:**

This study aims to examine the development, intellectual structure, and emerging trends of teachers' professional identity (TPI) research in China, with a focus on identifying research hotspots, thematic evolution, and future directions. Grounded in a systematic literature review and scientometric approach, the study synthesises existing literature to address the fragmented nature of TPI research, which has been widely discussed across educational psychology, teacher education, and policy studies but lacks comprehensive integration. The literature review highlights that TPI research has evolved from early conceptual and measurement-focused studies to more complex investigations involving psychological capital, work engagement, wellbeing, and contextual identity construction. Methodologically, this study employed PRISMA-guided procedures and CiteSpace visualisation techniques to analyse 208 publications retrieved from Web of Science, Scopus, and CNKI (2005–2025). The analysis includes publication trend mapping, co-authorship networks, institutional collaboration, keyword co-occurrence, clustering analysis, and burst detection. The results show a clear four-stage development trajectory: initial conceptual exploration, rapid expansion driven by policy reforms, stabilisation with empirical refinement, and recent thematic consolidation with declining publication growth. Key findings also reveal dominant themes such as teacher psychological factors, preservice identity formation, and work engagement, alongside weak research collaboration networks and limited interdisciplinary integration. The study concludes that TPI research in China is entering a maturity stage that requires theoretical integration, methodological diversification, and stronger collaborative structures. The findings contribute to Sustainable Development Goal 4 by providing insights into strengthening teacher professionalism, improving

teacher quality, and supporting sustainable and equitable education systems.
Keywords: Teachers' Professional Identity, China, Scientometric Analysis, CiteSpace, Knowledge Mapping, Research Trends, Hotspots

## 1.0 Introduction

Teachers' professional identity (TPI) has increasingly become a central concern in educational research because it represents how teachers understand themselves, negotiate their professional roles, and construct meanings about their responsibilities within changing educational environments. Professional identity is not merely a psychological perception of belonging to the teaching profession; rather, it is a dynamic, socially constructed, and context-dependent process shaped by personal experiences, institutional cultures, policy expectations, and interactions with students and colleagues (Beijaard et al., 2004; Beijaard et al., 2023). A strong professional identity has been associated with positive teacher outcomes, including higher professional commitment, greater resilience, improved teaching motivation, and stronger intentions to remain in the profession (Suárez & McGrath, 2022). Conversely, weak or unstable professional identity may contribute to teacher stress, burnout, reduced occupational commitment, and challenges in adapting to educational transformation. Therefore, understanding the development and evolution of teachers' professional identity is critical for strengthening teacher quality and achieving sustainable improvements in education systems, particularly in alignment with Sustainable Development Goal 4 (SDG 4), which emphasizes inclusive and equitable quality education supported by qualified teachers.

In China, the importance of teachers' professional identity has become increasingly prominent due to extensive educational reforms, rapid technological advancement, and changing expectations regarding teacher professionalism. The transformation of the Chinese education system, including curriculum reforms, digital education initiatives, teacher competency development, and the national agenda of building a high-quality teaching workforce, has created new demands on teachers' professional roles. These reforms have significantly influenced how teachers perceive their professional responsibilities and how they reconstruct their identities within evolving educational contexts. Previous studies indicate that Chinese teachers experience identity negotiation as they balance traditional expectations of teachers as knowledge transmitters with contemporary expectations of teachers as facilitators, innovators, and lifelong learners (Trent, 2023; Wang & Yuan, 2025). However, despite increasing scholarly attention, the complexity of teachers' professional identity development in China remains insufficiently understood due to fragmented research perspectives and methodological limitations.

One major problem is that existing research on teachers' professional identity in China remains theoretically fragmented. Although international scholarship has developed several influential perspectives, including social identity theory, narrative identity theory, communities of practice, and complex dynamic systems theory, Chinese studies have often adopted these frameworks selectively without fully integrating them with local educational, cultural, and institutional contexts (Beijaard et al., 2023; Xu et al., 2023). Many studies continue to conceptualize professional identity as a relatively stable psychological construct measured through self-report scales, emphasizing the degree to which teachers identify with their profession. While this approach provides valuable empirical evidence, it may overlook the fluid, negotiated, and developmental nature of identity construction. Teachers' professional identity is shaped through continuous interaction between individual agency and external structures, meaning that identity formation should be examined as an evolving process rather than a fixed attribute (Stenberg & Maaranen, 2020). The absence of a more integrated theoretical understanding creates difficulties in explaining why teachers in similar

institutional environments may develop different professional identities.

A second problem concerns the uneven development of research across different teacher populations and educational contexts. Existing studies in China have largely concentrated on pre-service teachers, English as a foreign language (EFL) teachers, and university educators, while other important teacher groups remain underexplored. For example, vocational education teachers, rural teachers, special education teachers, and early childhood educators encounter distinctive professional challenges that may influence identity formation differently (Chen et al., 2025; Li et al., 2025). Rural teachers may experience identity tensions related to limited resources and social recognition, while vocational teachers may negotiate professional legitimacy within a rapidly changing labor-oriented education system. Similarly, special education teachers face emotional and relational demands that shape their understanding of professional roles. The dominance of certain teacher groups in existing literature limits the comprehensiveness of current knowledge and creates gaps in understanding how professional identity develops across diverse educational settings.

