Teacher Professional Identity and Career Outcomes Among Pre-Service Teachers: A Bibliometric-Systematic Literature Review

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ABSTRACT

Teacher shortages and the early attrition of beginning teachers have drawn attention to how career decisions take shape during initial teacher education. Teacher professional identity is often credited with steering these decisions, yet research linking it to the career outcomes of pre-service teachers remains scattered across disciplines and methods. This study combined bibliometric mapping with a systematic synthesis to examine this link. Following the ten-step bibliometric-systematic literature review (B-SLR) protocol of Marzi et al. (2025), we analysed 305 Scopus-indexed documents published between 2000 and 2026 through performance analysis, co-citation analysis, keyword co-occurrence and bibliographic coupling in VOSviewer. We then synthesised 25 empirical studies that related identity to at least one career outcome and appraised their quality with the Mixed Methods Appraisal Tool. Publications rose sharply after 2020, and about 71% of the documents appeared between 2020 and 2026. The United States, Australia, China and the United Kingdom were the most productive countries, and *Teaching and Teacher Education* was the most cited source. The intellectual base of the field rests on identity, situated learning and self-efficacy theories, while career theories are almost absent. The synthesis shows that professional identity is associated with intentions to enter and remain in teaching, and the few longitudinal studies link earlier identity to later intentions and actual entry. The practicum, mentors and emotions act as turning points. Structural factors, including recruitment policies, job opportunities, service bonds and income, can outweigh or condition the link between identity and career outcomes. We propose an evidence-mapped model that connects initial inputs, teacher education experiences, professional identity, career mechanisms and career outcomes, together with a research agenda that brings identity research and career theory together.

Keywords: Bibliometric-systematic literature review, career outcomes, commitment to teaching, pre-service teachers, teacher professional identity

INTRODUCTION

Many countries face teacher shortages, and many beginning teachers leave the profession within their first few years of service. A meta-analysis showed that burnout and low job satisfaction are among the main predictors of teachers' intention to quit (Madigan & Kim, 2021). Yet the decision to stay or leave does not begin on the first day of teaching. It starts to form during teacher education, when pre-service teachers judge whether teaching suits them (Hong, 2010). Initial teacher education is therefore a period of career formation as well as a period of learning to teach.

Teacher professional identity is regarded as the core of this process. Professional identity refers to how individuals see themselves as teachers, and it develops continuously through the interaction between the self and the context (Beijaard et al., 2004; Beauchamp & Thomas, 2009). Among pre-service teachers, identity is shaped through coursework, the practicum and relationships with mentors and peers (Izadinia, 2013). Several reviews have examined the concept, formation factors and measurement of pre-service teacher identity (Hanna et al., 2019; Izadinia, 2013; Rodrigues & Mogarro, 2019). These reviews, however, paid little attention to a question

that matters for teacher workforce policy: to what extent identity is related to career outcomes such as the decision to enter the profession, commitment and the intention to stay.

The question also matters for career guidance and counselling. Social cognitive career theory (SCCT) explains that career choice and persistence are shaped by self-efficacy, outcome expectations and goals (Lent et al., 1994; Lent & Brown, 2013). Career construction theory views career identity as the core of career development (Savickas, 2013). If teacher professional identity is closely related to career outcomes, teacher education programmes and counselling services could use identity building as a strategy to retain prospective teachers. To our knowledge, however, no review has combined a map of the whole field with a synthesis of studies that link identity to the career outcomes of pre-service teachers.

This study used a bibliometric-systematic literature review (B-SLR), an approach that combines bibliometric analysis with systematic review and theory development (Marzi et al., 2025). It addressed five research questions (RQs):

RQ1. What are the publication and citation trends in research on the career-related professional identity of pre-service teachers?

RQ2. Which sources, countries, authors and documents are the most productive and influential?

RQ3. What is the intellectual base of the field, based on co-citation analysis?

RQ4. What are the main themes and research fronts, based on keyword co-occurrence and bibliographic coupling?

RQ5. How is professional identity related to the career outcomes of pre-service teachers?

The rest of the paper is organised as follows. The next section outlines the concepts and theories used. It is followed by the methodology, the results and discussion, the conclusion, and the implications and limitations of the study.

LITERATURE REVIEW

Teacher professional identity

Beijaard et al. (2004) summarised four features of teacher professional identity: it is an ongoing process, it involves both the person and the context, it consists of sub-identities, and it requires teacher agency. Beauchamp and Thomas (2009) emphasised the role of emotion, narrative and context in identity formation. For pre-service teachers, the move from student to teacher often creates tension between an idealised image of teaching and the reality of schools (Flores & Day, 2006). In quantitative studies, identity is often measured through several dimensions, such as commitment to teaching, professional orientation, task orientation and self-efficacy (Lamote & Engels, 2010). Some instruments therefore measure commitment as part of identity.

Professional identity and professional commitment are closely related but not identical. In this review, professional identity refers to how individuals define themselves as teachers, including their self-image, values and sense of belonging to the profession, whereas professional commitment refers to the strength of their attachment to teaching and their willingness to remain in it. Several identity instruments, however, include commitment to teaching as one of their dimensions (Hong, 2010; Lamote & Engels, 2010). When commitment is part of the identity measure, a reported link between identity and commitment may partly reflect shared item content. For this reason, commitment was treated as a career outcome only when it was measured or analysed separately from identity.

Career outcomes of pre-service teachers

In this study, career outcomes refer to pre-service teachers' decisions about, and attitudes towards, a teaching career. They include motivations and reasons for choosing teaching, the intention and decision to enter the profession, commitment and the intention to stay, and career resources such as career certainty, career adaptability and career calling. The FIT-Choice model explains that the choice of teaching is influenced by intrinsic value, social utility value, personal utility value, perceived ability and prior experiences (Richardson & Watt, 2006; Watt & Richardson, 2007). Marcia's (1966) identity status theory distinguishes individuals who have explored and committed from those who have not yet explored or committed. Both approaches suggest that identity and career decisions are intertwined.

THEORETICAL FRAMEWORK

This study drew on two groups of theories. The first comprises identity and situated learning theories, which view identity as the product of participation in communities of practice (Lave & Wenger, 1991; Wenger, 1998). The second comprises career theories, namely SCCT and career construction theory, which explain how self-beliefs and career identity lead to career choice and persistence (Lent et al., 1994; Savickas, 2013). Together, the two groups were used to interpret the findings for RQ5.

METHODOLOGY

Research design

This study followed the ten steps and three checkpoints of the B-SLR (Marzi et al., 2025), and the selection process was reported according to PRISMA 2020 (Page et al., 2021). Table 1 summarises how each step was carried out. The bibliometric part addressed RQ1 to RQ4 using the full dataset, while the systematic part addressed RQ5 using studies that met specific criteria.

Table 1. Implementation of the ten B-SLR steps and three checkpoints

Step	Implementation in this study
1. Research questions and boundaries	Five research questions; pre-service and trainee teachers, and ITE graduates within five years; professional identity and career outcomes
2. Search string	TITLE-ABS-KEY (("professional identity" OR "professional identities" OR "teacher identity" OR "teacher identities" OR "identity formation" OR "identity development") AND ("pre-service teacher*" OR "preservice teacher*" OR "student teachers" OR "teacher candidate*" OR "prospective teacher*" OR "trainee teacher*" OR "initial teacher education" OR "teacher education student*") AND (career* OR commitment OR retention OR attrition OR "intention to teach" OR "turnover intention*" OR "career choice" OR "career decision*" OR "self-efficacy" OR persist* OR dropout OR "drop out")) AND NOT TITLE-ABS-KEY ("student-teacher relationship*" OR "teacher-student relationship*") AND PUBYEAR > 1999 AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "re")) AND (LIMIT-TO (LANGUAGE, "english"))
3. Database selection	Scopus, 18 October 2026; 328 records
4. Screening and cross-checking	23 out-of-scope records removed; 305 records retained
5. Cleaning and export	Keyword thesaurus; cleaning of cited references
Checkpoint 1	Data consolidation: questions, search string and data completeness checked
6. Bibliometric approach	Performance analysis; reference co-citation (≥8 citations; 84 references); author-keyword co-occurrence (≥3 occurrences; 47 keywords); document bibliographic coupling (≥5 citations; 169 connected documents)

