



Reframing early-career teacher professional development: Toward a multi-level conceptual framework

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ABSTRACT

Early-career teachers face a crucial transition period, marked by high professional demands, uneven support, and ongoing retention challenges. Several studies still view professional development as a linear process of induction and mentoring, thus underemphasizing the interaction among teacher agency, the school context, and broader structural conditions. This study aims to critically examine dominant conceptualizations of early-career teacher professional development and develop a more integrative framework. The study employed a systematic critical review using the PRISMA procedure of Scopus-indexed journal articles published since 2016 that discussed early-career teachers and professional development. The results revealed several key patterns: the dominance of compliance-oriented professional standards, the weakening of teacher agency in restrictive school environments, unequal access to mentoring and support, and the importance of core teaching competencies. The study also emphasized the increasing relevance of digital and hybrid mentoring models as more flexible forms of support. These findings suggest that early-career teacher professional development should be understood as a dynamic, multilevel process shaped by interactions among individual, school, and broader structural factors.

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ABSTRAK

Guru pada awal karier menghadapi masa transisi yang krusial, ditandai oleh tuntutan profesional yang tinggi, dukungan yang tidak merata, serta tantangan retensi yang terus berlanjut. Sejumlah kajian masih memandang pengembangan profesional mereka secara linier melalui induksi dan mentoring, sehingga interaksi antara agensi guru, konteks sekolah, dan kondisi struktural yang lebih luas belum banyak diperhatikan. Penelitian ini bertujuan menelaah secara kritis konseptualisasi dominan tentang pengembangan profesional guru awal karier serta merumuskan kerangka yang lebih integratif. Penelitian menggunakan systematic critical review dengan prosedur PRISMA terhadap artikel jurnal terindeks Scopus yang terbit sejak 2016 dan membahas guru awal karier serta pengembangan profesional. Hasil kajian menunjukkan beberapa pola utama, yaitu dominasi standar profesional yang berorientasi pada kepatuhan, melemahnya agensi guru dalam lingkungan sekolah yang restriktif, ketimpangan akses terhadap mentoring dan dukungan, serta pentingnya kompetensi dasar mengajar. Kajian ini juga menegaskan meningkatnya relevansi model mentoring digital dan hibrida sebagai bentuk dukungan yang lebih fleksibel. Temuan tersebut menunjukkan bahwa pengembangan profesional guru awal karier perlu dipahami sebagai proses dinamis dan multilevel yang dibentuk oleh interaksi antara faktor individual, sekolah, dan struktur yang lebih luas.

Kata Kunci: dukungan digital dan hibrida; kerangka konseptual multi-level; mentoring; pengembangan profesional guru

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INTRODUCTION

The early years of teaching are a make-or-break time, when teachers start charting their career paths, professional development, and commitment to the profession for the long haul. Early-career teachers (ECTs), here defined as those within the first five years of their teaching careers, face a challenging transition from supervised pre-service teacher preparation to sole responsibility (Auletto, 2021; Maras et al., 2025; Nakata et al., 2026). Often, this phase is marked by abnormally stressful conditions, difficult classroom management, and an inability to connect theory with practice. As a result, dropout rates among those at the beginning of their careers remain an enduring global challenge, with major implications for the quality and equity of education provision more broadly, as well as for system sustainability (Antonsen et al., 2024; Auletto, 2021).

In turn, professional development for novice teachers has become a central topic at the intersection of educational policy and educational research (Admiraal et al., 2023; Masoumi & Noroozi, 2025). There have been an array of initiatives, with mentoring becoming the dominant paradigm and often positioned as the main route for facilitating professional learning and retention. Although some of these approaches have been more successful than others, the body of research by Hardman in *"The Palgrave Handbook of Teacher Education Research"* and Kutsyuruba in *"Positive Leadership for Flourishing Schools"* also finds substantial inconsistency in results, indicating that current models may be too simplistic to represent the complexity of early-career teacher development.

An emerging body of literature suggests that professional development approaches for early-career teachers are often disconnected from one another (Admiraal et al., 2023). Academic discourse in this field often places repeated emphasis on factors at the individual level, such as teacher motivation, self-efficacy, and reflection, whilst underestimating conditions at the organizational, structural, and contextual levels (Karimi & Keshvari, 2025; Li et al., 2025; Sonsupap et al., 2025). For one, professional development will consistently be tailored to standard, urban-centered assumptions that do not account for the heterogeneity of classrooms (e.g., resource-poor or provincial settings). This lack of contextual specificity raises serious questions about the relevance and adaptability of existing PD frameworks.