Another critical issue is the limited synthesis of the rapidly expanding body of empirical research on teachers' professional identity in China. Although numerous studies have examined factors influencing TPI, including psychological capital, social support, emotional regulation, organizational climate, and teacher agency, the research field remains characterized by isolated investigations rather than a coherent knowledge structure (Hui et al., 2025; Zhu et al., 2025). Traditional literature reviews often summarize findings within specific themes but may not reveal broader patterns regarding research growth, influential scholars, institutional collaboration, thematic evolution, and emerging research directions. Consequently, researchers and policymakers lack a comprehensive understanding of how TPI research has developed over time and which areas require further investigation. A scientometric approach is therefore necessary to visualize the intellectual landscape of the field and identify hidden patterns that conventional reviews may overlook (Chen, 2017).

Furthermore, methodological limitations represent another significant problem within existing TPI research. Earlier studies predominantly relied on cross-sectional surveys and quantitative measurements to examine relationships between professional identity and other variables such as job satisfaction, burnout, and professional commitment. Although these studies provide important statistical evidence, they often fail to capture the complexity of identity development as a continuous and context-sensitive process. Recent scholarship has increasingly emphasized the value of qualitative approaches, including narrative inquiry, discourse analysis, and longitudinal case studies, because these methods reveal how teachers construct meanings about their professional experiences over time (Sun & Akbar, 2023; Huang, 2021). However, methodological integration remains limited, and there is insufficient understanding of how quantitative, qualitative, and mixed-method approaches collectively contribute to knowledge advancement in the field.

The lack of systematic mapping of research trends also creates challenges in identifying future directions for teachers' professional identity studies in China. Recent educational transformations, particularly digitalization, artificial intelligence integration, and post-pandemic changes in teaching practices, have introduced new identity challenges for teachers. Teachers are increasingly required to redefine their professional roles as technology users, instructional designers, and adaptive practitioners. These emerging conditions suggest that future TPI research should move beyond traditional factors and explore how digital transformation, policy changes, emotional labour, and professional agency influence identity reconstruction. However, without a comprehensive analysis of current research trajectories, emerging themes and future priorities remain unclear.

Therefore, the primary problem addressed in this study is the absence of a systematic, evidence-based understanding of the intellectual development, research hotspots, thematic evolution, and future directions of teachers' professional identity research in China. While previous studies have generated valuable insights into specific dimensions of TPI, there remains a lack of comprehensive scientometric analysis that examines the overall structure and progression of the field. By applying scientometric techniques through CiteSpace, this study seeks to address this gap by mapping publication trends, identifying influential contributors and institutions, analyzing thematic clusters, and detecting emerging research frontiers from 2009 to 2025. Such an analysis is essential not only for advancing theoretical understanding but also for informing teacher education practices, professional development strategies, and educational policies aimed at strengthening teacher capacity and supporting the achievement of SDG 4.

## 2.0 Systematic Literature Review

Teachers' professional identity (TPI) has been widely examined as a multidimensional construct that explains how teachers perceive, interpret, and negotiate their professional roles within educational contexts. Early studies conceptualized professional identity as teachers' perceptions of "who they are" and "what kind of teacher they want to become," emphasizing the relationship between personal beliefs, professional knowledge, and teaching practices (Beijaard et al., 2004). Recent scholarship extends this view by highlighting that professional identity is not a fixed psychological characteristic but a dynamic process continuously reconstructed through interactions among personal experiences, social relationships, institutional expectations, and broader educational reforms (Beijaard et al., 2023).

Within the Chinese educational context, TPI research has gained increasing attention due to rapid reforms, changing teacher expectations, and the national emphasis on improving teacher quality. Previous studies have explored TPI from multiple dimensions, including identity formation, influencing mechanisms, professional development, psychological factors, and contextual influences.

A significant body of research has focused on the identity construction of pre-service teachers and early-career teachers. These studies suggest that professional identity begins developing before teachers formally enter the profession and continues evolving through teacher education programmes, practicum experiences, and workplace socialization. Trent (2023) demonstrated that preservice teachers construct their professional identities through discourse, teaching practice, and interactions with mentors, indicating that identity development is strongly influenced by opportunities for professional participation. Similarly, Stenberg and Maaranen (2020) found that differences exist between beginning and experienced student teachers' professional identities, suggesting that teaching experience and reflective practice contribute significantly to identity maturity. In the Chinese context, research has shown that preservice teachers often experience identity tensions as they negotiate between their expectations of teaching and the realities of classroom practice (Xu et al., 2023). These findings indicate that teacher education institutions play a critical role in shaping future teachers' professional identity.

Another important research stream examines the relationship between TPI and psychological factors. Previous studies have demonstrated that professional identity is closely associated with teachers' emotional experiences, psychological resources, and occupational well-being. Psychological capital, including self-efficacy, optimism, resilience, and hope, has been identified as an important factor supporting teachers' professional identity development because it enhances teachers' ability to cope with professional challenges (Suárez & McGrath, 2022). Hui et al. (2025) further revealed that emotional intelligence strengthens the relationship between social support and professional identity among preservice teachers by improving psychological well-being. These findings suggest that teachers' professional

identity development involves not only professional competence but also emotional and psychological adaptation (Sunasundram et al., 2026). Therefore, recent studies increasingly view TPI as an interaction between cognitive understanding, emotional attachment, and motivational processes.