7. Cluster identification	Full counting; association-strength normalisation; Leiden clustering algorithm; resolution 1.00; minimum cluster size 3; largest connected set retained; cluster labels assigned by the authors
8. Sample organisation and selection	Three-stage selection: 196 records excluded at title, abstract and keyword screening; 84 excluded at eligibility assessment, with reasons recorded; 25 studies included
Checkpoint 2	Preliminary evaluation of findings: meaning of clusters assessed
9. Systematic literature review	Standardised extraction, MMAT 2018 quality appraisal and thematic synthesis of 25 studies (23 full texts; 2 abstract-only)
10. Theoretical contribution	Identity and career outcome model and research agenda
Checkpoint 3	Evaluation of contribution: synthesis compared with the bibliometric maps

Source: Authors' work

Data search and preparation

Scopus was used as the single data source for three reasons. It covers a broad range of peer-reviewed education and social science journals, it provides the complete cited-reference data that co-citation and bibliographic coupling require, and its export format can be read directly by VOSviewer (Mongeon & Paul-Hus, 2016). Merging records from several databases would have required reconciling different citation formats, which can introduce duplicate records and distort citation counts. The search was run on 18 October 2026 in titles, abstracts and keywords. The search string combined three blocks of terms, covering professional identity, pre-service teachers and career outcomes, and excluded studies on teacher–student relationships (Table 1). The search was limited to articles and reviews published in English from 2000 onwards and returned 328 records. The language restriction was applied because English was the only language in which all three authors could screen, extract and appraise studies consistently, and because the citation analyses compare reference lists across peer-reviewed sources. These restrictions may under-represent research indexed in other databases or published in other languages, particularly national-language studies from Asia and Latin America; this is acknowledged as a limitation.

Records were exported from Scopus in CSV format with full bibliographic information and cited references. Titles and abstracts were checked against the population boundary, and 23 records that did not involve pre-service or beginning teachers (for example, studies of teacher educators, medical students and middle leaders) were removed, leaving 305 documents for the bibliometric analyses. Because all records came from a single database, no cross-database deduplication was needed. Author keywords were standardised with a thesaurus; for example, *preservice teachers*, *student teachers* and *teacher candidates* were merged into *pre-service teachers*. Cited references were cleaned so that variant forms of the same reference were counted once. At checkpoint 1, the research questions, search string and data completeness were checked before analysis.

Bibliometric analysis

Performance analysis counted documents, citations and the h-index by year, source, country and author (Donthu et al., 2021). Science mapping was carried out in VOSviewer version 1.6.20 (van Eck & Waltman, 2010) with full counting, association-strength normalisation, the Leiden clustering algorithm, a resolution of 1.00 and a minimum cluster size of three items for all three maps. Three analyses were run: reference co-citation (minimum eight citations; 84 references), author-keyword co-occurrence (minimum three occurrences; 47 keywords) and document bibliographic coupling (minimum five citations; 169 documents in the largest connected set). Co-citation shows the shared intellectual base of a field, whereas bibliographic coupling groups documents that share references and so points to current research fronts (Zupic & Čater, 2015). The authors labelled each cluster after examining its most frequent or most cited items, so the labels are interpretive. At checkpoint 2, the coherence of each cluster was assessed before the systematic synthesis.

Systematic review

Studies were eligible for the systematic synthesis when they (a) reported empirical research; (b) involved pre-service teachers enrolled in initial teacher education (ITE), including trainees in a second-phase traineeship that precedes full certification, or ITE graduates within their first five years after graduation, the period commonly used to define early-career teachers; (c) examined professional identity; and (d) related identity to at least one career outcome. Graduates were included only when the study linked identity formed during teacher education or the transition to work with entry, persistence or exit, because these outcomes can be observed only after graduation. Studies of experienced in-service teachers, principals, teacher educators or other professionals were excluded. Reviews, conceptual papers, instrument-validation studies, studies that examined commitment only as a dimension of identity, and studies in which career outcomes appeared only as background were also excluded. Of the 25 included studies, 19 involved pre-service or trainee teachers and six involved graduates in transition to work (Table 6).

The selection proceeded in three stages (Figure 1). First, 23 of the 328 records were removed because they did not involve pre-service or early-career teachers. Second, the titles, abstracts and keywords of the remaining 305 records were screened, and 196 records that did not mention any career outcome were excluded. Third, the remaining 109 records were assessed against the full eligibility criteria using their titles, abstracts and keywords, and 84 were excluded for the following reasons: the career outcome appeared only as background or rationale (n = 48); a career outcome was examined without analysing professional identity (n = 14); the record was a review, conceptual or programme-description paper (n = 11); the study developed or validated an instrument (n = 5); commitment was examined only as a dimension of identity (n = 3); or the population was outside the eligibility criteria, such as experienced in-service teachers or principals (n = 3). The full texts of the 25 included studies were then retrieved.

The first author conducted the search, screening, data extraction, quality appraisal and analyses. Screening and extraction were not duplicated independently. Instead, the second and third authors, as supervisors, reviewed the screening decisions, the extracted data, the quality ratings and the interpretation of the findings. Where they disagreed with a decision, the case was discussed by all three authors until agreement was reached, and the final decision was recorded in the screening log.

A standard extraction form captured country, population, sample, design, how identity was measured or examined, career outcomes and key findings. Full texts were used for 23 studies. The full texts of Arastaman and Demirkasımoğlu (2026) and Barraza-Gómez et al. (2025) could not be accessed, so data were extracted from their abstracts, which reported the design, sample and main findings. Both studies were retained because they add evidence on recruitment-policy constraints in Türkiye and on entry motives in Latin America. To limit their influence, they were marked as abstract-only wherever they are cited, they were not used to support claims about mechanisms or measurement, and no theme or model path depends on them alone. Findings were grouped thematically (Braun & Clarke, 2006) by the direction and form of the identity–career relationship, and contradictory findings were kept. At checkpoint 3, the themes were compared with the bibliometric maps before the model and research agenda were developed.

The methodological quality of the included studies was appraised with the Mixed Methods Appraisal Tool (MMAT) version 2018 (Q. N. Hong et al., 2018), which was designed for reviews that combine qualitative, quantitative and mixed methods studies. Each study was first checked against the two MMAT screening questions and then rated on the five criteria for its design category (qualitative, quantitative non-randomised or mixed methods) as 'yes', 'no' or 'can't tell'. In line with the MMAT guidance, no overall score was calculated, and no study was excluded on the basis of its ratings. Instead, the ratings were used to weigh the evidence in the synthesis and in the model. In reporting the findings, 'associated with' describes cross-sectional relationships, 'predicted' is used only for relationships observed over time in longitudinal designs, and no finding is interpreted as causal, because none of the included studies used an experimental design.

