

Toward doctorateness: A semi-systematic review of doctoral supervision strategies and a conceptual framework

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Keywords

Doctoral supervision

Doctorateness

Doctoral journey

Student transformation

Supervisory mentorship

Doctoral graduate attributes

Abstract

Effective supervisory models and strategies that foster the intellectual and professional development of doctoral candidates toward achieving doctoral status are examined. Using a semi-systematic literature review methodology, 10 peer-reviewed empirical studies were examined to identify supervisory approaches that promote identity development, critical reflection, and scholarly independence. We find that effective supervision relies on a combination of relational, dialogic, and structured strategies. Supervisory models that emphasise empathetic, reflective relationships—alongside adaptable, partnership-based, and community-focused approaches—are particularly influential in enabling doctoral transformation. Key strategies include aligning expectations, mentoring, facilitating the understanding of threshold concepts, and fostering collaborative learning through group supervision or communities of practice. These approaches are consistently linked to enhanced self-efficacy, critical thinking, professional skill development, and identity formation. Although the review was limited to 10 studies, this focused analysis provides a solid conceptual basis for further empirical research. The proposed draft framework, derived from the literature, will guide the second phase of the research, which involves qualitative data collection through expert interviews and focus group discussions. The aim is to refine and operationalise transformative supervision practices that address the evolving needs of doctoral education. This will be discussed in a follow-up article.

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1. Introduction

The doctoral journey is often described as a transformative rite of passage that requires candidates to develop advanced research skills, critical thinking, and professional attributes. Central to this process is the supervisor's role, which involves serving as a mentor, collaborator, and facilitator of the candidate's academic progress, personal growth, and intellectual development. As part of a more comprehensive study, this paper examines how supervisors enhance the doctoral experience and facilitate candidates' progression toward "doctorateness". It examines the transformational role of supervisors and investigates how supervisory practices can integrate key doctoral graduate attributes to prepare candidates for effective careers.

Despite a growing body of doctoral supervision scholarship, the literature remains fragmented across supervisory "models," relational pedagogies, and developmental outcomes, with limited integrative work that explicitly links supervision strategies to the developmental endpoint often described as doctorateness. We address that gap by synthesising empirical evidence through a semi-systematic review and by proposing a draft, evidence-informed conceptual framework that organises supervision into core supervisory dimensions, operational strategies, and developmental outcomes. The novelty lies in the framework's integrative structure and its explicit mapping of supervisory practices to identity formation, scholarly independence, and professional capability development.

1.1 Problem statement, aim, research question and contribution

Current doctoral supervision literature offers numerous models and recommendations, yet these are often presented as stand-alone typologies or context-specific accounts, leaving supervisors and institutions without a consolidated, evidence-informed map of which strategies (and combinations of strategies) most consistently support doctoral developmental outcomes. What is missing is a structured synthesis that integrates relational, dialogic, collaborative, and structured supervision practices into a coherent framework aligned to doctoral scholarly development.

Our aim is to synthesise empirical literature on doctoral supervision strategies and to propose a draft conceptual framework that links supervisory dimensions and practices to doctoral developmental outcomes.

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RQ1: What supervisory models and strategies are identified in the literature as effective in facilitating doctoral candidates' intellectual and professional development?

RQ2: How can these strategies be integrated into an evidence-informed framework to guide supervision practice and future research?

The contribution of this paper can be summarised as:

- A semi-systematic synthesis of 10 peer-reviewed empirical studies (with transparent selection logic);
- A draft conceptual framework integrating *dimensions* → *strategies* → *outcomes*; and
- A research agenda for the next empirical phase (expert interviews/focus groups).

1.2 Background

In this paper, doctorateness refers to the developmental endpoint of doctoral study characterised by scholarly independence, critical judgement, identity as a knowledge producer, and discipline beyond thesis completion alone. The journey to doctoral status is conventionally perceived as a linear process guided by clearly defined objectives, institutional regulations, and standardised expectations, with the submission of the thesis marking the formal conclusion of the researcher's academic development (Gravett, 2021). However, such perceptions obscure the complex, deeply personal, and evolving nature of doctoral studies, which often extend beyond formal guidelines and predetermined milestones (Weatherall, 2018).