Research has also explored the influence of organizational and contextual factors on teachers' professional identity. Teachers develop their professional identities within specific institutional environments where leadership practices, organizational culture, professional recognition, and workplace relationships shape their perceptions of professional value. Li et al. (2025) found that organizational climate and teacher self-efficacy significantly influence vocational teachers' professional identity in China, demonstrating the importance of supportive institutional environments. Similarly, social support from colleagues, administrators, and educational communities has been identified as a key factor enabling teachers to maintain positive professional identities, particularly during periods of educational change (Kharuddin et al., 2026). These studies suggest that professional identity cannot be understood solely from an individual perspective but must be examined through a broader ecological framework involving personal, organizational, and social dimensions.

A growing number of studies have investigated TPI among specific teacher groups, particularly language teachers. Language teaching contexts provide unique identity challenges because teachers often negotiate multiple roles, including language expert, cultural mediator, and educational facilitator. Sun and Akbar (2023) found that EFL teachers reconstruct their professional identities through continuous reflection and engagement with teaching innovations. Ge et al. (2025) further highlighted that identity reconstruction among EFL teachers is influenced by professional projects, curriculum development, and changing pedagogical expectations. These studies demonstrate that teacher professional identity is highly sensitive to disciplinary contexts and professional responsibilities. However, existing research remains concentrated on language teachers and preservice teachers, indicating the need for broader investigation among diverse teacher populations (Mohamad et al., 2026).

Methodologically, previous studies have employed quantitative, qualitative, and mixed-method approaches to examine TPI. Quantitative studies frequently use structural equation modelling and mediation analysis to examine relationships between professional identity and variables such as job satisfaction, burnout, psychological well-being, and professional commitment (Bai & Li, 2025). Qualitative studies, including narrative inquiry and longitudinal case studies, provide deeper insights into how teachers construct identity through lived experiences and professional transitions (Huang, 2021). Mixed-method research has recently gained attention because it integrates statistical patterns with contextual explanations, offering a more comprehensive understanding of identity development (Yu & Yu, 2023). Nevertheless, methodological fragmentation remains a challenge, as many studies investigate isolated variables without developing an integrated understanding of the broader knowledge structure of TPI research.

Overall, previous studies demonstrate that teachers' professional identity is shaped by the interaction between individual characteristics, psychological resources, professional experiences, and institutional contexts. Although substantial progress has been achieved, several gaps remain. Existing literature lacks a comprehensive mapping of research development, dominant themes, intellectual structures, and emerging trends, particularly within the Chinese context. Furthermore, limited studies have systematically examined how TPI research has evolved alongside educational reforms, digital transformation, and changing teacher roles. Therefore, a scientometric review is necessary to provide a holistic understanding of the development trajectory, research hotspots, and future directions of teachers' professional identity research in China.

## 3.0 Data Sources and Research Methodology

This systematic review adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) framework as the guiding methodological approach to ensure transparency, methodological rigor, and reproducibility throughout the review process. PRISMA is widely recognized as an established protocol for conducting systematic reviews by providing a structured reporting framework consisting of four key stages: identification, screening, eligibility, and inclusion (Page et al., 2021).

Although PRISMA does not function as a quality assessment instrument, it provides a systematic procedure for documenting the search strategy, selection process, and synthesis of evidence, thereby reducing potential bias and improving the reliability of review outcomes (Liberati et al., 2009). In this study, PRISMA was employed to systematically identify, evaluate, and synthesize existing research on teachers' professional identity (TPI) research in China, focusing on intellectual development, research hotspots, theoretical perspectives, methodological approaches, and emerging trends.

The review focused on peer-reviewed academic publications retrieved from internationally recognized and national academic databases, including Web of Science (WoS), Scopus, and China National Knowledge Infrastructure (CNKI).

These databases were selected because they provide extensive coverage of educational research literature and contain high-quality publications related to teacher education, professional development, and identity studies. The search period covered publications from 2009 to 2025, representing the period when research on teachers' professional identity in China experienced substantial growth and international visibility.

Both English and Chinese language publications were considered to capture the development of TPI research from international and local perspectives. The review adopted a scientometric orientation by integrating systematic review procedures with bibliometric mapping techniques to identify patterns and evolutionary trajectories within the research field (Chen, 2017).

*Process 1: Identification*

The identification phase involved developing a comprehensive search strategy to retrieve relevant publications from selected databases. Keywords were developed based on the research objectives, previous systematic reviews, and conceptual frameworks related to teachers' professional identity.

The search strategy incorporated major concepts including "teacher professional identity," "teacher identity," "professional identity construction," "teacher education," and "pre-service teacher identity." Synonyms and related terms were included to maximize retrieval accuracy while maintaining conceptual relevance.

Boolean operators, including AND and OR, were applied to construct database-specific search strings. The OR operator was used to capture variations of related concepts (e.g., "teacher professional identity" OR "teacher identity"), whereas the AND operator was used to combine different research dimensions (e.g., "teacher identity" AND "China" AND "teacher education"). Database-specific field codes such as TITLE, ABSTRACT, and KEYWORDS were applied to improve search precision. The final search strategy was conducted in 2025, covering literature published between 2009 and 2025.