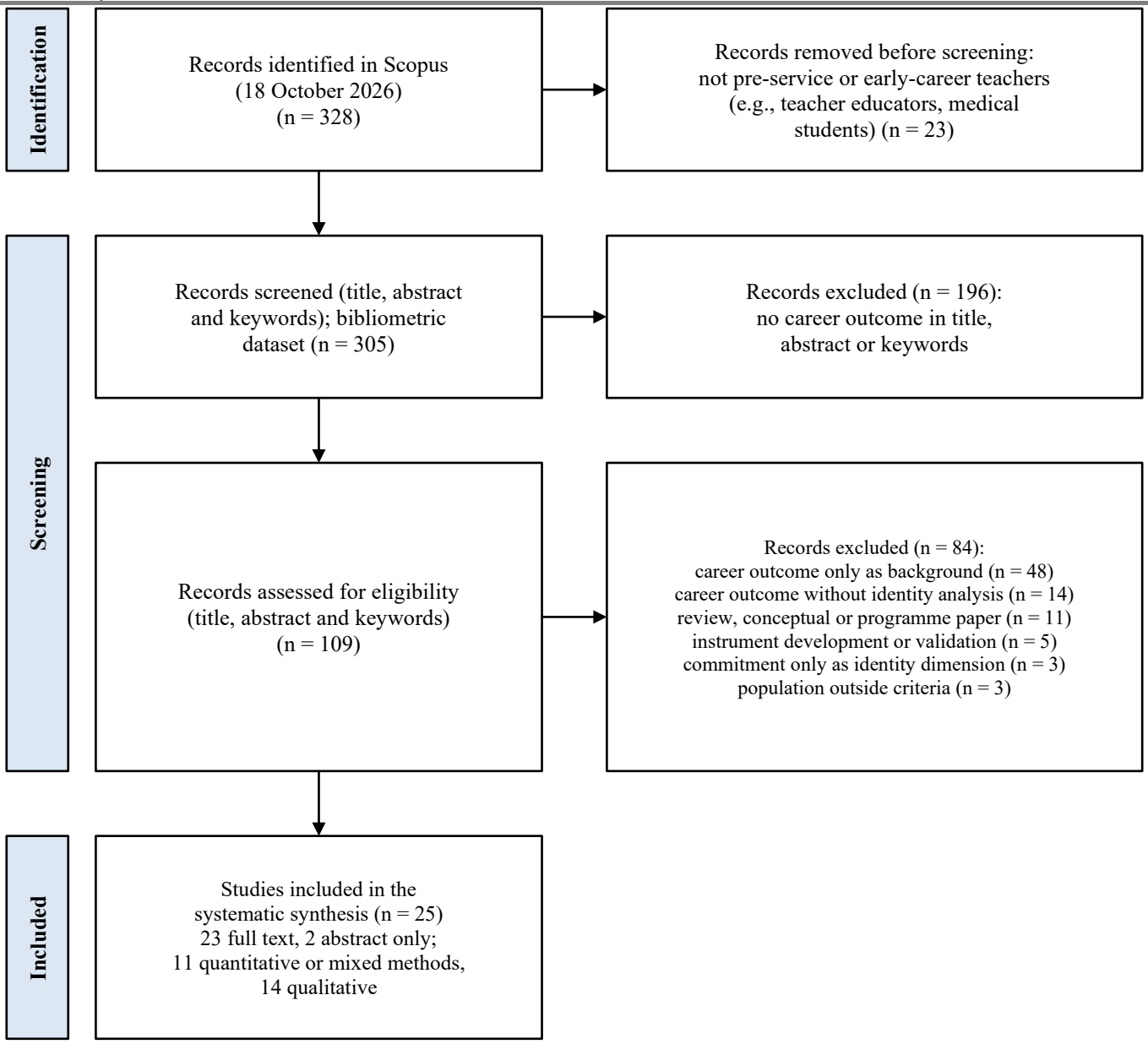


Figure 1. PRISMA 2020 flow diagram of study selection

Source: Authors' work

RESULTS AND DISCUSSION

Publication and citation trends (RQ1)

The 305 documents were published in 161 sources by 790 authors and received 5,737 citations, an average of 18.8 citations per document. The h-index of the dataset was 39. Most documents were co-authored (75.7%), with an average of 2.7 authors per document. Figure 2 shows that the field grew slowly at first. Only 13 documents (4.3%) were published between 2000 and 2009, and 76 (24.9%) between 2010 and 2019. A total of 216 documents (70.8%) were published from 2020 onwards, and almost half of all documents (147; 48.2%) appeared between 2024 and 2026. The year 2026 was the most productive, with 71 documents as of 18 October. This growth coincides with global concern over teacher shortages after the COVID-19 pandemic. Because recent documents have not yet had time to accumulate citations, the citation figures in the next section favour older documents.

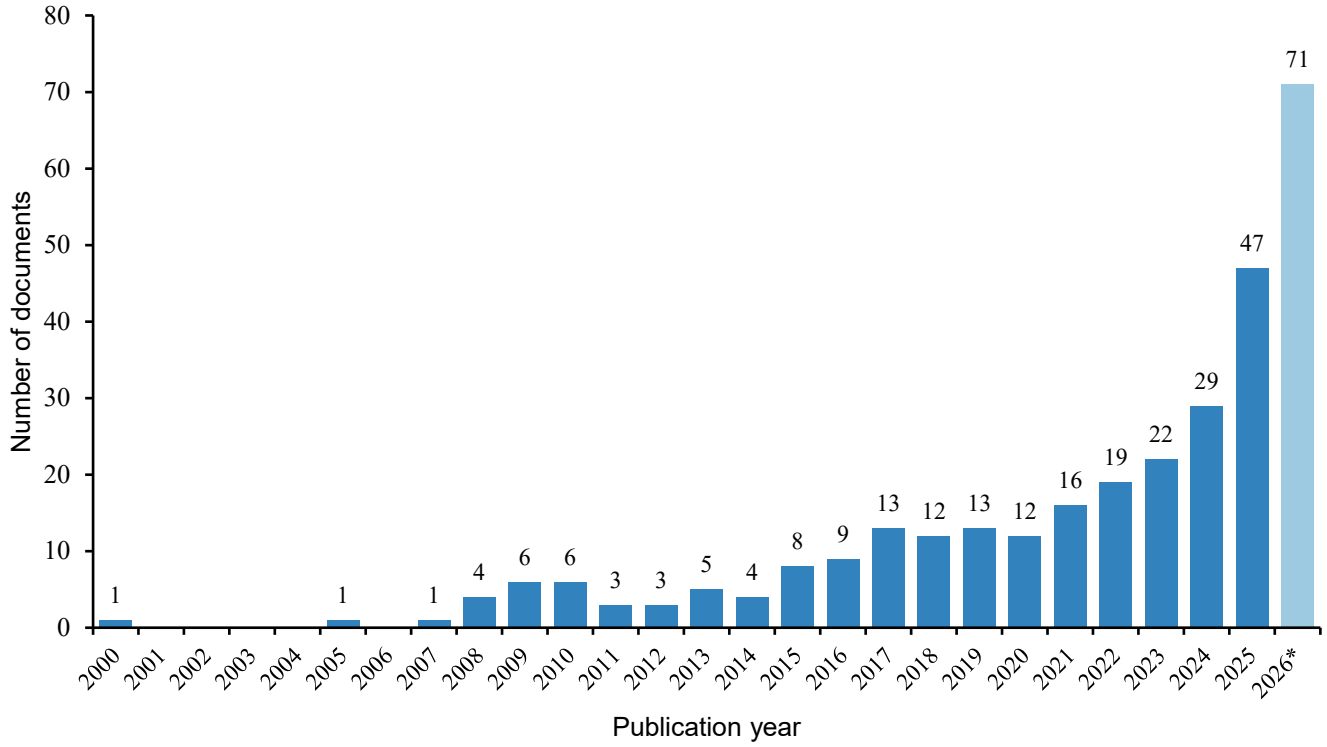


Figure 2. Number of documents by year, 2000 to 2026

*Data for 2026 up to 18 October. Source: Authors' work

Most influential sources, countries, authors and documents (RQ2)

Table 2 lists the ten most productive sources and countries. *Education Sciences* published the most documents (17), but *Teaching and Teacher Education* received the most citations (1,091 citations from 14 documents). Most of the leading sources are teacher education journals, so the topic has been studied mainly by teacher education researchers, with little input from career psychology. Authors from 58 countries contributed to the field, and 52 documents (17.0%) involved international collaboration. The United States was the most productive country (60 documents; 1,777 citations), followed by Australia (44), China (34) and the United Kingdom (31). Malaysia contributed 10 documents, the same number as Finland, Canada and Thailand, but its average citation count remains low.

Table 2. Ten most productive sources and countries

No.	Source	TP	TC	Country	TP	TC
1	Education Sciences	17	58	United States	60	1,777
2	Teaching and Teacher Education	14	1,091	Australia	44	589
3	European Journal of Teacher Education	9	405	China	34	598
4	Frontiers in Psychology	9	158	United Kingdom	31	717
5	Frontiers in Education	8	54	Israel	16	96
6	Journal of Science Teacher Education	7	241	Türkiye	13	81
7	Asia-Pacific Journal of Teacher Education	7	192	Malaysia	10	48
8	Journal of Education for Teaching	6	71	Finland	10	199
9	Teachers and Teaching: Theory and Practice	5	201	Canada	10	495
10	Australian Journal of Teacher Education	5	31	Thailand	10	31

Note. TP = total publications; TC = total citations in Scopus. Documents with authors from several countries were counted once for each country.