In addition, the integration of theoretical perspectives that underpin academic models for early-career teacher professional development remains limited. Previous research has drawn on multiple theoretical frameworks, but these have rarely coalesced into a unified, multilevel model of teacher development (Huang, 2021; Spencer et al., 2018). Consequently, no integrative conceptual model exists to explain the interplay among individual agency, institutional support, policy framework, and socio-cultural context. In light of these constraints, we need to move away from more descriptive, piecemeal accounts of early-career teacher professional development toward a more critical, integrative perspective on this area.

The present study seeks to address this need through a systematic critical review that analyzes dominant paradigms, highlights conceptual blind spots, and questions underlying assumptions within the literature. The review does not devalue their previous work by simply summarising prior studies; instead, it aims to provide a theory-based critique that develops.

This paper attempts to achieve two main objectives. It first provides a critical overview of existing frameworks around early-career teacher professional development that lays bare their conceptual shortcomings and structural voids. Third, it constructs an integrative multi-level framework that reconceptualizes early-career teacher development as a systemically embedded and context-sensitive process. Thus, this study hopes to advance theoretical knowledge in teacher professional development research and lead to more coherent, context-sensitive policy and practice.

LITERATURE REVIEW

Early-career teacher professional development: from induction support to complex learning trajectories

Studies consistently identify the initial years of teaching as a critical transition period during which early-career teachers establish instructional practices, negotiate their professional identity, and decide whether to remain in the profession (Smith et al., 2026). Often, support for early-career teachers is delivered in policy and practice as either induction or a time-bounded program with competencies to be achieved. Nevertheless, recent research challenges the assumption that ECT learning occurs in a linear fashion, best represented by a single program logic. For example, national program evidence from England's Early Career Framework reveals that the same intervention can produce disparate effects across settings, as mentoring availability, workload, and area-level implementation conditions create non-linear feedback loops that constrain opportunities to learn about and adopt new practices (Ovenden-Hope & Kirkpatrick, 2024).

The situated learning model of early-career professional development is informed not only by individual resources (e.g., prior teacher preparation, confidence, and reflective capability) but also by how those individuals are supported by organizational conditions (e.g., leadership priorities, timetabling needs, and collegial culture) and system-level structures (e.g., professional standards for teaching practice, accountability-focused pressures, and funding models). Changing the induction from a checklist to an approach that views ECT development as an ongoing, context-dependent journey is important when designing and evaluating professional development. Instead of questioning whether a program "works" on the whole, an emerging body of work asks: what works (to what extent), for whom, in which contexts, and by means of which mechanisms? These kinds of questions speak to the very need for multi-level frameworks that take into account teacher-mentor dyads, school structures, and wider policy environments through an equity lens (differential access to high-quality mentors, uneven distribution of time and resources, and variety in teaching assignments across contexts).

Mentoring and induction support: effectiveness, implementation conditions, and the rise of external/digital models

Mentoring continues to be the most prevalent and institutionalized mechanism for supporting ECTs and has been positioned as evidence-based, with links demonstrated between effective mentoring and improved instructional practice, well-being, and retention. However, the literature also warns that mentoring is not a one-size-fits-all intervention: its effect hinges

on mentor expertise, protected time, relational trust, and a fit between mentors' activities and the particular classroom challenges the teacher faces. A rapid evidence review by Sunal in "*Crossing the Border from Preservice to Inservice Science Teacher Research-Based Induction as Professional Development*" focused on mentoring and coaching for trainee and early-career teachers, highlighting continuing variation in the enactment of mentoring, and that providing mentor training or time can be a recurrent limitation that may dilute program fidelity as well as opportunities to learn.

This implies that "mentoring" is more usefully understood as an architectural practice that follows the organization's routines and resources—rather than as a role performed by an experienced teacher. To remove barriers within schools (such as a lack of mentors or competing accountability demands), newer designs have looked outside schools for mentoring and even used technology to support the teacher development pipeline. A scoping review of external mentoring programs suggests that out-of-school mentors (including university–school partnerships) can extend professional networks and mitigate the risk of "local norms" constraining ECT learning, whilst also facilitating identity development and professional agency (Maras et al., 2025).