**Table 1: Search Strings Used in This Study**

| Database | Keywords/Search Terms |
|---|---|
| Scopus | TITLE-ABS-KEY ("Teacher Professional Identity" OR "Teacher Identity" OR "Professional Identity Construction") AND ("Teacher Education" OR "Pre-service Teacher" OR "Teacher Development") AND ("China" OR "Chinese Teachers" OR "Chinese Educational Context") |
| Web of Science | TS=("Teacher Professional Identity" OR "Teacher Identity") AND ("Teacher Education" OR "Professional Development" OR "Teacher Learning") AND ("China" OR "Chinese Context") |
| CNKI | 主题 = ("教师职业认同" OR "教师专业身份" OR "教师身份建构") AND ("教师教育" OR "教师发展" OR "职前教师") |

*Process 2: Screening (Inclusion and Exclusion Criteria)*

A total of 408 records were initially retrieved from the three selected academic databases, including Scopus, Web of Science (WoS), and China National Knowledge Infrastructure (CNKI). The database search generated records from both international and national scholarly sources to ensure comprehensive coverage of teachers' professional identity (TPI) research in China. Specifically, the initial search identified Scopus (142 records), Web of Science (96 records), and CNKI (170 records), resulting in a total of 408 publications.

The first stage of screening involved the removal of duplicate records and irrelevant document types, including book reviews, editorial materials, conference abstracts, dissertations, non-academic publications, and studies unrelated to teachers' professional identity. Following the removal of 123 non-eligible entries, a total of 285 studies were retained for further evaluation. The inclusion and exclusion criteria were subsequently applied to assess the relevance, methodological suitability, and alignment of each publication with the objectives of this scientometric review.

The screening process prioritised studies that directly examined teachers' professional identity, identity formation, professional development, psychological and organisational influences, or related theoretical perspectives within the Chinese educational context. Publications that focused on unrelated professional groups, lacked empirical or theoretical relevance, or did not provide sufficient information for analysis were excluded. This systematic screening procedure ensured that the final dataset represented a reliable and comprehensive knowledge base for analysing the developmental trajectory, research hotspots, intellectual structure, and future directions of TPI research in China.

**Table 2: Inclusion and Exclusion Criteria**

| Criteria | Inclusion | Exclusion |
|---|---|---|
| Publication Type | Peer-reviewed journal articles indexed in WoS, Scopus, or CNKI | Editorials, book reviews, dissertations, reports, non-peer-reviewed materials |
| Language | English and Chinese publications | Publications written in other languages |
| Publication Period | 2009–2025 | Publications before 2009 |
| Research Focus | Teachers' professional identity, teacher identity development, teacher education, professional development | Studies unrelated to teacher identity or professional development |
| Context | Studies involving Chinese teachers, preservice teachers, or Chinese educational institutions | Studies without relevance to the Chinese education context |

To ensure the reliability and academic robustness of the evidence included in this review, a structured quality evaluation process was conducted. Although scientometric reviews primarily focus on mapping knowledge structures, research trends, and intellectual developments rather than evaluating intervention effectiveness, assessing the methodological credibility of included publications remains important for interpreting the strength and limitations of existing evidence. The quality appraisal considered several dimensions, including research design, theoretical foundation, methodological transparency, sampling adequacy, data collection procedures, analytical approaches, and alignment with the objectives of teachers' professional identity (TPI) research. Quantitative studies were examined based on the appropriateness of measurement instruments, statistical procedures, and validity evidence, while qualitative studies were assessed according to the clarity of research design, participant selection, data interpretation, and trustworthiness of findings. Mixed-method studies were evaluated based on the integration between quantitative and qualitative components.

Overall, the majority of included studies demonstrated acceptable methodological quality and provided meaningful contributions to understanding TPI development in China. However, several limitations were identified across the literature. Common methodological weaknesses included heavy reliance on cross-sectional survey designs, limited longitudinal investigations, insufficient exploration of identity development processes over time, restricted samples from specific regions or institutions, and inconsistent theoretical integration. These limitations highlight the need for future research to adopt more comprehensive designs, including longitudinal, mixed-method, and multi-context approaches, to capture the dynamic and socially constructed nature of teachers' professional identity.

*Process 3: Eligibility*

Following the initial screening stage, 285 publications were subjected to a detailed eligibility assessment. Titles, abstracts, and keywords were independently reviewed to determine their relevance to the objectives of this scientometric review. Articles were considered eligible when they explicitly examined teachers' professional identity, teacher identity construction, professional development, teacher education, identity-related psychological factors, or contextual influences within the Chinese educational environment. Studies that focused solely on general teacher attitudes, teaching effectiveness, job satisfaction, or professional competence without examining identity-related dimensions were excluded.

During the eligibility screening, 62 articles were removed due to insufficient alignment with the research focus, including studies that lacked direct engagement with teachers' professional identity, examined unrelated professional populations, or provided limited theoretical or empirical contribution to understanding identity development. Where relevance could not be determined through title and abstract screening, full-text assessment was conducted to evaluate conceptual alignment, methodological clarity, and contribution to the research objectives.

A further 15 publications were excluded after full-text evaluation because they lacked sufficient information regarding research focus, theoretical orientation, empirical evidence, or relevance to the Chinese teacher identity context. Following the completion of the eligibility assessment process, a final dataset of 208 publications was retained for scientometric analysis. These selected publications provided the empirical foundation for analysing publication trends, collaboration networks, citation structures, keyword clusters, and emerging research directions in teachers' professional identity research in China.