Source: Authors' work

The most productive author was Ladachart (five documents) from Thailand, whose work focuses on the identity of pre-service mathematics and science teachers. No other author published more than four documents, which suggests that the field does not yet have a dominant research group. The most cited document was Hong's (2010) study of the identity of pre-service and beginning teachers and its relation to dropping out (621 citations), followed by Lamote and Engels's (2010) study of the development of student teachers' professional identity (277 citations). Both studies also underpin recent quantitative research.

Intellectual base (RQ3)

Co-citation analysis grouped the 84 references into four clusters (Table 3; Figure 3). Cluster 1 (24 references) centres on the concept of teacher identity and the role of context, with Beijaard et al. (2004), Flores and Day (2006) and Day et al. (2006) among its most cited works. Cluster 2 (23 references) combines situated learning, teacher socialisation and widely used methodological sources, including Lave and Wenger (1991), Wenger (1998), Braun and Clarke (2006) and Lortie (1975). Cluster 3 (19 references) is closest to the focus of this review because it brings together pre-service teacher identity, development during training and attrition (Friesen & Besley, 2013; Hong, 2010; Izadinia, 2013). Cluster 4 (18 references) connects identity with self-efficacy and professional development (Bandura, 1997; Beauchamp & Thomas, 2009; Lamote & Engels, 2010). The clusters reflect patterns of joint citation in this dataset and overlap with one another; they are not separate theoretical schools.

Table 3. Co-citation clusters of the intellectual base

Cluster	Items	Key references
1. Teacher identity concept and context	24	Beijaard et al. (2004); Flores & Day (2006); Beijaard et al. (2000); Day et al. (2006); Akkerman & Meijer (2011)
2. Situated learning and qualitative methods	23	Braun & Clarke (2006); Wenger (1998); Lave & Wenger (1991); Lincoln & Guba (1985); Lortie (1975); Korthagen (2004); Varghese et al. (2005)
3. Pre-service teacher identity and attrition	19	Hong (2010); Izadinia (2013); Friesen & Besley (2013); Tschannen-Moran & Hoy (2001); Schepens et al. (2009); Y. Zhang et al. (2016)
4. Identity, self-efficacy and professional development	18	Beauchamp & Thomas (2009); Bandura (1997); Sachs (2005); Lamote & Engels (2010); Gee (2000); Kelchtermans (2009); Hanna et al. (2019)

Source: Authors' work

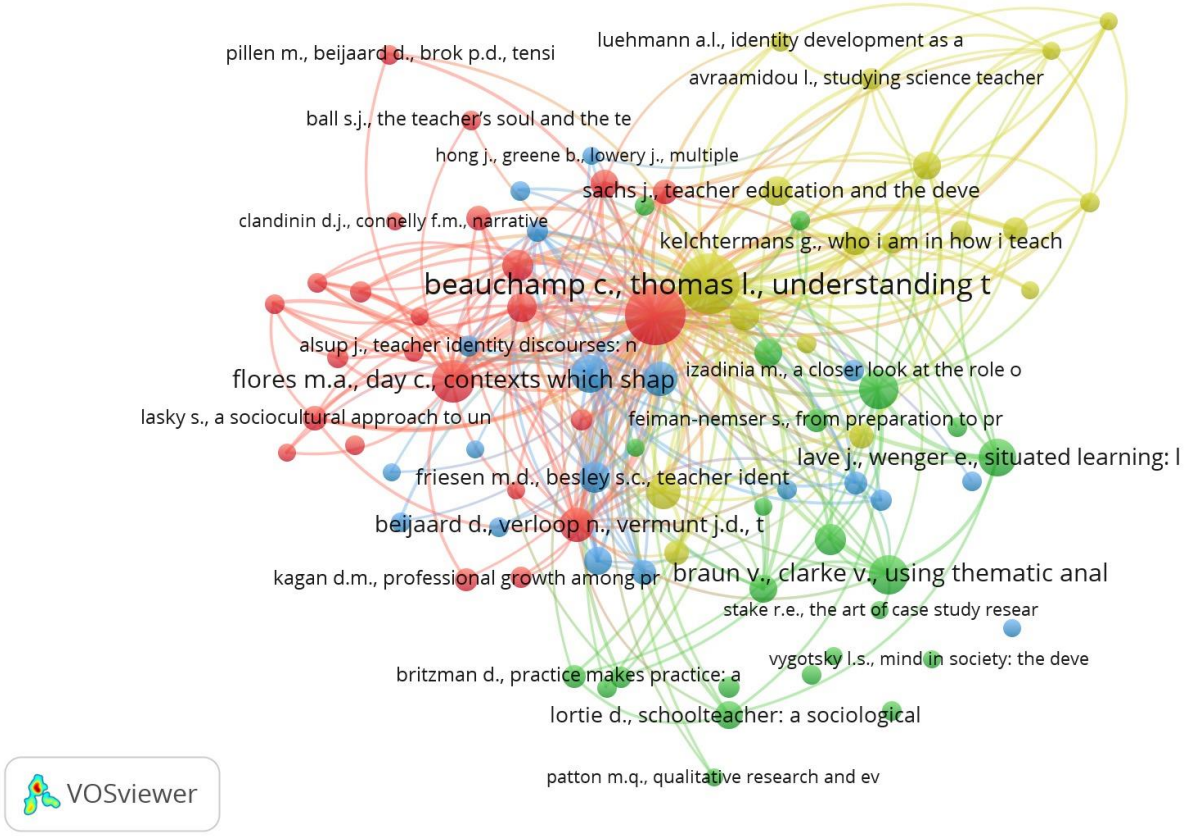


Figure 3. Co-citation network of references (at least eight citations; 84 references)

Source: Authors' work

Career theory was weakly represented in the intellectual base. The seminal SCCT work (Lent et al., 1994) was cited by only five documents and career construction theory works by no more than two, so neither reached the co-citation threshold. Work on motivations for choosing teaching (Richardson & Watt, 2006; Watt & Richardson, 2007) appeared in the network but with low citation counts. In this dataset, career decisions are discussed mainly through identity, situated learning and self-efficacy traditions, and seldom through career theory.

Themes and research fronts (RQ4)

The author-keyword map contained 47 keywords in eight clusters, with 241 links and a total link strength of 526 (Table 4; Figure 4). The largest cluster concerns teacher education, the practicum, mentoring and beginning-teacher attrition. Other clusters cover sociocultural and equity perspectives; professional identity, agency and commitment; and career changers, retention and resilience. The two most recent clusters by mean publication year deal with current challenges in teacher education, such as emotions, inclusive education and out-of-field teaching (mean 2024.0), and with motivation and quantitative research (mean 2023.1). Two smaller clusters concern reflection and technology, and self-efficacy and beliefs. The only career-outcome keywords were *attrition* (eight occurrences), *retention* (six) and *commitment* (five), and no career-theory keyword reached the threshold.

Table 4. Author keyword co-occurrence clusters

No.	Cluster label	Mean year	Main keywords (occurrences)
1	Teacher education, practicum and attrition	2021.1	teacher education (77), identity development (19), practicum (17), mentoring (9), attrition (8), early career teachers (8)

2	Sociocultural perspectives and equity	2020.9	teacher identity (70), diversity (5), narrative inquiry (5), social justice (4), intersectionality (3), equity (3)
3	Professional identity, agency and commitment	2021.0	professional identity (68), identity (14), commitment (5), agency (3), learning motivation (3)
4	Career changers, retention and resilience	2021.4	career changers (10), retention (6), resilience (4), communities of practice (3)
5	Current challenges in teacher education	2024.0	initial teacher education (32), emotions (5), inclusive education (3), out-of-field teaching (3)
6	Motivation and quantitative research	2023.1	pre-service teachers (87), early childhood education (6), motivation (5), self-determination theory (4), SEM (3)
7	Reflection and technology	2022.7	reflection (7), AI literacy (3), EFL (3), liminality (3)
8	Self-efficacy and beliefs	2021.1	self-efficacy (24), science teacher identity (4), teacher beliefs (4)