In addition, policy and practice are increasingly exploring digital or hybrid mentoring arrangements to take a more expansive approach. Although the evidence base is still evolving, the growth of digital and hybrid models suggests a transition away from one-to-one, largely school-bound mentoring practices towards somewhat more distributed support ecologies (individualized feedback, peer communities, platform-mediated resources). These are vital developments when adopting a multi-level conceptualization, as they highlight that new technologies have the potential to redefine the interaction among individual learning needs, school-level support capacity, and system-level infrastructure for professional development.

Teacher agency, professional standards, and equity: why a multi-level framework is needed

One of the conundrums in early-career professional development has been the balance brokered between structure (e.g., competency frameworks and professional standards) versus teacher agency (the ability but not need for teachers to make wise choices, apply expertise with specialty of practice, and purposefully act within constraints) (Escandell-Poveda, 2025; Restiglian et al., 2023; Simanjuntak et al., 2019). Standards-based approaches to induction and professional learning have been reinforced by recent policy reforms, which provide clarity on what is expected of beginning teachers and allow the government (and universities) to guarantee a minimum entitlement. Finally, standards-influenced systems can become compliance-driven: professional learning reduced to completing modules or exhibiting prescribed behaviors, rather than inquiry-based experimentation and context-sensitive problem-solving.

Research evidence regarding the implementation of England's Early Career Framework, for example, highlights context-constrained and school-level condition-dependent program effects (Ovenden-Hope & Kirkpatrick, 2024). This underscores why agentic possibilities cannot be reduced to an individual attribute but are facilitated or hindered by organizational routines (such as workload protection and access to instructional leadership) and policy

contexts that define what “good teaching” is. Equity further sharpens this argument. Mentoring and professional learning opportunities are not distributed evenly among schools or regions. At the same time, ECTs pursuing work in under-resourced or high-need contexts often undertake more teaching responsibilities with little support or structure (where retention risks are often highest) (Dempsey et al., 2009; Maras et al., 2025).

Furthermore, whilst the emergence of digital and hybrid mentoring could widen participation, such approaches risk reproducing inequities in both access to support and success without a focus on institutional governance (infrastructure, digital capability). The literature, taken together, indicates that the existing accounts remain fractured: some focus on individual cognition and motivation, others on mentoring relationships, and still others on policy standards and accountability. The integration of these layers into an explanatory conceptual model is what is missing from our understanding of ECT learning and development over time. It is this gap that drives the present study to reconceptualize early-career teacher professional development within a multilevel conceptual framework linking individual capacities, school contexts, and structural conditions.

METHODS

Research Design

This study adopts a systematic critical review design to examine the conceptual and theoretical development of early-career teacher professional development (Pirbhulal et al., 2021). The design integrates the procedural rigor of systematic review methods with a critical analytical perspective aimed at advancing theory rather than merely summarizing existing literature. To ensure methodological transparency and replicability, the review process follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. However, the purpose of employing PRISMA in this study is not limited to the systematic identification and selection of the literature but also to provide a robust foundation for subsequent critical synthesis. Furthermore, this study employs a critical synthesis strategy, which emphasizes analytical interpretation over descriptive reporting. Through this approach, the review moves beyond thematic categorization toward conceptual integration and theoretical reframing. The analysis is oriented toward developing a multi-level understanding of early-career teacher professional development that captures the interaction between individual, organizational, structural, and contextual dimensions.

PICOC Strategy

To strengthen the problem formulation, this review was guided by the PICOC strategy in defining its analytical scope. The population focused on early-career teachers, the phenomenon of interest concerned professional development, the outcomes referred to dominant conceptual patterns, challenges, and support mechanisms, and the context included school, institutional, and broader structural settings. As this study was designed as a systematic critical review aimed at conceptual integration rather than intervention comparison, the comparison element was not explicitly applied. Based on this formulation, the review addressed the following question: how has early-career teacher professional

development been conceptualized in recent literature, and what multi-level conceptual framework can be developed from the patterns identified across the selected studies?

Search Strategy

This study was conducted using the Scopus database, which is widely recognized for its extensive coverage of high-quality peer-reviewed academic publications (Baas et al., 2020). The search was performed in May 2026 to ensure the inclusion of the most recent and relevant studies in the field. The search strategy was designed to identify studies explicitly addressing early-career teachers. To enhance the precision and relevance of the retrieved records, the search was restricted to the following keyword: TITLE-ABS-KEY ("early-career teacher"). The initial search yielded a total of 1,729 records.