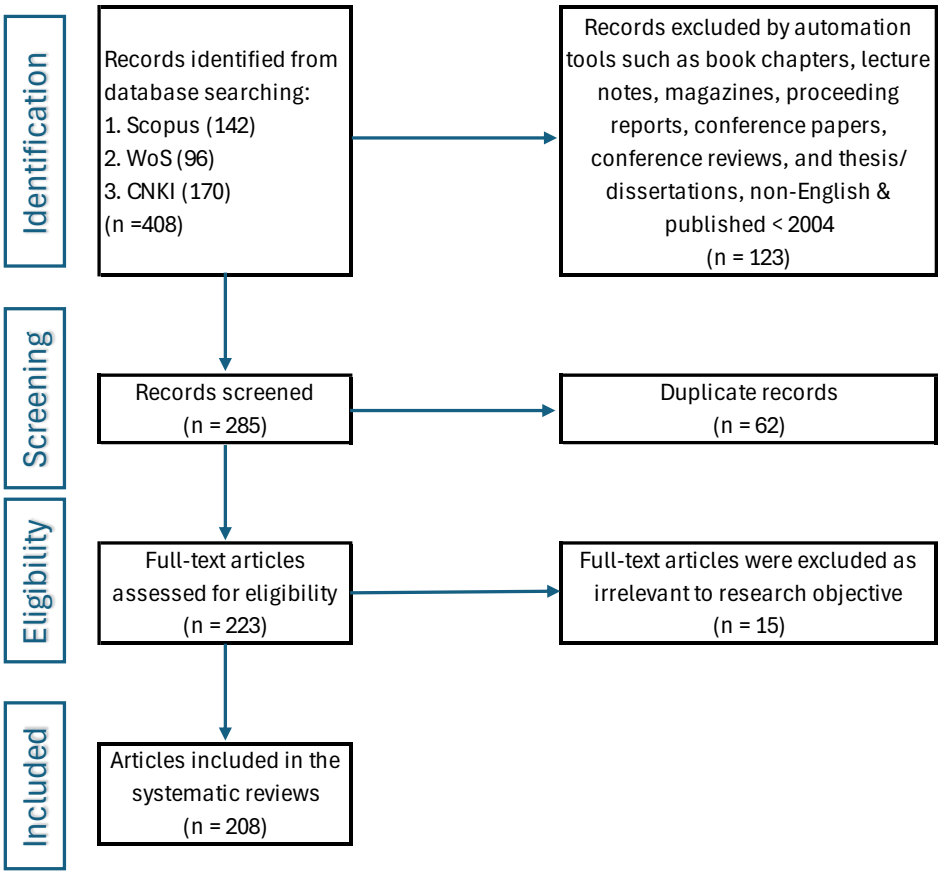


**Figure 1: Flow diagram of the study (adapted from Nang et al., 2022)**

*Process 4: Included*

The final review included 208 publications retrieved from Web of Science, Scopus, and China National Knowledge Infrastructure (CNKI) covering the period from 2005 to 2025. The selected studies consisted of Web of Science (52 publications), Scopus (41 publications), and CNKI (115 publications), reflecting a combination of international and Chinese scholarly perspectives on teachers' professional identity research. The selected studies represented a broad range of research perspectives, including empirical quantitative studies, qualitative investigations, mixed-method research, theoretical discussions, and conceptual analyses related to teachers' professional identity, identity construction, professional development, and contextual influences within the Chinese educational environment. The final dataset provided a comprehensive foundation for scientometric analysis, enabling the examination of publication trends, intellectual structures, collaboration patterns, research hotspots, and emerging directions in TPI research in China.

Collectively, the included publications examined multiple dimensions of TPI research, including professional identity formation among preservice and in-service teachers, psychological mechanisms influencing identity development, relationships between identity and professional wellbeing, organisational and contextual factors, teacher agency, professional commitment, and identity reconstruction during educational reform. The inclusion of diverse research approaches enabled a comprehensive understanding of the intellectual development, thematic evolution, and emerging directions of TPI scholarship in China.

The final dataset was subsequently analysed using scientometric techniques through CiteSpace, including publication trend analysis, author collaboration networks, institutional distribution analysis, citation analysis, keyword co-occurrence mapping, cluster analysis, and burst detection.

These procedures enabled the identification of major knowledge domains, influential contributors, research hotspots, and future research trajectories.

*Data Analysis Procedures*

Following the final selection of 408 publications, bibliographic information was organised and processed for scientometric analysis. CiteSpace software was utilised to generate visual knowledge maps representing the intellectual structure and evolution of TPI research. The analysis incorporated several techniques:

a) Temporal analysis was conducted to examine publication growth patterns and identify developmental phases of TPI research from 2005 to 2025.

b) Author and institutional collaboration analysis was performed to identify influential researchers, research centres, and collaboration patterns within the field.

c) Citation analysis was applied to determine highly influential publications and foundational contributions shaping TPI scholarship.

d) Keyword co-occurrence analysis was conducted to identify major research themes and knowledge clusters.

e) Burst detection analysis was applied to identify emerging research interests and rapidly developing topics over time.

The thematic interpretation followed a structured analytical process involving data reduction, pattern identification, comparison of recurring concepts, and construction of a conceptual understanding of the research landscape. This process enabled the identification of major thematic domains, including identity construction, psychological wellbeing, teacher engagement, professional development, and contextual identity negotiation.

*Expert Validation*

To enhance the credibility and interpretive reliability of the scientometric findings, an expert validation process was conducted involving three independent academic reviewers with expertise in teacher education, educational research methodology, and bibliometric analysis. The validation process was conducted in three stages.