Source: Authors' work

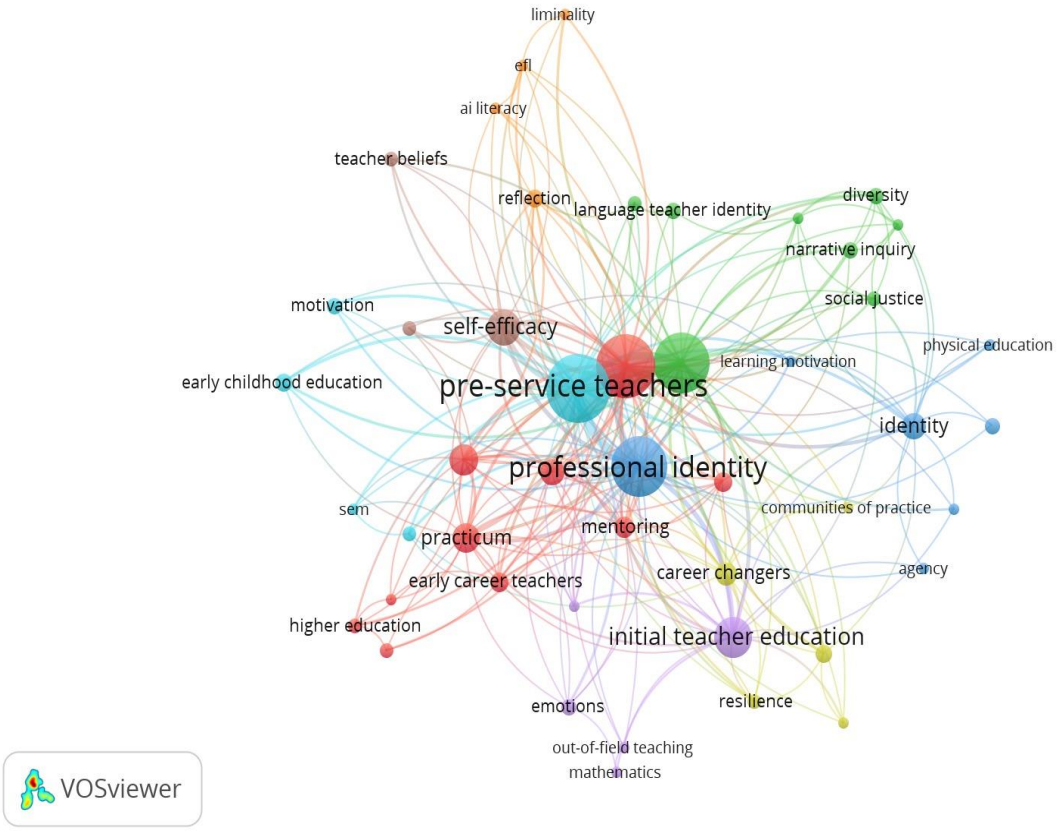


Figure 4. Author keyword co-occurrence network (at least three occurrences; 47 keywords)

Source: Authors' work

Bibliographic coupling grouped the 169 documents in the largest connected set into eight research fronts (Table 5; Figure 5). The oldest front (mean 2013.8) contains foundational work on identity, attrition and the transition to work, including Hong (2010) and Farrell (2012). The largest front (41 documents) concerns identity in contexts of diversity and equity (Pugach et al., 2019; Trent, 2019). Four fronts relate more directly to career outcomes: the development and measurement of pre-service teacher identity (Chang-Kredl & Kingsley, 2014; Lamote & Engels, 2010), career changers and decisions to enter teaching (Horvath et al., 2018; Watters & Diezmann, 2015), identity, self-efficacy and work motivation (Hanna et al., 2020; Wang & Zhang, 2021), and

the practicum as a context for identity formation (Cai et al., 2022). Two smaller fronts concern identity as a dynamic system (Henry, 2016) and music teacher identity and career intentions (Bennett & Chong, 2018; Isbell, 2008). Because coupling is based on shared references, the fronts show which studies draw on similar literature, not that they reach similar conclusions.

Table 5. Research fronts based on bibliographic coupling

No.	Research front	Documents; mean year	Most cited documents
1	Identity in contexts of diversity and equity	41; 2020.8	Pugach et al. (2019); Trent (2019)
2	Foundations: identity, attrition and transition to work	40; 2013.8	Hong (2010); Farrell (2012)
3	Development and measurement of pre-service teacher identity	24; 2020.0	Lamote & Engels (2010); Chang-Kredl & Kingsley (2014)
4	Career changers and decisions to enter the profession	21; 2021.0	Watters & Diezmann (2015); Horvath et al. (2018)
5	Identity, self-efficacy and work motivation	15; 2021.1	Hanna et al. (2020); Wang & Zhang (2021)
6	Practicum and identity formation	12; 2020.5	Cai et al. (2022)
7	Identity as a dynamic system	9; 2018.2	Henry (2016)
8	Music teacher identity and career intentions	7; 2018.0	Isbell (2008); Bennett & Chong (2018)

Source: Authors' work

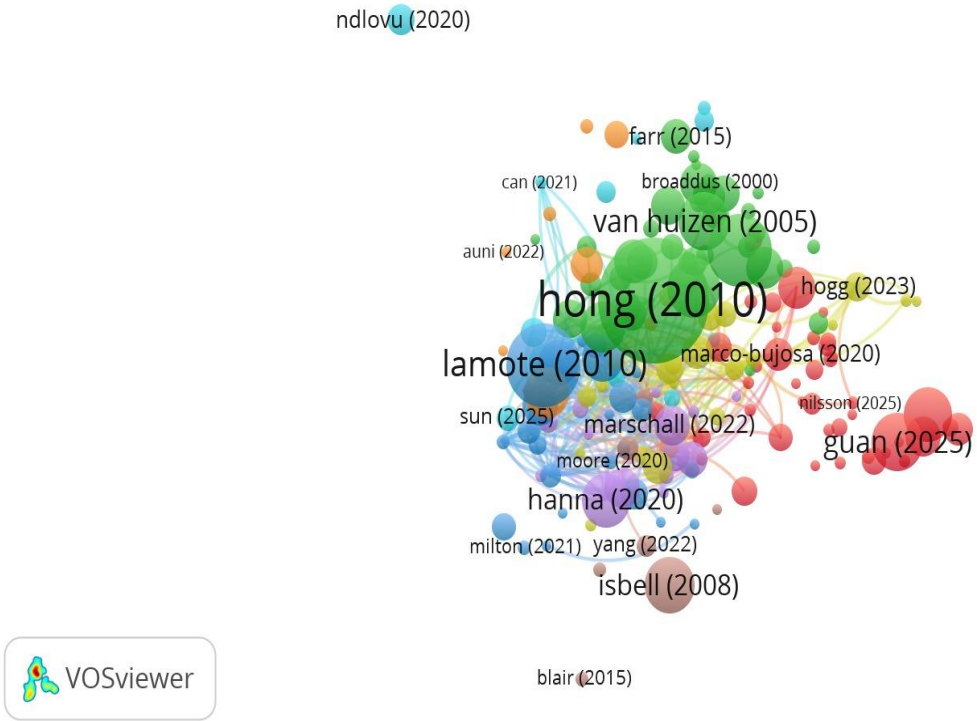


Figure 5. Bibliographic coupling network of documents (at least five citations; 169 documents)

Source: Authors' work

Relationship between professional identity and career outcomes (RQ5)

Profile of the studies

Table 6 summarises the 25 synthesised studies. They came from 15 countries and territories, mainly the United States (five), China (four) and Australia (three), and 12 were published from 2023 onwards. Nineteen studies involved pre-service or trainee teachers and six followed graduates into the first five years after ITE. Eleven used quantitative or mixed-methods designs and 14 used qualitative designs such as case studies, narrative inquiry and phenomenology. Only three quantitative studies used longitudinal data (Horvath et al., 2018; Morris & Imms, 2021; Weiß et al., 2023), and only Horvath et al. (2018) measured actual career behaviour, namely entry into teaching. Most of the other studies examined intentions, self-reported resources or personal accounts. The outcomes fall into four groups: motivation for choosing teaching; the intention and decision to enter the profession; commitment and the intention to stay; and career resources such as career certainty, adaptability and calling.