Doctoral education demands more than compliance with institutional procedures. It requires intellectual perseverance, critical self-awareness, and adaptability (Lindgreen et al., 2000). To fully grasp the motivations for doctoral study, one must adopt a multidimensional perspective informed by theoretical frameworks that reflect the complexity of students' academic identities and experiences (Litalien et al., 2015). Early decisions, such as selecting a research topic, are pivotal moments where supervisor input is crucial, guiding students towards research that is original, feasible, and effective (Ahmad, 1969).

The evolution from novice to independent scholar is not merely a process of academic maturation but a developmental rite of passage that involves identity reconstruction (Wang & Li, 2023). This transformation is significantly shaped by the doctoral student's interactions within the scholarly community process, often facilitated by the supervisor (Trout, 2018). The supervisor bridges institutional expectations and the student's scholarly development, thereby fostering academic integration and social belonging (Trout, 2018).

Elliot (2021) compares this holistic approach to doctoral education to a compass, offering metacognitive scaffolding that helps candidates navigate both the intellectual challenges and the existential uncertainties of the Ph.D. journey. In this context, supervisors serve as anchors—providing guidance, support, and critical challenge to help students stay oriented on their path to becoming doctors.

Moreover, a doctoral candidate's intellectual stance is shaped by various contextual influences, including personal values, social interactions, and cultural background (Bryan & Guccione, 2018). Supervisors must, therefore, adopt flexible, empathetic approaches that recognise and validate the individualised nature of each student's journey. Doctoral studies are long and arduous, often marked by internal and external challenges that require resilience, particularly in areas such as time management and work-life balance (Hughes, 2020; Wang & Li, 2023).

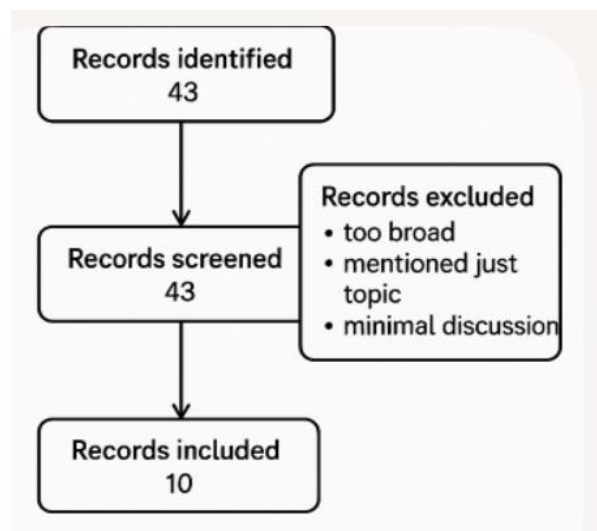
Ultimately, the supervisor's role is not only to oversee academic progress but also to act as a reflective figure who supports the doctoral candidate's intellectual, emotional, and professional growth. In doing so, supervisors significantly influence whether and how students achieve identity formation—not just in research outputs but in becoming confident, self-directed members of the academic community (McAlpine & Norton, 2006).

2. Research design and methodology

The first phase of this study involves a semi-systematic literature review (semi-SLR) to synthesise existing research on supervisory approaches (Snyder, 2019; 2023). The purpose of the semi-SLR is to identify a gap in literature and to create an agenda for further research. The research question to be addressed by the semi-SLR is: What supervisory models and strategies have been identified in the literature as effective in facilitating the Towards doctorateness: A semi-systematic review of doctoral supervision strategies and a conceptual framework, Schutte & Stewart (2025)

intellectual and professional development of doctoral candidates? Databases such as EBSCOhost, Emerald, and Google Scholar have been searched, using Boolean operators and keywords including doctoral supervision, PhD supervision, graduate supervision, doctorateness, doctoral identity, doctoral attributes, transformational supervision, and supervisory approaches. After applying inclusion and exclusion criteria, a minimum of 10 articles were analysed in depth. Based on this review, a draft framework has been devised to encapsulate best practices and strategies for adequate supervision. In the second phase, a follow-up study employing a qualitative design will use this draft framework as an agenda for focus group discussions and expert interviews. Consistent with semi-systematic review logic, the review prioritised conceptual coverage and depth of synthesis over exhaustive inclusion; ten studies were selected for detailed coding because they met all inclusion criteria and provided sufficient methodological and conceptual variation to support framework development for Phase 2 empirical refinement.