First, the preliminary thematic categories generated from keyword clustering and citation analysis were reviewed independently by the experts to evaluate conceptual accuracy and relevance. Second, reviewers examined whether the identified research themes adequately represented the broader landscape of teachers' professional identity research in China. Third, feedback regarding thematic classification, interpretation of research trends, and identification of future directions was discussed among the research team, and necessary refinements were incorporated.

This validation process strengthened methodological credibility by reducing interpretive bias and ensuring that the final thematic structure reflected both quantitative scientometric evidence and expert understanding of teacher identity scholarship.

The final analytical framework identified major knowledge domains and emerging research directions within TPI research, including:

1. Professional identity formation and construction
2. Psychological resources and professional wellbeing
3. Preservice teacher identity development
4. Organisational and contextual influences
5. Teacher engagement and professional sustainability

Frequency analysis was also conducted to determine the prominence of major themes across the included publications. These findings are presented in the Results section to demonstrate the relative importance and evolution of research hotspots within the field.

## 4.0 Results

4.1 Temporal Evolution of Research Output (2005–2025)

The longitudinal analysis of 208 publications reveals that research on teachers' professional identity (TPI) in China has progressed through four distinct phases over the past two decades. During the initial emergence period (2005–2010), annual output remained low but gradually increased as foundational concepts and theoretical orientations were introduced into the domestic research landscape. A rapid expansion phase followed between 2011 and 2014, during which publication volume rose sharply, reaching its first peak in 2014. This escalation aligned closely with national policy initiatives emphasising teacher professionalisation and rural workforce development, which stimulated both scholarly interest and empirical inquiry. From 2015 to 2019, research entered a phase of stabilisation and refinement, characterised by consistently high publication levels and a shift from conceptual discussions to more targeted empirical studies, including scale development and mediation modelling. Since 2020, however, output has declined and stabilised at a lower level, despite ongoing educational reforms such as the "Double Reduction" policy. This suggests the field has reached a point of thematic saturation, with innovation increasingly dependent on methodological diversification and emerging subfields rather than volume growth. Although partial data from 2025 indicate continued activity, the overall trend reflects a transition from quantitative proliferation to qualitative consolidation.

**Table 5: Phases of Research Development on TPI in China (2005–2025)**

| Phase | Years | Key Features | Interpretation |
|---|---|---|---|
| Initial emergence | 2005–2010 | Slow growth; conceptual exploration; first foundational studies | Early establishment of terminology and theoretical framing |
| Rapid expansion | 2011–2014 | Sharp increase; first research peak in 2014 | Policy-driven acceleration and diversification of topics |
| Stabilisation and refinement | 2015–2019 | Sustained high output; second peak in 2019 | Shift from foundational studies to empirical deepening |
| Plateau and thematic narrowing | 2020–2025* | Decline in volume; 2022 micro-peak; partial 2025 data | Field saturation; increased difficulty generating novelty |

*2025 counts reflect data only through 1 September.

Overall, the trajectory aligns closely with national reforms, illustrating how policy cycles directly shape research intensity and thematic direction.

4.2 Spatial Distribution of Research Output

4.2.1 Journal Distribution

The final review included 208 publications retrieved from three major academic databases: Web of Science (WoS), Scopus, and China National Knowledge Infrastructure (CNKI), covering the period from 2005 to 2025. The database distribution consisted of 52 publications from Web of Science, 41 publications from Scopus, and 115 publications from CNKI, demonstrating a balanced integration of international and Chinese academic contributions to teachers' professional identity (TPI) research. The inclusion of CNKI publications was particularly important for capturing locally developed theoretical perspectives, empirical evidence, and context-specific discussions related to teacher identity formation within the Chinese education system, while WoS and Scopus provided broader international visibility and comparative scholarly perspectives.

The selected studies represented diverse research approaches, including quantitative empirical studies, qualitative investigations, mixed-method research, theoretical discussions, and conceptual analyses focusing on teachers' professional identity, identity construction processes, professional development, psychological influences, and contextual factors affecting

teacher professionalism. Collectively, these publications provided a comprehensive knowledge base for conducting scientometric analysis, enabling the identification of publication trends, intellectual structures, collaboration networks, research hotspots, and future research directions in the field of teachers' professional identity research in China.

**Table 6: Top Publishing Journals in TPI Research**

| Rank | Journal | Publication Count | Characteristics |
|---|---|---|---|
| 1 | *Teacher Education Research* | 24 | CSSCI core; leading platform for teacher development scholarship |
| 2 | *Journal of Education* | 18 | Broad educational scope with growing identity-focused contributions |
| 3 | *Educational Exploration* | 15 | Practice-oriented; bridges theory and school-level application |
| 4 | *Studies in Early Childhood Education* | 8 | Specialised attention to early-years teacher identity |
| 5 | *Journal of Beijing Normal University* | 6 | High-tier academic influence aligned with normal universities |

These patterns indicate centralised knowledge production anchored in authoritative teacher-education outlets.

4.2.2 Core Authors and Collaboration Networks

Applying Price's Law identified 28 core authors contributing three or more publications, yet network density remained extremely low (0.0029), indicating limited collaboration across the field. Highly productive scholars such as Wang Xinqiang and Zhang Dajun have made notable contributions to themes including pre-service teacher identity, psychological capital, and occupational wellbeing. Foundational theorists such as Wei Shuhua and Song Guangwen continue to hold strong citation influence due to their early-scale development and structural frameworks. However, the overall collaboration structure is fragmented, characterised by small-scale, institution-based clusters with few enduring partnerships. This suggests that despite the presence of leading figures, the field lacks a cohesive scholarly community capable of generating sustained, cross-institutional theoretical synthesis.