Table 6. Studies included in the systematic synthesis

Study	Country; sample	Design	Career outcome and key findings
Hong (2010)	United States; 84 (survey), 27 (interviews) †	Mixed methods	Attrition: pre-service teachers idealistic; teachers who dropped out most emotionally exhausted
Chang-Kredl & Kingsley (2014)	Canada; 53 narratives	Qualitative	Reasons for entering the profession: prior memories shape identity expectations
Barnes (2018)	United States; 1	Two-year case study	Attrition: conflicting conceptions of care with the mentor led to leaving
Bennett & Chong (2018)	Singapore; 35 (16 interviewed)	Mixed methods	Intention to stay: identity as a teacher aligned with long-term career plans
Hong et al. (2018)	United States; 326 and 32	Mixed methods	Exploration and commitment: identity statuses differed in resilience
Horvath et al. (2018)	United States; 311 (191 follow-up) †	Longitudinal quantitative	Entry into the profession: identity predicted intention and actual entry (longitudinal)
Poom-Valickis & Löfström (2019)	Estonia; 13	Longitudinal qualitative	Career choice: four identity pathways according to motivation
Trent (2019)	Hong Kong; 6 ITE graduates †	Case study	Not teaching: failure to build identity during the practicum
Karalis Noel (2021)	United States; 1 †	Narrative	Leaving the profession: identity tensions since training
Morris & Imms (2021)	Australia; 305 early career teachers †	Longitudinal mixed methods	Expectation to stay: subject discipline practice strengthened identity
Wang & Zhang (2021)	China; 3	Longitudinal qualitative	Career choice: income and residency status outweighed identity
Ölmez-Çağlar (2022)	Türkiye; 271	Correlational	Career motivation: ability and intrinsic value associated with identity
Salonen & Havu-Nuutinen (2022)	Finland; 58	Qualitative	Motivation: three identity types shaped by the labour market
Moore et al. (2023)	Australia; 37	Design-based research	Career choice: kindergarten placement made the career more attractive
Weiß et al. (2023)	Germany; 79	Longitudinal quantitative (4 waves)	Intention to stay: earlier identification predicted later intention to stay (cross-lagged); autonomy support helped

Barraza-Gómez et al. (2025)	Chile; 80	Qualitative	Career choice: family, sport and teachers as role models
Duchesne et al. (2025)	Australia; focus groups	Qualitative	Persistence: learning communities built resilience and identity
Ramos et al. (2025)	Philippines; 615	CB-SEM	Aspiration: career certainty strongest correlate; identity negatively related to career certainty
X. Zhang et al. (2025)	China; 230	SEM	Career decision: mentor support associated with identity; emotions mediated
Arastaman & Demirkasımoğlu (2026)	Türkiye; 22 †	Qualitative	Employability: identity in limbo due to recruitment policy
Burušić et al. (2026)	Croatia; 44	Qualitative	Career commitment: job shadowing strengthened identity
Drajati et al. (2026)	Indonesia; 6	Multimodal narrative	Career aspiration: practicum emotions shaped identity
Huang & Tian (2026)	China; 668	Quantitative	Career adaptability mediated identity and life satisfaction
Shang et al. (2026)	China; 1,029	SEM	Career calling: identity mediated social support and calling
K. C. Zhang (2026)	United Kingdom; 21	Qualitative	Career development: turning points, values and resilience

Note. ITE = initial teacher education; SEM = structural equation modelling. † Graduates in transition to work (within five years of completing ITE); all other studies involved pre-service or trainee teachers.

Source: Authors' work

Methodological quality of the studies

Table 7 summarises the MMAT ratings. The 12 qualitative studies that could be appraised generally met the criteria: ten met all five, while Trent (2019) and Burušić et al. (2026) reported too little detail on analysis or interpretation to rate one criterion. The seven quantitative studies were weaker. Only two used samples that could be considered representative of their target populations (Weiß et al., 2023; X. Zhang et al., 2025), only two reported complete outcome data (Ramos et al., 2025; X. Zhang et al., 2025), and only Horvath et al. (2018) adjusted for potential confounders, although its data on actual entry were available for 68% of the sample. Most quantitative studies relied on convenience samples and single-source, cross-sectional self-reports. In the four mixed methods studies, the quantitative and qualitative strands were integrated, but none explicitly addressed divergent findings between strands. The two abstract-only studies could not be appraised. This matters for what follows. Claims about timing rest on two longitudinal quantitative studies, each meeting three of the five criteria. The cross-sectional pathway studies are read as evidence of association only.

Table 7. Methodological quality of the included studies (MMAT 2018)

Study	Design	1	2	3	4	5	Main limitation
Hong (2010)	MM	Y	Y	Y	CT	N	Small voluntary samples; retrospective dropout data
Chang-Kredl & Kingsley (2014)	Q	Y	Y	Y	Y	Y	None noted
Barnes (2018)	Q	Y	Y	Y	Y	Y	Single case
Bennett & Chong (2018)	MM	CT	Y	Y	CT	CT	Rationale for mixing not stated; descriptive survey
Hong et al. (2018)	MM	Y	Y	Y	CT	Y	Divergences between strands not discussed
Horvath et al. (2018)	NR	CT	Y	N	Y	Y	Actual entry known for 68% of the sample
Poom-Valickis & Löfström (2019)	Q	Y	Y	Y	Y	Y	Small sample

Trent (2019)	Q	Y	Y	CT	Y	Y	Analysis briefly described
Karalis Noel (2021)	Q	Y	Y	Y	Y	Y	Single case
Morris & Imms (2021)	MM	Y	Y	Y	CT	CT	Response and attrition not reported
Wang & Zhang (2021)	Q	Y	Y	Y	Y	Y	Small sample
Ölmez-Çağlar (2022)	NR	N	Y	CT	N	Y	Single-programme convenience sample; no covariates
Salonen & Havu-Nuutinen (2022)	Q	Y	Y	Y	Y	Y	None noted
Moore et al. (2023)	Q	Y	Y	Y	Y	Y	None noted
Weiß et al. (2023)	NR	Y	Y	CT	CT	Y	Small sample; autoregressive controls only
Barraza-Gómez et al. (2025)	Q	CT	CT	CT	CT	CT	Abstract only; not appraisable
Duchesne et al. (2025)	Q	Y	Y	Y	Y	Y	None noted
Ramos et al. (2025)	NR	CT	Y	Y	CT	Y	Regional convenience sample; no covariates
X. Zhang et al. (2025)	NR	Y	Y	Y	N	Y	Common-method bias not tested
Arastaman & Demirkasımoğlu (2026)	Q	CT	CT	CT	CT	CT	Abstract only; not appraisable
Burušić et al. (2026)	Q	Y	Y	Y	CT	Y	Reflections reported briefly
Drajati et al. (2026)	Q	Y	Y	Y	Y	Y	Small sample
Huang & Tian (2026)	NR	CT	Y	CT	N	Y	Convenience sample; cross-sectional
Shang et al. (2026)	NR	N	Y	CT	N	Y	Single-university sample; cross-sectional
K. C. Zhang (2026)	Q	Y	Y	Y	Y	Y	None noted

Note. Q = qualitative (criteria 1.1–1.5); NR = quantitative non-randomised (3.1–3.5); MM = mixed methods (5.1–5.5). Criteria: Q, appropriate approach, adequate data collection, findings derived from data, interpretation substantiated, coherence; NR, representative sample, appropriate measures, complete outcome data, confounders accounted for, exposure as intended; MM, rationale for mixed methods, integration, interpretation of integration, divergences addressed, quality of each component. Y = yes; N = no; CT = can't tell. Following the MMAT guidance, no total score is reported.

Source: Authors' work

Theme 1: Identity, entry into teaching and intention to stay

The strongest evidence on timing comes from the few longitudinal studies. Horvath et al. (2018) found that the strength of STEM pre-service teachers' identity in their final year was associated with the intention to enter and with actual entry into the profession one to three years later; satisfaction with student teaching also had an indirect pathway through identity. Weiß et al. (2023) reported that professional identification after six months of training was associated with the intention to stay six months later, and that autonomy support was related to stronger identification. In other contexts, Singaporean pre-service music teachers who saw themselves mainly as teachers more often described long-term teaching plans (Bennett & Chong, 2018), and early-career teachers who kept practising their subject discipline reported stronger identity and higher expectations of staying (Morris & Imms, 2021). Hong (2010) found that pre-service teachers often held idealised views of teaching, whereas participants who had left reported the greatest emotional exhaustion. These studies suggest that identity often precedes or accompanies career outcomes. Self-selection and the overlap between identity and commitment measures, however, mean that a causal effect cannot be assumed.