PRISMA Stages

PRISMA was used in this study as a procedural framework for the transparent reporting of study identification, screening, eligibility, and inclusion. Since the selected studies were methodologically and conceptually heterogeneous, meta-analysis was not undertaken. Instead, the review employed a critical synthesis approach to generate conceptual and thematic integration across the literature.

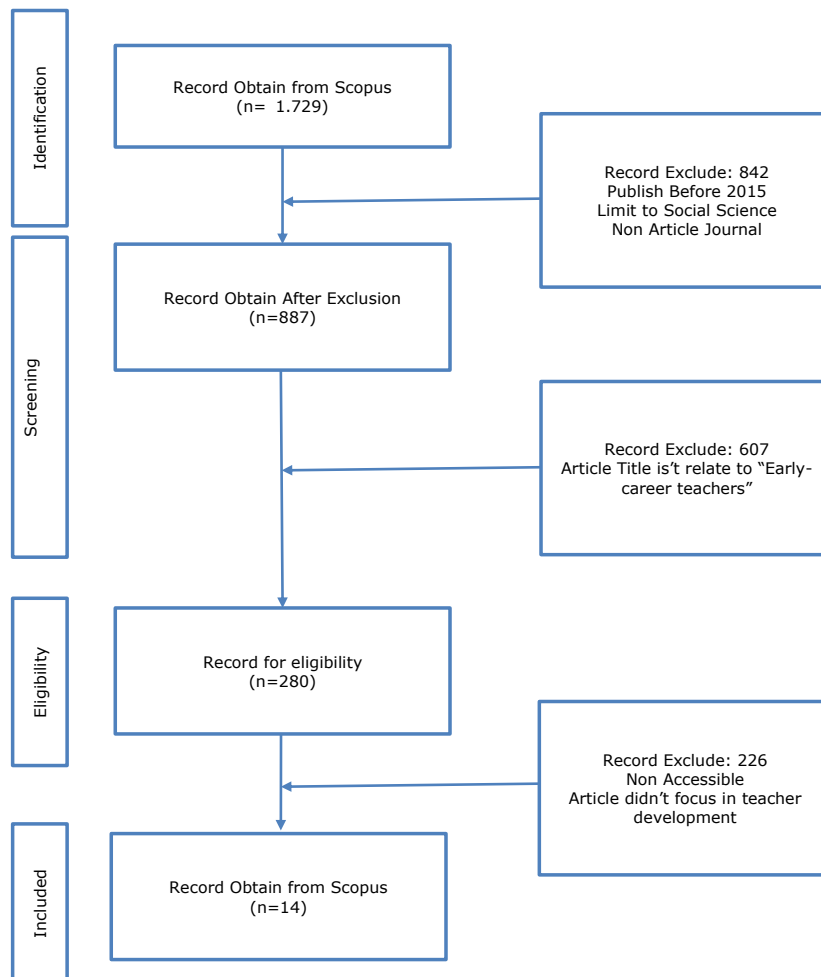


Figure 1. Prisma Flow
Source: Scopus (processed by the researcher, 2026)

Subsequently, a set of inclusion criteria was applied to refine the dataset. The base of Figure 1 shows: First, the publication year was limited to studies published in or after 2016 to capture contemporary developments in early-career teacher professional development. Second, only journal articles were included to ensure the academic rigor and quality of the selected studies. Third, the subject area was restricted to the social sciences, in line with this study's focus on education and teacher development. After applying these criteria, the number of records was reduced to 887 articles. After applying these criteria, the number of records was reduced to 887 articles. A screening process was then conducted based on title relevance. During this stage, 111 articles were excluded as they were not directly related to early-career teachers. The remaining articles were further assessed for eligibility through abstract and full-text review, resulting in 280 articles considered potentially relevant. During the eligibility assessment, 14 articles were excluded due to limited accessibility or lack of focus on teacher professional development. As a result, a final set of 14 articles was included in the review.

Quality Testing

To ensure the quality of the search results, the retrieved records were limited to peer-reviewed journal articles indexed in Scopus and classified within the social sciences subject area. These restrictions were applied to enhance the academic credibility, topical relevance, and contemporary significance of the reviewed studies. In addition, each record was screened through title, abstract, and full-text review to confirm its direct relevance to early-career teacher professional development. The final set of included articles was therefore not only systematically selected but also conceptually aligned with the study's focus.