**Table 7: Leading Authors in TPI Research**

| Author | First Publication Year | Publication Count | Primary Research Focus |
|---|---|---|---|
| Wang Xinqiang | 2010 | 10 | Pre-service teacher identity and psychological capital |
| Zhang Dajun | 2009 | 10 | Teacher stress and professional wellbeing mechanisms |
| Wei Shuhua | 2005 | 9 | Foundational theorisation and structural measurement |
| Song Guangwen | 2006 | 9 | Influencing factors and mediating pathways |
| Zhou Ke | 2011 | 8 | Subject-area identity, particularly physical education |

Collaboration networks are localised and short-chain, with most authors working independently or within single-institution clusters.

4.2.3 Institutional Distribution

Analysis of institutional output demonstrates a clear dominance of teacher-training institutions, which produced 38% of total publications. Beijing Normal University and East China Normal University serve as national research hubs with broad theoretical influence and consistent scholarly productivity. Southwest University and Hunan Normal University play pivotal roles in advancing empirical and region-specific studies, particularly related to youth educators and rural contexts. Despite strong intra-institutional cohesion, cross-institutional collaboration remains weak, as reflected in network modularity (Q = 0.9779), revealing highly segmented academic clusters rather than interconnected scholarly ecosystems.

**Table 8: Top Research Institutions**

| Institution | Type | Contribution Pattern |
|---|---|---|
| Beijing Normal University | National key normal university | Strong theoretical output and scale development |
| East China Normal University | Comprehensive teacher education hub | High publication consistency and topic diversity |
| Southwest University | Teacher education stronghold | Emphasis on measurement and empirical studies |
| Hunan Normal University | Regional academic centre | Focus on youth and rural teacher identity |

Network modularity (Q = 0.9779) indicates highly segmented clusters, with weak cross-regional or cross-system collaboration.

4.3 Highly Cited Literature Analysis

The thematic examination of the most frequently cited publications reveals the intellectual foundations of the field. Early high-impact works, particularly those by Wei (2008) and Song and Wei (2006), concentrated on defining structural dimensions and identifying influencing mechanisms of professional identity. Subsequent studies expanded into applied domains, including job satisfaction, emotional commitment, and psychological wellbeing. The prominence of measurement-focused research demonstrates the central role played by scale construction in advancing methodological standardisation. More recent literature deepens rather than replaces early frameworks, reflecting an incremental rather than disruptive knowledge trajectory

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**Table 9: Thematic Characteristics of Highly Cited Works**

| Dominant Theme | Representative Works | Core Contribution |
|---|---|---|
| Structural definition and measurement | Wei (2008); Sun & Zuo (2010) | Established multidimensional identity scales and constructs |
| Influencing mechanisms | Song & Wei (2006); Luo et al. (2014) | Identified mediating roles (e.g., job satisfaction, emotional commitment) |
| Group-specific identity studies | Tan (2009); Zhou (2010) | Expanded inquiry to early childhood and subject-specialist teachers |
| Wellbeing and psychological capital | Wang et al. (2014) | Integrated positive psychology into TPI mechanisms |

Most foundational works were produced before 2014, while more recent studies refine rather than redefine theoretical directions.

Keyword co-occurrence analysis generated a network of 365 nodes and 813 links, with strong clustering validity (Q = 0.6053; S = 0.912), indicating a well-structured knowledge system. Central terms such as *professional identity*, *teacher trainees*, *psychological capital*, and *work engagement* illustrate the field's movement from broad conceptual exploration toward psychological and behavioural modelling. The prominence of methodological keywords including *mediation effect*, *scale development*, and *survey research* further reflects increasing empirical sophistication.

4.3.1 Keyword Clustering Results

Ten clusters were consolidated into five major thematic domains, demonstrating diversification across psychological, contextual, and evaluative dimensions. Collectively, these clusters show a clear progression from generalised teacher populations to subgroup-specific and context-responsive research.

**Table 10: Major Knowledge Clusters in TPI Research**

| Cluster Theme | Focus Area | Research Significance |
|---|---|---|
| Identity & psychological states | burnout, wellbeing, job satisfaction | Explains pathways linking identity to emotional and behavioural outcomes |
| Typological development | physical education, secondary teachers | Supports precision in identity theorisation |
| Pre-service formation | teaching practicum, enrolment motivation | Positions identity as a pre-entry developmental process |
| Rural & private-sector contexts | special-post, private kindergarten | Addresses equity-driven identity challenges |
| Performance evaluation & measurement | scale validation, modelling | Advances methodological standardisation |

4.3.2 Burst and Time-Zone Evolution

Keyword burst analysis indicates a three-stage evolution of research hotspots. Early emphasis (2005–2013) centred on foundational terminology and problem-identification. From 2014 to 2020, methodological and cohort-specific expansion occurred, reflected in the emergence of terms such as *survey research* and *newly qualified teachers*. Since 2021, the strongest and most sustained burst has been *work engagement*, signalling a paradigm shift toward positive psychological development and alignment with global scholarship.