Figure-1: Roadmap



(Source: Authors)

We present the findings of the draft conceptual framework, suggesting strategies that supervisors can follow to facilitate doctoral candidates' transformation process toward independence, based on the results of a semi-structured literature review. Coding followed a hybrid approach: an initial deductive code frame was derived from supervision models and doctoral development constructs (e.g., relationality, dialogue, structure, collaboration), followed by inductive coding to capture emergent strategies and outcomes across studies. Themes were then consolidated through iterative comparison and synthesis.

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3. Findings

3.1 Screening

Using the research question: “How can supervisors enrich the doctoral experience and foster candidates’ progression toward 'doctorateness'?", papers from the Semantic Scholar corpus were searched. The 43 papers most relevant to the question were retrieved through a Boolean search. The following questions were used as inclusion and exclusion criteria when screening the 43 papers.

- *Education level*: Does the article focus primarily on doctoral-level supervision?
- *Supervisory focus*: Does the study examine supervisory practices, models, strategies, and/or supervisor-supervisee relationships?
- *Development focus*: Does the study investigate the development, transformation, or identity formation of doctoral candidates?
- *Study type*: Is the study either an empirical study or a systematic review?
- *Evidence base*: Does the study present empirical evidence, or is it an opinion article?
- *Practice focus*: Does the study examine supervisory practices rather than focusing exclusively on administrative aspects or completion rates?
- *Scope*: Does the study include analysis of supervisory practices or relationships (rather than focusing solely on student characteristics)?

All screening questions were considered and critically judged to determine whether to include them in each paper's screening. After scrutinising the 43 articles using the inclusion and exclusion criteria, 10 articles were selected for in-depth analysis.

3.2 Results

The following 10 articles met the criteria and were included in the study:

Table 1: Articles included in the study

Authors	Study focus	Supervisory model type	Research approach	Key outcomes
Guerin et al., 2015	Supervisor development, supervisory models and pedagogies	Personalised, reflective, relational; critiques rigid typologies; references Grant's "Map for Supervision"	Narrative inquiry, autoethnographic analysis	Emphasises supervisor-student relationships, supervisor self-awareness, and identity development.
Masek and Alias, 2020	Adequate doctoral supervision, framework development	Supervision triangle (management, student, supervisor); two-phase expectation alignment	Systematic review	Identifies four domains of doctoral outcomes; stresses expectation alignment and supervisor-student fit.
Kaur et al., 2021	Student-faculty partnership, transformative learning	Partnership-based, collaborative, transformative learning	Qualitative exploratory, reflective journals, and interviews	Partnership fosters identity, knowledge construction, enactive/vicarious learning; notes challenges of structure and power.
Fenge, 2012	Group supervision, collaborative learning	Group supervision, cohort-based, peer learning	Qualitative, small-scale; details not fully specified	Group supervision enables reflexive identity work and collaborative learning.
Halse, 2011	Supervisor learning, impact of supervision	Adaptive, flexible, self-protective, relational	Qualitative, thematic analysis of interviews	Supervisor learning shapes practice; adaptation, valuing student uniqueness, and explicit learning processes are key.
Fulton and Hayes, 2017	Experiential learning in professional doctorates	Supervisor as facilitator, skill development focus	Qualitative, semi-structured interviews	Supervisors facilitate critical reflection, investigation, and adaptive capacity;

				focus on independence.
Webber, 2017	Identity change in professional doctorate women	Supportive, non-hierarchical, empathetic	Qualitative, narrative interviews	Supportive relationships crucial for identity transformation; barriers to seeking support are noted.
Wisker, 2005	Theories and practices of supervision	Dialogic, stage-based, community of practice	Action research, mixed methods	Supervisory dialogues, skill development, and preparation for post-PhD careers.
Johnson, 2014	Threshold concepts in doctoral writing	Supervisor support for threshold concepts	Qualitative case study; interviews, surveys	“Talking to think” and self-efficacy as key; supervisor development should go beyond compliance.
Lee, 2008	Concepts of doctoral supervision	Functional, enculturation, critical thinking, emancipation, quality relationship	Qualitative, in-depth interviews	Five models identified; supervisors must balance roles and foster independence.

(Source: Authors)

3.3 Supervisory model types

From these studies, the following supervisory models were identified, as listed in Table 2.

Table 2: Supervisory models

Models	Number of studies
Relational, reflective, personalised, empathetic, or supportive model	5
Functional, management-oriented, stage-based, or skill development-focused model	4
Collaborative, partnership-based, group, cohort, or community of practice model	3
Adaptive or flexible models	1
Dialogic models	1

(Source: Authors)

3.4 Key outcomes

Table 3 lists the key outcomes of the different studies. Most studies focused on the student-supervisor relationship, identity development and skills development.