Data Analysis

The analysis was conducted using a critical qualitative synthesis approach. After the final articles were identified, each study was read in full and examined for its research focus, methodological orientation, key findings, and conceptual contribution to understanding early-career teacher professional development. The extracted data were then coded and grouped into recurring themes and patterns across the studies. Rather than statistically aggregating results, the analysis aimed to identify conceptual convergences, tensions, and gaps in the literature. These analytical patterns were subsequently interpreted to construct a multi-level conceptual framework consisting of individual, school, structural, and innovation-related dimensions.

RESULTS AND DISCUSSION

Global Overview

This study adopts a systematic critical review design to examine the conceptual and theoretical development of early-career teacher professional development. The design integrates the procedural rigor of systematic review methods with a critical analytical perspective aimed at advancing theory rather than merely summarizing existing. The

synthesis of the selected studies indicates that research on early-career teacher professional development has evolved into a globally distributed and conceptually diverse field. The reviewed articles originate from a range of educational contexts, including North America, Europe, Asia, and Australia, reflecting the widespread recognition of early-career teachers as a critical component of educational quality and system sustainability. Despite contextual differences, the literature demonstrates a notable convergence in identifying early-career teaching as a high-risk yet high-impact phase within the teaching profession.

Table 1. Literature Overview

Author	Title	Country	Method
Rowan & Townend (2016)	Early career teachers' beliefs about their preparedness to teach: Implications for the professional development of teachers working with gifted and twice-exceptional student	Australia	Qualitative
Antonsen et al. (2024)	Early career teachers' role in school development and professional learning	Norway	Qualitative
Mogra (2026)	Early career teachers navigating the landscape of SACRE in England	UK	Qualitative
Beasy et al. (2025)	Early Careers Teachers' Engagement with the Australian Professional Standards for Teachers	Australia	Qualitative
Vo et al. (2025)	Understanding Early Career Teacher Instructional Quality: A Person-Centred Approach	Australia	Quantitative
Liyuan et al. (2022)	How does teachers' professional agency in the classroom change in the professional transition from early career teachers to more experienced ones?	Finland	Quantitative
Cesário & Anunciato (2024)	Identification of training needs of early career teachers in a mentoring program	Brazil	Qualitative
He et al. (2025)	Is "Neijuan" the Way to Achieve Early-Career Teachers' Well-Being: A Perspective From the Relationship Among Foreign Language Teacher Well-Being, Agency, and Identity	China	<i>Mixed-methods</i>
Auletto (2021)	Making sense of early-career teacher support, satisfaction, and commitment	USA	<i>Mixed-methods</i>
Nguyen et al. (2026)	Distributional Trends and the Induction Supports and Preparedness of Early Career Teachers: Evidence From Longitudinal Nationally Representative Data	USA	Qualitative

Author	Title	Country	Method
McGraw et al. (2025)	Promoting access to learning: the experiences of early-career teachers in the USA	USA	Qualitative
Bührer et al. (2024)	Supporting early career teachers' self-regulation and goal pursuit through online coaching during a professional development programme	Swiss	Qualitative
Fielder et al. (2024)	A Framework for Supporting Teacher Development and Progression: Identifying Conditions to Support Teaching Interns and Early Career Teachers	Australia	Qualitative
Bartanen et al. (2026)	"Refining" Our Understanding of Early Career Teacher Skill Development: Evidence From Classroom Observations	USA	Quantitative

Source: Scopus (processed by the researcher, 2026)

The general overview of the findings from the 14 articles is presented in **Table 1**. The global overview suggests that, while significant progress has been made in understanding early-career teacher development, the field remains characterized by conceptual dispersion and limited theoretical integration. This condition highlights the need for a more systematic and integrative approach, which forms the basis for the thematic analysis presented in the following sections.

Academic support and learning adjustment.

Academic adjustment in all studies was consistently framed as a matter of student preparedness and ambiguity, not simply as a matter of language proficiency (Bethel et al., 2020; Hou & Abu, 2024; Jung, 2023). Extensive evidence suggests that culturally inclusive classroom climates and opportunities for positive contact with host nationals are associated with psychological adaptation and engagement, which, in turn, indirectly bolster students' academic performance. Within the China-specific evidence base, it was concluded that academic adaptation mediated students' psychological and sociocultural adaptation via motivational mechanisms: intrinsic motivation represented a prominent pathway through which adaptation was transformed and reflected in academic functioning (He et al., 2025). Consistent with these results, research on perceived cultural distance suggests that cultural gaps can reduce academic performance unless they are buffered by higher cultural intelligence (Cheng et al., 2023), indicating that culture-learning and competence-building elements should be part of academically oriented support rather than being limited to remedial language provision.

