



Mentoring for school leaders: **A rapid evidence assessment**

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Notes on terminology

“Mentoring” is used throughout the report to refer to both mentoring and coaching. Additionally, since most of the included studies are from the United States, a lot of the terminologies associated with teaching and education are those used in the States. We did not change these terms to an English equivalent as our understanding may be inaccurate.

For illustration, below is an inexhaustive list of these terms and their English (close) equivalents:

US term	English (close) equivalent
Assistant principal	Deputy or Assistant Headteacher
Elementary school	Primary school
High school	Secondary school
Intern principal	Aspiring headteacher, similar to NPQH placement
K-12	Nursery to Year 13
Middle school	Lower secondary school/Key Stage 3
Principal	Headteacher
Residency programme	Leadership apprenticeship/in-school training
School administrator	School leader
School district	Local authority or multi-academy trust
Superintendent	Director of Education, who oversees multiple schools
Tenure	Permanent employment status after probation

Executive summary

What is this review about?

This rapid evidence assessment brings together international research on mentoring for school leaders, including aspiring, new, and experienced leaders. It examines how mentoring is designed and delivered, what outcomes it is associated with, and where evidence is strong, mixed, or missing. The aim is to support policymakers and practitioners in understanding what mentoring appears to do well, and where caution or further research is needed.

What the evidence suggests is promising

Mentoring supports leaders' professional growth and wellbeing

The strongest and most consistent evidence shows that mentoring helps school leaders develop in ways that matter for their day-to-day practice. Across studies, mentoring is linked to improved self-reflection, decision-making, confidence, communication, and instructional leadership knowledge. Leaders often report feeling more supported, better able to navigate complex roles, and more confident in handling challenges.

Relationships matter more than models

While mentoring is delivered through a wide range of approaches and activities, the quality of the mentor-mentee relationship appears to underpin success across outcomes. Mentoring works best when mentors are experienced and credible, relationships are built on trust, and mentors balance guidance with allowing leaders to retain autonomy. Overly directive or controlling approaches can undermine these benefits.

Sustained structure helps when it remains flexible

Promising mentoring programmes tend to be structured enough to provide clarity and continuity, but flexible enough to respond to leaders' individual contexts and needs. Mentoring that is sustained over time, grounded in real leadership challenges, and embedded in leaders' daily work is more likely to support meaningful development than short-term or one-off interventions.

Benefits extend beyond individual leaders

There is consistent evidence that mentoring can contribute positively to school culture and teacher development, particularly by supporting collaboration and professional learning. Mentors themselves also benefit, often developing stronger leadership and mentoring skills through the process.

Where the evidence is limited or uncertain

Pupil outcomes remain unclear

Evidence linking mentoring for school leaders to pupil achievement is mixed and inconclusive. Some studies report small or subject-specific improvements, while others find no clear effects or even negative outcomes. Overall, the current evidence does not allow firm conclusions about mentoring as a lever for improving pupil attainment.

Some leadership outcomes depend heavily on context

Outcomes such as leader retention, career progression, leadership effectiveness, and planning skills are generally positive but inconsistent. Effects appear to depend on programme design, context, implementation quality, and individual characteristics, rather than mentoring alone.

Key evidence gaps

Despite a large body of research, important gaps remain:

- Much of the evidence is qualitative and exploratory, which limits confidence about cause and effect.
- Few studies compare different mentoring models.
- Reporting on mentor training, matching processes, and mechanisms of impact is often sparse.
- Evidence on costs, scalability, and long-term outcomes is limited.
- Most studies focus on short-term outcomes for leader-mentees, with little evidence on sustained impact over time.

Key takeaways

- Mentoring is most strongly supported as a developmental support for school leaders, particularly for reflection, building confidence, making decisions, and instructional leadership.
- High-quality relationships, not specific models, appear central to effectiveness.
- Policymakers should be cautious about assuming mentoring will deliver direct attainment gains.
- Future research needs to focus on how mentoring works, for whom, and in what contexts, with stronger context-sensitive designs to inform decisions about scale and investment.

1. Why a review on mentoring for school leaders

School leadership has been widely acknowledged as an influential factor in enhancing education quality through improving teaching and learning environments, thereby promoting student achievement (Hitt & Tucker, 2016; Leithwood et al., 2020). School leaders accomplish this in a number of ways, including developing teachers' capacity through professional development and learning (Pont et al., 2008; Robinson et al., 2008), building positive school culture and working conditions (Day et al., 2020), facilitating informal relations (Brown et al., 2021), and setting directions, goals and expectations (Day et al., 2020; Robinson et al., 2008).