**Table 11: Evolution of Research Hotspots (2005–2025)**

| Stage | Years | Emerging Keywords | Implications |
|---|---|---|---|
| Foundational | 2005–2013 | teachers, structural elements, countermeasures | Established problem framing and conceptual bases |
| Expansion | 2014–2020 | survey research, teacher support, newly qualified teachers | Methodological diversification and subgroup refinement |
| Positive-development shift | 2021–2025 | work engagement, young teachers | Movement toward asset-based identity enhancement |

## 5.0 Discussion

The findings of this study demonstrate that research on teachers' professional identity (TPI) in China has undergone a clear structural and epistemic transformation over the past two decades, reflecting both internal academic maturation and external policy shifts. The temporal analysis indicates that publication patterns are closely aligned with national reform cycles, particularly major policy interventions targeting teacher professionalism and equity. This confirms that teacher identity in China is not only an individual psychological construct but also a system-embedded phenomenon shaped by state-driven expectations and institutional restructuring (Yan, 2024; Wang et al., 2025). The post-2020 decline in publication volume suggests that the field has transitioned into a saturation phase, where incremental innovation requires theoretical expansion and methodological diversification rather than increased output. The spatial analysis reveals a highly centralised yet fragmented research landscape. While normal universities dominate scholarships and have contributed significantly to theoretical construction and empirical standardisation, the weak collaboration networks indicate the absence of a cohesive academic community capable of generating cumulative theoretical advancement. This fragmentation helps explain why, despite two decades of productivity, the field still lacks integrative theoretical synthesis bridging psychological, sociocultural, and policy-driven perspectives. As international literature increasingly emphasises identity as relational and historically situated (Trent, 2023; Holloway & Brass, 2024), Chinese research remains largely compartmentalised across thematic silos.

The analysis of highly cited literature illustrates that early foundational work established the structural definition and measurement of TPI, providing necessary conceptual clarity and instrument development. However, recent studies tend to elaborate rather than reconceptualise these frameworks, signalling the need for theoretical innovation beyond scale refinement. The dominance of quantitative, cross-sectional research further constrains explanatory depth, reinforcing the urgent need for longitudinal, mixed-method, and intervention-based designs capable of capturing identity evolution and causality. Keyword clustering results confirm a progressive thematic shift from broad conceptual exploration toward specialised, context-responsive inquiry. The increasing attention to marginalised groups such as rural teachers, private kindergarten educators, and newly qualified teachers reflects a growing sensitivity to equity and differentiated professional trajectories. This aligns with national priorities related to balanced development and rural revitalisation (Song & Li, 2024). Moreover, the recent surge in positive-psychology constructs, particularly work engagement, indicates a paradigmatic shift from deficit-oriented diagnosis to developmental enhancement, paralleling global repositioning toward teacher flourishing and sustainability (Zhang & Wang, 2022).

At the same time, the emergence of identity-related challenges linked to digitalisation, parental negotiation, and intensified accountability, points to a changing professional ecology. Yet these areas remain underexamined, suggesting that the research field has not fully caught up with the lived realities of teachers in the post-pandemic era. Additionally, the near absence of studies on vocational, special education, and private-sector teachers signals persistent blind spots that limit the national representativeness of existing knowledge. Taken together, the findings highlight four key implications. First, theoretical advancement requires movement beyond additive expansion toward integrative, cross-paradigm synthesis capable of accounting for identity as simultaneously psychological, relational, and policy-mediated. Second, methodological transformation is essential, with longitudinal tracking, sequential mixed methods, and experimental interventions necessary for capturing identity development, not merely identity status. Third, research must transition from describing problems to generating solutions, including the design and evaluation of professional-identity enhancement programs within teacher education and in-service systems.

Finally, collaborative restructuring through cross-institutional research alliances and national data-sharing mechanisms is crucial for overcoming fragmentation and building a cumulative knowledge base aligned with international standards.

## 6.0 Conclusion

This study provides the first long-span, visualised scientometric analysis of teachers' professional identity research in China from 2005 to 2025, offering comprehensive insight into its developmental trajectory, structural characteristics, thematic hotspots, and emerging frontiers. The findings reveal that the field has evolved from foundational conceptual construction toward empirical refinement and is now entering a phase of thematic narrowing and qualitative deepening. However, despite substantial progress, the field remains marked by limited theoretical integration, methodological homogeneity, and fragmented scholarly collaboration. Study contributes to literature in three major ways. First, it maps the structural evolution of TPI research within China's policy and institutional context, providing a clearer understanding of how national reform cycles shape academic attention and research direction. Second, it identifies five enduring knowledge domains and highlights a paradigmatic shift toward positive-development orientations, particularly the rise of work engagement and well-being-focused inquiry. Third, it outlines evidence-based future research priorities, including theoretical synthesis across disciplinary frameworks, longitudinal and mixed-method research design, precision studies targeting underrepresented teacher groups, and increased alignment between research output and educational practice.

Future scholarship should prioritise dynamic and context-sensitive models of identity formation, integrate sociocultural and psychological perspectives, and expand beyond self-report paradigms toward multi-source and real-time data approaches, including digital trace and AI-supported analytics. Equally critical is the movement toward practice-embedded research capable of informing policy implementation and enhancing teacher development systems at scale. Ultimately, strengthening the professional identity of teachers is not only an academic endeavour but a cornerstone of China's broader educational modernisation agenda. By illuminating past progress and future pathways, this study provides a strategic foundation for advancing both scholarly inquiry and practical innovation in support of a more robust, equitable, and resilient teaching workforce.

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