The Paradox of Compliance Versus Reflexivity: Reconstructing Professional Standards

The synthesis of the reviewed studies reveals a persistent tension regarding the role of professional standards during the induction phase for early-career teachers. Rather than serving as frameworks that promote reflective practice and professional growth, professional standards are frequently operationalized as instruments of administrative compliance. Evidence from the literature indicates that standards such as the Australian Professional Standards for Teachers are often reduced to checklist-oriented requirements, emphasizing documentation and accountability over meaningful pedagogical reflection (Beasy et al., 2025). This shift toward compliance-oriented practices suggests a structural limitation within contemporary professional development systems. Instead of fostering critical reflection and adaptive expertise, early-career teachers are often required to demonstrate alignment with predefined criteria, which may constrain opportunities for authentic professional learning.

As highlighted in several studies, the emphasis on performative compliance can lead to superficial engagement with professional standards, in which teachers prioritize fulfilling formal requirements over deeper pedagogical inquiry (Fielder et al., 2024). From a critical perspective, this phenomenon reflects a broader misalignment between the intended purpose of professional standards and their implementation in practice. While professional standards are theoretically designed to guide teacher development, their institutional enactment often transforms them into regulatory tools. This misalignment risks limiting the development of professional reflexivity, which is essential for navigating complex classroom environments and evolving teaching demands. Furthermore, the dominance of compliance-driven approaches may contribute to the disconnection between early-career teachers and their emerging professional identities.

When professional development is framed primarily in terms of evaluation and accountability, opportunities for identity construction, reflective dialogue, and contextual adaptation may be diminished. This condition is particularly problematic during the early-career phase, when teachers are still negotiating their roles, beliefs, and pedagogical orientations. These findings suggest the need to reconceptualize professional standards as enabling frameworks rather than regulatory instruments. A shift toward reflexivity-oriented professional development would require integrating reflective practices, dialogical mentoring, and context-sensitive evaluation mechanisms. Such an approach may better support early-career teachers in developing adaptive expertise while maintaining alignment with professional expectations.

Erosion of Agency within Restrictive Ecosystems

Building upon the limitations of compliance-oriented professional standards discussed in the previous section, the reviewed literature further indicates that the structural conditions of school ecosystems significantly shape early-career teachers' professional agency. Rather than functioning as autonomous professionals capable of adaptive decision-making, early-career teachers frequently operate within tightly regulated institutional environments that limit their pedagogical discretion. Empirical evidence suggests that organizational cultures characterized by prescriptive curricula, standardized assessment regimes, and hierarchical

decision-making structures tend to restrict opportunities for the enactment of agency (McGraw et al., 2025). In such contexts, early-career teachers are often positioned as implementers of predefined instructional models rather than as reflective practitioners.

This condition is further intensified by broader socio-cultural pressures, including competitive professional environments conceptualized as “*involution*” or *Neijuan*, which have been shown to influence both professional identity and well-being (He et al., 2025). The interaction between institutional constraints and individual capacity reveals a complex dynamic in which agency is not merely an individual attribute but a contextually mediated phenomenon. Longitudinal and qualitative studies demonstrate that early-career teachers’ ability to exercise agency is closely linked to the availability of supportive environments, collegial trust, and opportunities for meaningful participation in decision-making processes (Antonsen et al., 2024). Conversely, environments that emphasize control and compliance may suppress initiative, reduce professional confidence, and limit opportunities for pedagogical innovation.

In addition to constraining instructional autonomy, restrictive ecosystems may also have significant implications for teachers’ psychological resilience. The literature indicates that sustained exposure to high-pressure environments, combined with limited agency, can contribute to emotional exhaustion and reduced job satisfaction. This suggests that the erosion of agency is not only a pedagogical issue but also a well-being concern that may influence retention outcomes. From a critical standpoint, these findings challenge the assumption that professional development can be effectively addressed through individual-level interventions alone. While mentoring and training programs remain important, their impact may be limited if underlying structural conditions are not addressed. The evidence instead points to the need for an ecological perspective, in which early-career teacher development is understood as the product of interactions between individual capabilities and institutional environments.