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Table 3: Key outcomes

Outcomes	Number of studies
Emphasis on the supervisor-student relationship, partnership, or support	4
Identity development or transformation of the student or supervisor	4
Skill development, critical reflection, or fostering independence	4
Supervisor learning or adaptation	2
Barriers or challenges (such as structure or power)	2
Expectation alignment or supervisor-student fit	1
Collaborative, group, or peer learning	1
Preparation for post-PhD careers	1

(Source: Authors)

3.5 Thematic analysis

The main themes identified and discussed in the studies were the key strategies implemented, the approaches to implementation, and any evidence of their effectiveness. The data supporting each theme is shown in Table 4.

Table 4: Supervisory relationship models

Authors	Key strategies	implementation approaches	Evidence of effectiveness
Kaur et al., 2021	Partnership-based, collaborative	Student-faculty partnership, mentoring	Partnership fosters identity and knowledge construction, but structure/power issues are noted.
Masek and Alias, 2020	Supervision triangle, expectation alignment	Two-phase framework: negotiate expectations, monitor progress	Alignment of expectations and relationships improves outcomes.
Fulton and Hayes, 2017	Supervisor as facilitator	Skill development, independence	Facilitation of reflection and adaptive capacity linked to candidate transformation.
Webber, 2017	Supportive, non-hierarchical, empathetic	Care, empathy, and non-hierarchical relationships	Supportive relationships crucial for identity transformation, especially in turbulence.
Guerin et al., 2015	Relational, reflective, personalised supervision	Emphasis on the supervisor-student relationship, a safe learning environment	Supervisors' self-awareness and relationship-building are linked to candidate identity development.
Johnson, 2014	Supervisor support for threshold concepts	Strategies for "talking to think," self-efficacy	Supervisor support for threshold concepts aids independence.
Fenge, 2012	Group supervision, peer learning	Cohort-based, collaborative reflection	Group supervision supports identity work and collaborative learning.
Halse, 2011	Adaptive, flexible, self-protective	Structured meetings, quotas, and valuing uniqueness	Supervisor adaptation and explicit learning processes support candidate development.
Lee, 2008	Five models: functional, enculturation, critical thinking, emancipation, and quality relationship	Project management, community integration, critical analysis, personal development, and emotional support	Multiple models address different aspects of candidate transformation.
Wisker, 2005	Dialogic, stage-based, community of practice	Supervisory dialogues, skill development	Dialogic and community approaches support skill and identity development.

(Source: Authors)

3.6 Patterns in supervision strategies and outcomes

Table 5 identifies the patterns recognised in the supervision strategies and outcomes.

Table 5: Strategy and outcome patterns

Patterns	Number of studies
Reflective or dialogic approaches	3
Expectation alignment, structured, or triangular frameworks	3
Partnership-based, collaborative, or mentoring approaches	3
Skill development and/or fostering independence	3
Relational, personalised, or supportive supervisor-student relationships	2
Group-, peer-, or cohort-based supervision	2
Adaptive or flexible supervision	2
Facilitative approaches	2
Threshold concepts and self-efficacy	1
Multiple-model or holistic approach	1

(Source: Authors)

3.7 Evidence of effectiveness

The evidence regarding the effectiveness of the supervision strategies is presented in Table 6. No study was found reporting on a negative outcome or with no effect.

Table 6: Effectiveness of supervision strategy

Effectiveness	Number of studies
Identity development or transformation	6
Relationship-building or supportive relationships linked to positive outcomes	3
Improved outcomes or candidate development	3
Skill or knowledge development	3
Collaborative learning or partnership is reported as beneficial	2
Independence or self-efficacy	2
Addressing power or structure issues	1
Explicit learning processes	1
Multiple models addressing different aspects of transformation	1

(Source: Authors)

3.8 Transformative learning strategies

Each of the articles discussed transforming learning strategies as part of supervision within doctoral education and supervision pedagogies. These findings are presented in Table 7.