In the present day, school leadership carries significant demands. School leaders are challenged to fulfil various responsibilities ranging from increasing administrative day-to-day tasks, recruitment, resources management, and public affairs, to school improvement and meeting the complex and diverse needs of students, parents, and the wider community (Lupton, 2023; Pont et al., 2008). Serving in multiple capacities, school leaders experience difficulties with increasing workload and accountability pressures, insufficient preparation, professional development, and support, and challenges related to teacher expertise and performance (Tamadoni, 2021; Tintoré et al., 2022), despite reporting working less hours than before (Department for Education, 2026a).

One promising measure proposed to address the challenges school leaders face and to support them is mentoring (ASK Europe, 2025; Daresh, 2004; Hopkins-Thompson, 2000). Mentoring has been reported to advance professional growth, serve as a successful tool for transitioning into new leadership roles, foster confidence and wellbeing, and develop school leadership capacity (Clayton et al., 2013; Hayes & Mahfouz, 2020). Despite growing interest, however, current research offers limited clarity regarding mentoring approaches and their defining characteristics (e.g. Barnett et al., 2017; Bello, 2022). Furthermore, evidence on the specific impacts of mentoring and effective methods for measuring them remains limited (e.g. Drake et al., 2023; Levings, 2020).

Building on this research interest, recent policy developments reflect a growing emphasis on mentoring as a means to strengthen school leaders' capacity to enhance school performance. Recognising the critical role of leadership in influencing school outcomes, the UK Labour Party's 2024 Manifesto introduced a new mentoring framework to support this goal, and an investment and support package for mentoring headteachers (Department for Education, 2026b). While mentoring is increasingly common, according to the latest School and College Voice Omnibus Survey (Department for Education, 2025), there is still limited evidence on its effectiveness specifically for school leadership. Additionally, given the significant workload pressures school leaders face, time remains a major constraint on professional development, reinforcing the importance of ensuring that any investment in mentoring is grounded in research evidence and likely to yield meaningful outcomes for leadership capability and wellbeing.

In response to the policy emphasis on leadership development through mentoring, the primary goal of this review is to inform policy by examining existing mentoring practices, mentor and mentee characteristics, and the impact mentoring has on school leaders. Beyond its policy focus, the review addresses two additional objectives, one grounded in school practice, and the other in research application. First, it seeks to inform practice by designing an evidence-informed mentoring framework that schools and providers can use to run and support leadership mentoring programmes. Second, from a research perspective, in addition to appraising the methodological rigour of studies on this topic, it aims to report on the research instruments used for measuring the impact of mentoring on school leadership to identify common evaluation practices and highlight gaps in how mentoring outcomes are assessed.

In England, the current limitations in understanding and application of mentoring for school leadership hinder policymakers' capacity to enable and support the development of scalable, evidence-informed programmes and to allocate resources effectively for evaluating their outcomes. Without clear, evidence-informed guidance on what mentoring approaches work, for whom, and in what contexts, policy risks being reactive, fragmented, or ineffective. In turn, it becomes challenging for schools to effectively implement mentoring for school leaders in the absence of a context-specific and evidence-informed framework. Schools and providers may invest time and resources in mentoring models that do not meet their needs or lack robust evaluation, resulting in missed opportunities for effective leadership development despite the commitment and intent. Finally, a gap of research on clearly defined outcomes of mentoring on school leaders and research instruments to measure them makes it

challenging for researchers to build a cumulative evidence base. A lack of shared frameworks and methodologies present obstacles to compare or replicate studies, limiting their contribution to national and system-wide improvement. Accordingly, it is crucial to address the existing knowledge and practice gaps on mentoring for school leaders, as they present a barrier to evidence-informed decision-making across the English education system.

2. What we (do not) know

Recognising the importance of effective school leadership, researchers have proposed a range of leadership approaches, such as instructional, managerial, transformational, distributed, and moral leadership (Bush & Glover, 2014). These models differ in emphasis: instructional leadership focuses on improving teaching and learning (Hallinger et al., 2010); managerial leadership on administrative efficiency (Bush, 2007); transformational leadership on setting direction, developing staff, and redesigning the organisation (Leithwood & Jantzi, 2006); distributed leadership on shared responsibility across the school (Harris, 2013); and moral leadership on ethical decision-making and values-driven practice (Arjanto et al., 2025). However, leading a school successfully has proven to be more complex than following a specific leadership disposition. Rather, effective leadership requires the ability to assess the specific needs of a school and apply a strategic combination of practices that are both contextually relevant and timely (Day et al., 2010; Day et al., 2016). This adds to the complexity of school leadership and underscores the need for targeted and ongoing professional support for school leaders.

Stronger school leadership is warranted, with a clear need for well-designed professional development initiatives, especially since, as referenced earlier, many leaders themselves acknowledge a lack of adequate preparation for their roles. Reflective practice is widely recognised as a cornerstone of effective school leadership development; some argue that leaders must be reflective and responsive to their specific contexts (e.g. Begley, 2008; Hallinger, 2018), while others emphasise the cultivation of analytical and interpretive skills (Brauckmann et al., 2023).