Integrative Discussion: Toward a Multi-Level Framework of Early-Career Teacher Professional Development

The preceding analysis reveals that early-career teacher professional development cannot be adequately understood through isolated perspectives. Instead, the findings point toward a deeply interconnected system in which professional standards, individual agency, mentoring practices, structural conditions, and foundational competencies interact dynamically. This interdependence highlights the limitations of fragmented professional development models and underscores the need for a more integrative conceptualization. At the structural level, the literature demonstrates that professional standards, while intended to guide development, are frequently enacted as compliance-driven mechanisms that constrain reflective practice.

This compliance orientation is further reinforced by institutional environments that prioritize standardization and control, thereby limiting early-career teachers’ opportunities to exercise professional agency. As discussed in earlier sections, such conditions may not only restrict pedagogical autonomy but also weaken teachers’ capacity for meaningful professional learning. Simultaneously, the emergence of digital and hybrid mentoring models reflects an attempt to address some of these systemic limitations by introducing more flexible and personalized forms of support. However, the effectiveness of these innovations remains

contingent upon broader institutional and policy alignment. In contexts where structural inequalities persist, the benefits of such innovations may be unevenly distributed, thereby reinforcing existing disparities in access to professional development.

At the individual level, the literature consistently emphasizes the central role of foundational teaching competencies, particularly classroom management and instructional quality, in shaping early-career teachers' effectiveness and retention. These competencies are not developed in isolation but are influenced by the availability of support, opportunities for reflective practice, and the broader institutional environment. Moreover, the development of these competencies is closely linked to teachers' sense of agency, well-being, and emerging professional identity. Taken together, these findings suggest that early-career teacher professional development should be conceptualized as a multi-level system consisting of interconnected dimensions:

1. Individual Level: foundational teaching competencies, professional identity, agency, and well-being
2. School Level: mentoring quality, collegial support, leadership, and organizational culture
3. Structural Level: professional standards, policy frameworks, and resource distribution
4. Innovation Level: digital and hybrid mentoring, adaptive professional learning models

Within this framework, development is understood not as a linear progression but as a dynamic process shaped by interactions across levels. For instance, compliance-driven standards at the structural level may limit agency at the individual level. In contrast, high-quality mentoring at the school level may mitigate these constraints by fostering reflective practice. Similarly, innovations such as digital mentoring may enhance access to support but require alignment with institutional structures to achieve sustained impact. From a critical standpoint, this integrative perspective challenges the prevailing tendency to treat professional development as a set of discrete interventions.

Instead, it calls for a systemic reorientation in which policies, school environments, and professional learning practices are aligned to support the holistic development of early-career teachers. Such an approach emphasizes not only the acquisition of skills but also the cultivation of agency, the development of professional identity, and the promotion of equitable access to support. Furthermore, this framework highlights the importance of balancing technical and reflective dimensions of teaching. While foundational competencies remain essential, their development must be situated within environments that enable critical reflection, collaboration, and adaptive learning. Without such alignment, professional development risks becoming either overly technical or overly abstract, failing to address the complex realities of early-career teaching.

CONCLUSION

It is an engaging study that highlights that developing early-career teachers is neither simple nor static and cannot be discussed from a single perspective. At the individual level, foundational competencies, professional identity, agency, and well-being are significant predictors of teachers' capacity to navigate the profession's challenging realities. At the institutional level, mentoring quality, peer support, and collective leadership heavily influence teachers' learning experiences, job satisfaction, and retention. At the systemic level,

however, it is policy frameworks, professional standards, and resource distribution that shape broad structural conditions for professional development. Adaptive and online coaching models suggest that the growing complexity of professional learning requires that opportunities also incorporate flexible, context-responsive support mechanisms to encourage self-regulation. In other words, we need an integrated, coherent teacher development approach across individual, organizational, and systemic aspects that ensures sustained reflection on the teacher as a practitioner and meaningful change through professional practice. Future research should examine how this proposed multi-level framework operates across diverse educational settings and how its dimensions interact in shaping early-career teacher development over time.

AUTHOR'S NOTE

The author declares that there is no conflict of interest related to the publication of this article. The author also affirms that all data and content presented in the article are free of any plagiarism.

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