Table 7: Transformative learning strategies

Authors	Key strategies	Implementation approaches	Evidence of effectiveness
Guerin et al., 2015	Reflective practice, identity development	Supervisor self-reflection, narrative inquiry	Supervisor awareness linked to candidate identity development.
Masek and Alias, 2020	Self-development, professional growth	Monitoring progress, skill/attitude development	Four domains of outcomes (knowledge, skills, attitudes, and professional skills) were identified.
Kaur et al., 2021	Transformative learning, identity formation	Enactive/vicarious learning, mentoring	Partnership supports identity and knowledge construction.
Fenge, 2012	Collaborative reflection, peer learning	Group supervision, cohort-based learning	Peer learning and reflection support the development of professional identity.
Halse, 2011	Supervisor learning, adaptation	Valuing uniqueness, learning from mistakes	Supervisor adaptation supports candidate independence.
Fulton and Hayes, 2017	Critical reflection, adaptive capacity	Base superstructure model, skill facilitation	Supervisors facilitate transformation to independence.
Webber, 2017	Empathy, care, support	Supportive, non-hierarchical relationships	Empathetic support aids identity transformation.
Wisker, 2005	Skill development, dialogic practice	Supervisory dialogues, preparation for viva	Dialogic and skill-based approaches support transformation.
Johnson, 2014	Threshold concepts, self-efficacy	“Talking to think,” supervisor support	Overcoming threshold concepts fosters independence.
Lee, 2008	Critical thinking, emancipation	Questioning, self-development, and emotional support	Multiple strategies foster independence and identity.

(Source: Authors)

3.9 Collaborative learning environments

Each article also discussed collaborative learning environments and their effectiveness. These are listed in Table 8.

Table 8: Effectiveness of Collaborative Learning Environments

Authors	Key strategies	implementation approaches	Evidence of effectiveness
Guerin et al., 2015	Safe learning environment	Relational, reflective supervision	Supports identity development
Masek and Alias, 2020	Positive environment, expectation alignment	Supervision triangle, monitoring	Environment and fit improve outcomes.
Kaur et al., 2021	Social learning, partnership	Student-faculty partnership, mentoring	Social activity is central to learning.
Fenge, 2012	Peer learning, group supervision	Cohort-based, collaborative reflection	Peer learning enhances identity and collaboration.
Halse, 2011	Professional relationships, flexibility	Transition from student to colleague	Professional relationships support transformation.
Fulton and Hayes, 2017	Community of practice, facilitation	Skill development, technology upskilling	Community and facilitation foster independence.
Webber, 2017	Supportive environment	Empathy, care, and non-hierarchical support	Supportive environment aids transformation.
Wisker, 2005	Communities of practice	Dialogic, stage-based supervision	Community approaches support the development of skills and identity.
Johnson, 2014	Supervisor-student dialogue	Overcoming threshold concepts	Dialogue supports independence.
Lee, 2008	Disciplinary community integration	Enculturation, legitimate peripheral participation	Community integration fosters identity.

(Source: Authors)

The included studies report that supervisors often employ a blend of relational, dialogic, and structured strategies. For example, Lee (2008) identifies five supervisory models, with supervisors drawing on multiple models depending on candidate needs and stage. Masek and Alias (2020) propose a framework integrating management, student, and supervisor perspectives. Guerin et al. (2015) and Halse (2011) emphasise supervisor self-awareness and adaptation. Group and partnership-based models (Fenge, 2011) are often integrated with traditional one-to-one supervision to provide a richer learning environment.

3.10 Thematic Synthesis

Table 9 provides a summary of the major themes identified across the various articles and studies.

Table 9: Synthesis of themes

Theme	Key strategies	Implementation approaches	Evidence of Effectiveness
Supervisory Relationship Models	Relational, dialogic, partnership-based, group supervision	Supervisor-student relationship, expectation alignment, partnership, group/cohort-based, flexibility	Strong evidence for relationship quality, adaptation, and partnership in fostering transformation
Transformative Learning Strategies	Reflective practice, critical thinking, skill development, and identity support	Supervisor self-reflection, monitoring, mentoring, critical analysis, skill facilitation	Evidence for reflective, critical, and skill-based strategies in supporting independence and identity
Collaborative Learning Environments	Peer learning, community of practice, social learning	Group supervision, cohort-based, community integration, dialogue	Collaborative and community approaches enhance identity, skill, and independence

(Source: Authors)

Key strategies for developmental supervision in the included studies can thus be listed as:

- Relational approaches, dialogic approaches, partnership-based supervision, group supervision, reflective practice, critical thinking, skill development, identity support, peer learning, community of practice, and social learning;
- For each of the three main themes (supervisory relationship models, transformative learning strategies, collaborative learning environments), we found evidence of effectiveness cited in all 10 studies per theme. We found no strategies or themes with fewer than 10 studies cited as evidence, nor did we find any strategies unsupported by evidence in the table; and
- The study presents supervision as a dialogic partnership. It emphasises how supervisors can help doctoral candidates in their intellectual and personal growth by improving doctoral graduate qualities and guiding candidates through the doctoral rite of passage. This research enhances understanding of the supervisor's role in doctoral

education and provides practical strategies for developing effective and supportive supervision practices.