Theme 2: Identity and the career decision process

Other studies place identity within a broader career-decision process. Hong et al. (2018) found differences in exploration, resilience and commitment across occupational identity statuses and showed that identity development was not linear. Three cross-sectional models reported indirect associations involving career adaptability (Huang & Tian, 2026), vocational outcome expectations and professional identity (Shang et al., 2026), and mentor support, emotions, identity and career decisions (X. Zhang et al., 2025). These pathways fit

SCCT, but cross-sectional data cannot show the order in which the variables change. Ramos et al. (2025) found that motivation was associated with professional identity, career certainty and career-decision self-efficacy, and that career certainty was the strongest correlate of the aspiration to become a mathematics or science teacher. Against their hypothesis, professional identity was negatively related to career certainty ($\beta = -0.23$). The negative path was stronger among mathematics than science students, and the authors attributed it to systemic constraints and ethical dilemmas in the profession that may leave strongly identified students disillusioned.

Theme 3: Motivation for choosing teaching as a basis of identity

A further group of studies looked in the opposite direction, at how reasons for choosing teaching relate to identity. Ölmez-Çağlar (2022) reported that perceived ability, intrinsic value and the desire to work with children were positively associated with teacher identity, whereas choosing teaching as a fallback or for family time was negatively associated; as the data were correlational, the direction remains uncertain. Salonen and Havu-Nuutinen (2022) identified confident, reinforced and cautious identity types, which they linked to motivation and labour-market conditions. Narrative studies described how school memories, family support, sporting experiences and teacher role models shaped both entry motives and anticipated identities (Barraza-Gómez et al., 2025; Chang-Kredl & Kingsley, 2014). Poom-Valickis and Löfström (2019) identified four developmental pathways that differed by initial motivation.

Theme 4: Practicum, mentors and emotions as turning points

The practicum came up repeatedly as a decisive period, although no study isolated it as a single cause. Trent (2019) described graduates in Hong Kong who struggled to build their desired identity during the practicum and then chose not to teach. Two single-case studies linked conflicting conceptions of care, or persistent identity tensions, with withdrawal from student teaching or later exit (Barnes, 2018; Karalis Noel, 2021); such cases show how the process can unfold but not how common it is. On the positive side, an enhanced kindergarten placement, job shadowing and professional learning communities were linked with stronger attraction to teaching, commitment, resilience or identity (Burušić et al., 2026; Duchesne et al., 2025; Moore et al., 2023). Other studies described emotions, values and turning points as part of identity and career reflection (Drajati et al., 2026; K. C. Zhang, 2026). In Hong Kong, the United States, Australia, Croatia, Indonesia and the United Kingdom alike, the practicum was where students tested whether they could see themselves as teachers.

Theme 5: Structural factors can outweigh identity

Several studies show that identity does not translate simply into retention. Wang and Zhang (2021) reported that income and residency status carried more weight than identity construction in the career choices of three pre-service Chinese language teachers. Arastaman and Demirkasımoğlu (2026), whose study was extracted from the abstract only, reported that recruitment reforms in Türkiye left candidates' identities in limbo and made employability appear to depend on examinations and socioeconomic background. Service bonds in Singapore (Bennett & Chong, 2018) and labour-market conditions in Finland (Salonen & Havu-Nuutinen, 2022) also shaped how identity related to career intentions, and the negative association between identity and career certainty reported by Ramos et al. (2025) points the same way. Professional identity is best seen as one resource within a limited set of opportunities: it may support entry or persistence, but it cannot make up for a lack of posts, poor employment conditions or restrictive recruitment systems.

DISCUSSION

This study maps 26 years of research on the career-related professional identity of pre-service teachers and synthesises evidence on its relationship with career outcomes. The field has grown quickly but unevenly in theory: identity, situated learning and self-efficacy form its intellectual base, while career theories remain at the margins. A large qualitative tradition now sits alongside a newer quantitative strand that uses structural equation modelling. This widens the questions being asked, but it also makes constructs, outcomes and causal assumptions hard to compare across studies.

For RQ5, the evidence shows that professional identity is associated with several career outcomes, while only a few longitudinal studies speak to timing. Horvath et al. (2018) linked identity to later intention and actual entry, and Weiß et al. (2023) linked earlier identification to later intention to stay. These findings fit career construction theory, in which vocational identity gives direction to career behaviour (Savickas, 2013), but they do not show that strengthening identity alone will raise entry or retention. Studies of career adaptability, career calling and outcome expectations (Huang & Tian, 2026; Shang et al., 2026) point to mechanisms described in SCCT and career construction theory, yet most did not test those theories over time. The theoretical gap seen in the co-citation and keyword maps is therefore also a gap in research design.

Three further issues help to explain the mixed findings. First, commitment is sometimes measured as part of identity (Lamote & Engels, 2010) and elsewhere treated as its outcome. This overlap can inflate observed relationships and weakens discriminant validity. In this review, commitment counted as a career outcome only when it was measured separately from identity, and the two included studies that measured commitment within identity (Hong, 2010; Hong et al., 2018) were read as describing identity profiles; they cannot show whether identity raises commitment. Second, motivation and identity probably influence each other: entry motives shape anticipated identity, and teacher education experiences can later revise both identity and commitment (Hong et al., 2018; Ölmez-Çağlar, 2022). Third, individual identity develops within structural conditions. Recruitment rules, labour-market demand, income, residency requirements and service bonds can enable, redirect or block intentions, so a coherent teacher identity may still not lead to entry or persistence.

Identity and career outcome model

Based on step 10 of the B-SLR (Marzi et al., 2025), Figure 6 organises the synthesis into five components. Initial inputs include motives for choosing teaching, prior experiences, family influence and teacher role models. Teacher education experiences include the practicum, mentor and lecturer support, emotions and learning communities. Professional identity is a dynamic self-definition that develops through these inputs and experiences. Career mechanisms include career-decision self-efficacy and outcome expectations from SCCT, and career adaptability, calling, certainty and meaning-making from career construction theory. Career outcomes include entry into teaching, commitment, intention to stay and actual persistence. The two theories play different roles in the model. SCCT explains how self-efficacy, outcome expectations and goals turn personal and contextual inputs into choice and persistence, whereas career construction theory explains how vocational identity, adaptability and meaning-making give direction to a career across transitions. Each path comes from the synthesis. A path is drawn as solid when at least two included studies reported the relationship, and as dashed when it rests on theory or on a single study. Table 8 lists the studies behind each path, their designs and their MMAT ratings, so that readers can judge the strength of each link. Five paths are solid: initial inputs and teacher education experiences with identity, identity with career mechanisms, identity with career outcomes, and structural factors with outcomes. Three are dashed: the link from initial inputs to teacher education experiences, the link from career mechanisms to outcomes, and the moderating role of structural factors such as recruitment policy, job availability, income, employment conditions, residency rules and service bonds. Only the identity–outcome path has longitudinal support; the other solid paths rest on cross-sectional or qualitative evidence.