Accordingly, the literature increasingly advocates for leadership development activities that are adaptive and context-sensitive, equipping leaders to respond thoughtfully to the dynamic and varied demands they face in practice. The literature indicates that effective leadership development should be multifaceted, requiring a blend of

structured learning, personalised support, and practical experience delivered through both formal and informal means (Pont et al., 2008). Researchers have identified a range of key strategies to support this development, including action learning, group-based learning, mentoring, coaching, and problem-based approaches (Bush & Glover, 2004; Davis et al., 2005; Weindling, 2003; Zepeda et al., 2014). These strategies collectively emphasise experiential learning rooted in real-world contexts, collaborative problem-solving, and peer engagement.

Researchers argue that, mentoring, in particular, has emerged as a central mechanism for addressing professional development needs, offering school leaders a space for reflective dialogue, contextual guidance, and professional growth. While widely valued in educational leadership development, mentoring remains a concept without a universally agreed-upon definition; its meaning shaped by context and intended purpose (Brondyk & Searby, 2013). For instance, in the United States, mentoring is often positioned as a strategic tool for career advancement, whereas in the European context, it is primarily seen as a developmental process focused on personal growth and learning (Clutterbuck, 2008). Moreover, there is an ongoing discussion surrounding the definitions and boundaries between mentoring and coaching. Mentoring is often regarded as a broader, long-term developmental process that supports an individual's overall professional growth, whereas coaching typically focuses on enhancing specific skills or addressing targeted areas of practice (Castanheira, 2016; Duncan & Stock, 2010; Irby, 2012). Despite differing interpretations, mentoring is widely recognised as a developmental relationship (Castanheira, 2016; Dominguez & Kochan, 2020). To maintain clarity and consistency in this review, we adopt the term mentoring, reflecting its prevalent usage in the literature identified during the initial scoping stages of our research. In this review, the concept of mentoring is understood in line with the definition provided by Maxwell et al. (2022), that is, "facilitative or helping relationships intended to achieve some type of change, learning and/or enhanced individual and/or organisational effectiveness" (p. 5).

It is pertinent to note that such practices as mentoring entered the educational field primarily through teachers rather than school leaders, with tailored developmental approaches for leaders emerging only more recently (Wise & Cavazos, 2017). Mentoring for teachers and school leaders serves different purposes, each addressing their distinct needs. For teachers, this is exemplified by "educative mentoring," which fosters inquiry-based classroom approach, deepens understanding of teaching and learning, and emphasises the ability to interpret student behaviour to support their progress (Norman & Feiman-Nemser, 2005). The literature, in contrast, highlights

several key mentoring approaches designed to address the unique demands of school leadership. For example, facilitative mentoring, as described by Lofthouse and Whiteside (2019), supports headteachers' well-being, enhances resilience and self-confidence, and builds leadership capacity. Relational mentoring supports the transition into school leadership roles by fostering a sense of belonging, easing integration into the leadership community, and nurturing the skills and confidence needed to lead with greater impact (Cowin et al., 2016). Other mentoring engagements are designed to develop specific school leadership competencies, such as leading instructional improvement through classroom observation (Cosner et al., 2018). At the same time, a number of mentoring frameworks for school leaders are grounded in broader sociological or psychological theories, rather than being based directly on empirical research into mentoring practice (e.g. Bertrand, 2018; Hughes, 2019; Patrick et al., 2021).

Research consistently highlights several key benefits of mentoring for school leaders. One of the most frequently observed is the opportunity for structured reflection, which allows leaders to think more deliberately about their decision-making and leadership identity (Hansford & Ehrich, 2006; Irby et al., 2022; van Nieuwerburgh et al., 2020; Wise & Cavazos, 2017). Mentoring also facilitates the application of new leadership practices and skills that leaders may not have previously employed, fostering professional growth and innovation (Cosner et al., 2018; Irby et al., 2022). It provides a safe and supportive environment in which leaders can reflect openly, explore their professional goals, and engage in meaningful professional dialogue (Irby et al. 2022; van Nieuwerburgh et al., 2020). Moreover, mentoring contributes to school leaders' increased self-confidence and greater comfort in navigating leadership responsibilities, helping leaders feel more assured in their roles and professional capabilities. For instance, Cosner et al. (2018) highlight how mentoring strengthens leaders' self-efficacy and decision-making capabilities, while Daresh (1995) notes that mentees often feel more comfortable and prepared through mentoring relationships. Similarly, Hansford and Ehrich (2006) identify improved confidence as a key outcome, and van Nieuwerburgh et al. (2020) report that mentoring helps aspiring leaders gain greater assurance in both their leadership aspirations and their understanding of the ways to achieve them. Additionally, mentoring acts as a powerful socialisation tool, helping new leaders develop professional networks, build relationships, and integrate into leadership communities (Crow & Matthews, 1998; Daresh, 2004; Hansford & Ehrich, 2006; Irby et al., 2022). Together, these benefits suggest that mentoring can play a valuable role in supporting school leaders' ongoing development.