4. Discussion

We explored how supervisors can enrich the doctoral experience and foster candidates' progression toward doctoral capability. By synthesising findings from 10 peer-reviewed studies, it became evident that the supervisor's role is far more than managerial or procedural—it is fundamentally developmental, involving relational depth, intellectual partnership, and pedagogical adaptability. Three interrelated themes emerged: supervisory relationship models, reflective learning strategies, and collaborative learning environments. Each of these contributes uniquely to the candidate's intellectual, emotional, and professional development.

4.1 Supervisory relationships as transformative anchors

One of the most consistent findings across the selected studies was the centrality of the supervisor–student relationship in shaping the doctoral experience. Relational, reflective, and empathetic supervisory models—often characterised by a non-hierarchical nature—were associated with increased identity development and academic confidence (Guerin et al., 2015; Webber, 2017). These findings align with the existing literature, which views doctoral supervision not merely as oversight but as a dynamic, human-centred pedagogical practice (Elliot, 2021; Wang & Li, 2023).

The evidence suggests that supervisors who actively cultivate trust, care, and mutual respect create psychologically safe learning environments where students are more likely to engage in critical reflection and risk-taking, both essential for scholarly independence. Such relational depth fosters not only academic progress but also the personal transformation that underpins doctoral study.

4.2 Transformative learning through critical and reflective practice

The reviewed studies consistently identified critical reflection, skill development, and identity support as core components of adequate doctoral supervision (Wisker, 2005; Lee, 2008; Fulton & Hayes, 2017). Supervisors who encourage reflective practice, both in themselves and in their students, act as developmental agents, supporting the metacognitive shifts necessary for students to transition from consumers of knowledge to producers of original thought.

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These findings support Mezirow's theory of reflective learning, which sees adult learning as a change in perspective achieved through critical self-examination (Kurnia, 2021). In this context, supervisors act as facilitators who support this change by asking questions, providing feedback, modelling scholarly behaviour, and creating environments that foster intellectual discomfort and growth (Halse, 2011). Supervisors who reflect on their practice serve as models of lifelong learning and professional self-awareness, reinforcing these values in their students.

4.3 Communities of practice and peer learning

Another salient theme was the growing emphasis on collaborative and peer-supported learning environments. Group supervision models, communities of practice, and cohort-based structures were found to enhance reflexive identity work, mitigate isolation, and democratise the research process (Fenge, 2012; Kaur et al., 2021). The studies showed that when peer dialogue complements supervisor guidance, students engage more actively and develop professional identities grounded in mutual learning and collegiality.

This collective orientation aligns with Wenger's (1998) notion of communities of practice, where learning is inherently social and identity is co-constructed. Supervisors who enable access to such communities support a more holistic and sustainable model of doctoral education, especially critical in interdisciplinary or professional doctorate contexts.

4.4 Integration of models and context-specific supervision

A key meta-theme across the findings was the integration of multiple supervisory models, tailored to meet the needs of candidates and address contextual demands. Studies such as Lee (2008) and Masek and Alias (2020) highlight the value of combining functional, relational, and critical models in a flexible, stage-based approach. This supports the argument that no single model can meet the diverse demands of doctoral supervision; instead, effective supervision is marked by pedagogical agility, supervisor self-awareness, and responsiveness to context.

This insight aligns with the shift in literature toward the supervisor as a reflective practitioner, capable of navigating between guidance, collaboration, and challenge depending on the candidate's developmental stage (McAlpine & Norton, 2006; Gravett, 2021). The findings reinforce the view that identity formation is not achieved through a

linear trajectory but through iterative cycles of reflection, feedback, and intellectual risk-taking—cycles facilitated by adaptive supervisors.