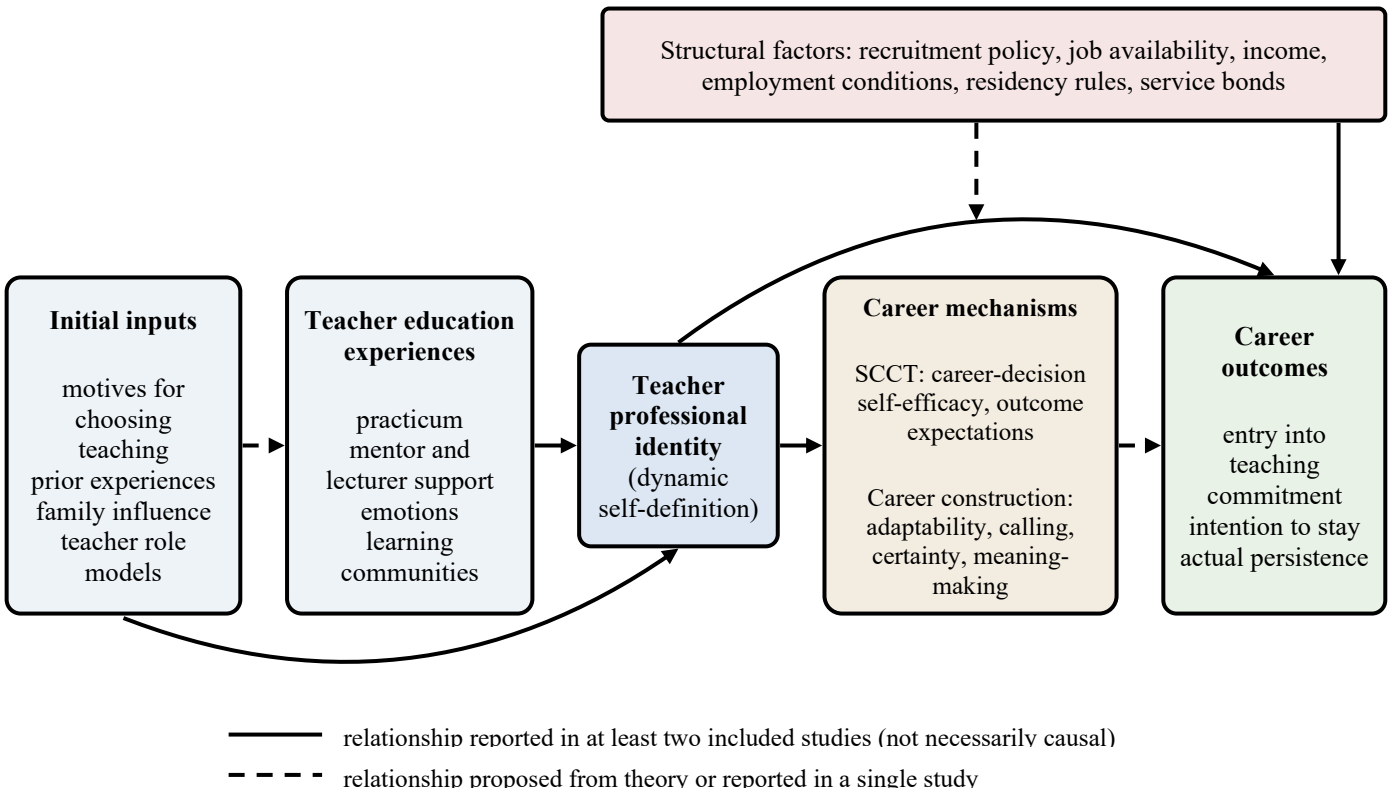


Figure 6. Model of professional identity and career outcomes of pre-service teachers

Note. Solid arrows show relationships reported in at least two included studies and do not imply causation; dashed arrows show relationships proposed from theory or reported in a single study. Supporting studies for each path are listed in Table 8.

Source: Authors' work

Table 8. Evidence supporting each path in the identity and career outcome model

Path	Type	Supporting studies	Nature of evidence
Initial inputs → identity	Solid	(Chang-Kredl & Kingsley, 2014; Ölmez-Çağlar, 2022; Poom-Valickis & Löfström, 2019; Ramos et al., 2025; Salonen & Havu-Nuutinen, 2022)	Cross-sectional associations and qualitative accounts; MMAT 2–5
Teacher education experiences → identity	Solid	(Burušić et al., 2026; Drajati et al., 2026; Duchesne et al., 2025; Moore et al., 2023; Trent, 2019; Weiß et al., 2023; X. Zhang et al., 2025)	One longitudinal study (autonomy support), one cross-sectional SEM (mentor support) and qualitative accounts; MMAT 3–5
Identity → career mechanisms	Solid	(Hong et al., 2018; Huang & Tian, 2026; Ramos et al., 2025; Shang et al., 2026)	Cross-sectional associations, including one negative association with career certainty; MMAT 2–4
Identity → career outcomes	Solid	(Barnes, 2018; Bennett & Chong, 2018; Hong, 2010; Horvath et al., 2018; Karalis Noel, 2021; Morris & Imms, 2021; Weiß et al., 2023)	Two longitudinal quantitative studies (MMAT 3), mixed methods studies and single-case accounts

Structural factors → career outcomes	Solid	(Arastaman & Demirkasımoğlu, 2026; Bennett & Chong, 2018; Salonen & Havu-Nuutinen, 2022; Wang & Zhang, 2021)	Qualitative and mixed methods accounts, one abstract-only; MMAT 2–5
Initial inputs → teacher education experiences	Dashed	Not tested in the included studies; proposed from the FIT-Choice model (Watt & Richardson, 2007)	Theoretical
Career mechanisms → career outcomes	Dashed	(Ramos et al., 2025); SCCT (Lent et al., 1994)	One cross-sectional study, aspiration only; MMAT 3
Structural factors as moderators of identity → outcomes	Dashed	Suggested by (Bennett & Chong, 2018; Wang & Zhang, 2021)	No study tested moderation formally

Note. Solid paths are reported in at least two included studies; dashed paths rest on theory or a single study. MMAT ranges show the number of criteria rated 'yes' (out of five) for the supporting studies.

Source: Authors' work

Research agenda

Four research priorities follow. First, SCCT and career construction theory should be tested separately. SCCT studies can model self-efficacy, outcome expectations, goals and contextual supports or barriers, while career construction studies can examine identity, adaptability and meaning-making across transitions. Second, longitudinal studies should follow pre-service teachers into employment and record actual entry and persistence, because only one included study measured entry. Third, measurement models should separate professional identity from commitment and establish discriminant validity before the two are related. Fourth, multilevel and comparative studies should test whether recruitment policy, job availability, income and service arrangements affect outcomes directly or moderate individual pathways. Systems with structured or guaranteed placement, such as Malaysia, are a useful setting for this test.

CONCLUSION

Research on the career-related professional identity of pre-service teachers has grown rapidly, but it still rests mainly on identity and situated learning theories; career theories are rarely used. The synthesis of 25 studies shows that a strong identity is associated with the intention and decision to enter the profession, with commitment and the intention to stay, and with career resources such as career adaptability and career calling, although longitudinal evidence is limited. The practicum, mentors and emotions are the main turning points in this relationship. Structural factors such as recruitment policies, income and job opportunities can outweigh or condition the role of identity. The proposed model brings these findings together and shows how future research can combine identity theory with career theory.

Implications Of The Study

Theoretically, the findings support linking teacher identity research with career theory, provided that the proposed pathways are tested empirically. Professional identity can be modelled as a person input alongside SCCT mechanisms, or as vocational identity within career construction theory. In practice, teacher education and counselling units can combine identity reflection with career exploration, realistic information about teaching conditions and support for career-decision self-efficacy. Practicum coordinators and mentors should attend to the emotions and identity negotiations that appear repeatedly in the evidence, although this review cannot show that any single intervention improves retention. At the policy level, identity development cannot replace available posts, supportive working conditions and transparent recruitment.

Limitations And Future Research

This study has several limitations. First, using Scopus alone and English-language publications only may have excluded relevant studies indexed elsewhere, published in other languages or available as grey literature, so the evidence may over-represent English-speaking and highly cited contexts. Second, the search required career-outcome terms, so relevant studies that used different vocabulary may have been missed. Third, citation counts favour older documents, and 2026 was incomplete at the search date. Fourth, bibliometric maps depend on database coverage, data cleaning, thresholds, counting choices and clustering settings, and topics below the thresholds do not appear; the cluster labels are our interpretation. Fifth, study designs, identity measures and outcome definitions were too diverse for meta-analysis, and the MMAT ratings show that most quantitative studies relied on convenience samples and cross-sectional self-reports. Sixth, screening, extraction and appraisal were carried out by one reviewer and checked by two supervisors, without independent duplicate screening, which may have introduced selection or rating bias. Seventh, two studies were extracted from abstracts only and could not be appraised. Eighth, only three quantitative studies were longitudinal and only one measured actual entry into teaching, which limits conclusions about timing and rules out causal claims. Future reviews should search multiple databases and languages, use independent duplicate screening, extraction and appraisal with agreement statistics, and obtain full texts for all included studies. Primary research should test the proposed model longitudinally and across contrasting recruitment systems, including Malaysia and Southeast Asia.

Ethical Considerations

This study is a review of published literature and did not involve human participants or animals. Ethical approval was therefore not required.

Conflict Of Interest

The authors declare no conflict of interest.

Data Availability Statement

The bibliographic records were retrieved from Scopus and cannot be shared publicly under the Scopus licence terms. The full search string is reported in Table 1, so the dataset can be reproduced. The screening log, the keyword thesaurus and the data extracted from the 25 synthesised studies are available from the corresponding author on reasonable request.

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