4.5 Limitations of the evidence base

While the findings provide valuable insights, we acknowledge the limitations of the underlying studies. Most are qualitative, with small or context-specific samples. Disciplinary variation is not always apparent, raising concerns about the generalisability of the findings. Furthermore, few studies report on longitudinal outcomes or provide comparative evidence across different supervision models. Despite these limitations, the consistent themes across studies add weight to the conclusions drawn and provide a foundation for further empirical research.

4.6 Implications for supervisory practice and institutional policy

The study highlights the need for institutions to recognise and support the pedagogical complexity of supervision. Supervisor development programmes should move beyond compliance and administration, focusing instead on identity-sensitive, reflective, and relational pedagogies. Institutions could also consider expanding group supervision and community-based formats as complements to one-on-one supervision, thereby building resilience and fostering a sense of belonging among doctoral candidates.

Supervisors, in turn, are encouraged to embrace multi-faceted roles—as facilitators, mentors, critical friends, and co-learners—and to engage in ongoing reflection about their practice. Such approaches are not only beneficial for students but also enrich supervisors' own professional identities.

5. Contributions

This paper makes several interrelated contributions to doctoral supervision scholarship. Theoretically, it advances the literature by synthesising fragmented supervision models and practices into a coherent, evidence-informed conceptual framework that explicitly links supervisory dimensions and strategies to doctoral developmental outcomes associated with doctorateness. While prior studies often describe supervision models in isolation or focus on procedural effectiveness, this study contributes a structured integrative lens that foregrounds doctoral identity formation, scholarly independence, and professional capability development as central outcomes of supervision. In doing so, the

framework extends existing supervision theory by positioning supervision not merely as a managerial or mentoring function, but as a developmental and relational pedagogy.

Methodologically, the study demonstrates the value of a semi-systematic literature review as a framework-building approach within doctoral education research. By combining transparent selection criteria with a hybrid deductive–inductive coding strategy, the review moves beyond descriptive aggregation to analytic synthesis, enabling the identification of core supervisory dimensions, recurring strategies, and developmental outcomes across diverse empirical contexts. The paper further contributes methodologically by positioning the semi-systematic review as Phase 1 of a multi-phase research design, thereby providing a replicable pathway for scholars seeking to move from literature synthesis to empirical refinement through expert consultation or practitioner validation.

Practically, the study offers supervisors, doctoral schools, and higher education institutions a structured conceptual map for designing, reflecting on, and evaluating doctoral supervision practices. The proposed framework supports informed decision-making about the combination and sequencing of supervision strategies—such as relational engagement, dialogic learning, collaborative practices, and structured guidance—rather than treating supervision models as fixed or mutually exclusive. In this way, the paper contributes a practical tool that can inform supervisor development programmes, doctoral policy design, and curriculum innovation, while remaining adaptable to diverse institutional contexts and doctoral pathways.

6. Conceptual framework

The purpose of this article was to provide a structured, evidence-informed framework that conceptualises how supervisory practices and pedagogies contribute to the transformation of doctoral candidates. This will serve as a foundation for further empirical refinement through expert consultation and focus group discussion in a follow-up study, which might be titled: “A conceptual framework: Transformative supervision for doctorateness.”

6.1 Core supervisory dimensions

These are the foundational pedagogical orientations identified across the literature:

Dimension	Description	Key literature
Relational	Builds trust, empathy, and a supportive learning environment.	Guerin et al., 2015; Webber, 2017
Dialogic	Encourages critical discussion, reflection, and reciprocal learning.	Wisker, 2005; Lee, 2008
Reflective	Promotes supervisor and candidate self-awareness through metacognition.	Halse, 2011; Guerin et al., 2015
Collaborative	Fosters peer learning through group supervision or communities of practice.	Fenge, 2012; Kaur et al., 2021
Adaptive	Adjusts supervisory style to candidate stage, needs, and context.	Halse, 2011; Lee, 2008
Structured	Applies frameworks such as expectation alignment and skill tracking.	Masek & Alias, 2020

6.2 Pedagogical strategies

These are the operational practices that supervisors adopt within the above dimensions:

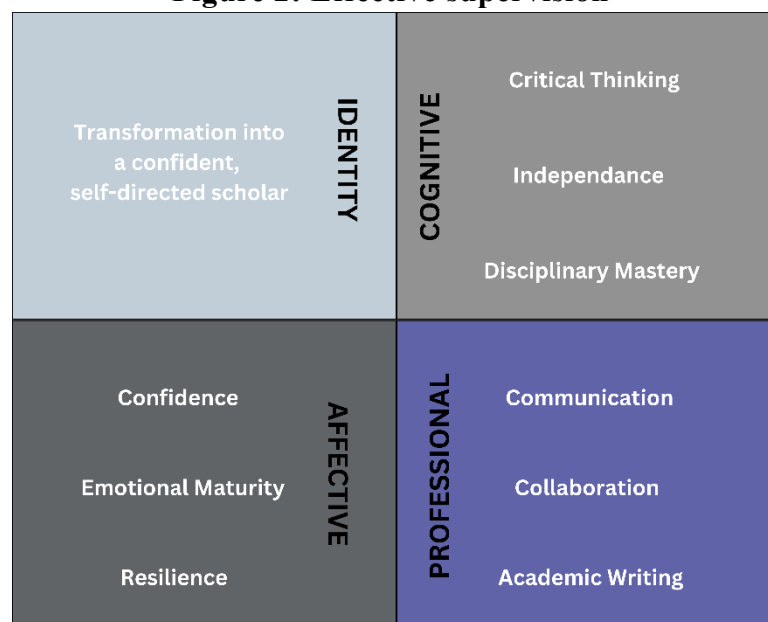
- Expectation alignment;
- Mentorship and modelling;
- Facilitation of critical reflection and threshold concepts;
- Peer learning and cohort-based dialogue;
- Enculturation into academic/professional communities;
- Support for emotional and identity work; and
- Project management and skill development tracking.

6.3 Developmental outcomes of transformative supervision

These are the desired results of effective supervision, aligned with the concept of doctorateness:

Domain	Outcome
Cognitive	Critical thinking, independence, and disciplinary mastery
Affective	Confidence, resilience, and emotional maturity
Professional	Communication, collaboration, and academic writing
Identity	Transformation into a confident, self-directed scholar

Figure 2: Effective supervision



(Source: Authors)

Figure 3: Proposed framework structure

SUPERVISORY DIMENSIONS

↓ ↓ ↓

Pedagogical Strategies

↓ ↓ ↓

Transformative Outcomes (Doctorateness)

or, more concretely:

Relational → Supportive relationship, identity work

Dialogic → Critical reflection, co-construction of knowledge

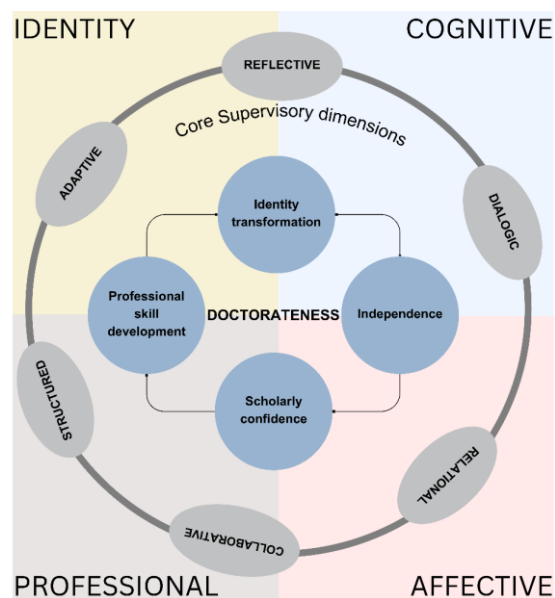
(Source: Authors)

Collaborative → Peer learning, professional integration

Structured → Goal alignment, progress tracking

Adaptive → Context-sensitive support

Reflective → Supervisor and candidate self-awareness



This will lead to doctoral capability:

- Identity transformation;
- Independence;
- Professional skill development; and
- Scholarly confidence.

7. Conclusions

This study identified that successful doctoral supervision integrates relational, dialogic, and structured strategies, including mentoring and group-based approaches, to support candidates' professional and intellectual development.

In summary, the journey to doctorateness is not merely a solitary or purely technical process. It is a significant developmental passage shaped by the supervisor's ability to balance guidance with independence, care with critique, and structure with flexibility. Supervisors who adopt relational, reflective, and collaborative approaches play a key role in helping doctoral candidates develop into confident, critically engaged scholars. As doctoral education continues to diversify, the supervisory role must be reimagined—not as a gatekeeper or evaluator, but as a dialogic partner on the path to scholarly identity.

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