However, evidence also reveals several limitations of mentoring for school leaders. First of all, while mentoring is widely associated with improvements in leadership capacity, its broader impact, particularly on outcomes beyond leadership practice, remains uncertain. This is likely because most research tends to focus primarily on the outcomes regarding the development of school leaders themselves, such as enhanced confidence and improved leadership practices (e.g. Naicker et al., 2014; Robinson et al., 2009). Secondly, emerging research indicates that leadership mentoring can be counterproductive when it becomes overly prescriptive or controlling. As Awaya et al. (2003) argue, successful mentoring requires a delicate balance in which mentors are able to discern when to provide guidance and when to step back to allow mentees to take responsibility. When mentors take control of the mentee's actions, they risk limiting mentees' autonomy and sense of responsibility, ultimately weakening the developmental purpose of the relationship. These findings point to the importance of balancing support with professional agency in mentoring relationships. Compounding this issue are persistent practical challenges: poor mentor-mentee matching, lack of time, and unsupportive school cultures. As Castanheira (2016) notes, mentoring is less effective when mentors are not given adequate time or the choice to participate.

Despite the growing body of research on mentoring for school leaders, there is still ambiguity in the literature about what constitutes various mentoring models and their core features. Without clear definitions and conceptual boundaries, as well as minimal description of mentoring mechanisms and models, thereby limiting the usefulness of these studies to practitioners and policymakers, researchers cannot rigorously study mentoring processes, reliably replicate findings, and draw conclusions (Cosner et al., 2018; Dominguez & Kochan, 2020; van Nieuwerburgh et al., 2020; Wise & Cavazos, 2017). This lack of clarity contributes to a broader gap in the robustness of the evidence base regarding the impact of mentoring school leaders. It is, therefore, unsurprising that there is no consensus regarding effective mentoring models. For example, while most existing research on school leadership mentoring has focused on face-to-face formats, limited comparative studies make it difficult to determine whether in-person mentoring fosters stronger trust and communication than online alternatives. Some studies highlight the promise of virtual mentoring in offering supportive and trusting environments (e.g. Irby et al., 2022), but direct evidence comparing relational dynamics across delivery modes remains scarce. Likewise, the relative impact of formal versus informal structures, peer versus hierarchical mentoring, or short-term versus ongoing models remains unknown. Third, and closely linked to the question of impact, is the limited understanding of mentor and mentee characteristics. Few studies systematically examine or present comprehensive descriptions of participants'

backgrounds, such as their experiences, professional trajectories, and personal traits, even though these variables are known to influence how mentoring relationships develop and function (Banerjee-Batist et al., 2019). Mismatches in personality or expertise can hinder meaningful learning and professional growth (Daresh, 2004; Hansford & Ehrich, 2006; Southworth, 1995). Without understanding who participates in mentoring programmes and what they bring to the process, it is difficult to assess how different configurations may affect the quality, relevance, or impact of mentoring relationships.

While the discussion above has explored the reported benefits, limitations, and uncertainties surrounding mentoring for school leaders, it is important to recognise that these findings emerge from diverse educational contexts. Much of the existing research is situated in systems with governance structures, policy mandates, and leadership development models different than those in England. For instance, a significant portion of mentoring research comes from the U.S. (e.g. Ray, 2017; Finley, 2016; Heath, 2024). As discussed above, there are differences in research language and conceptual definitions on mentoring across countries, which complicate the usage of findings. Variations in terminology, such as 'mentoring' and 'coaching', reflect divergent research traditions and cultural understandings (e.g. Shernoff et al., 2015). Furthermore, policy contexts shape the conditions in which mentoring takes place. Access to professional development varies internationally: in systems like the U.S., leadership development often relies on district-led initiatives (Honig, 2012), while in England, it is more centrally structured through frameworks such as the National Professional Qualifications (NPQs). Similarly, in-house professional development takes various forms in different education systems depending on the policy climate around which schools have to navigate (Bush, 2020).

Accountability frameworks further influence school leaders' roles and priorities, which in turn may affect how mentoring is interpreted and made use of. For instance, Unda et al. (2023) show that Australian principals' perceptions of board-driven accountability pressures shape their role expectations and leadership practices. Likewise, Leithwood's (2001) analysis of how various accountability frameworks shape the demands placed on school leaders and their corresponding leadership practices underscores that mentoring models proven effective in one context may not translate directly into high-accountability, outcome-focused environments like England without careful adaptation. Finally, school-level contexts, such as organisational structure and cultural norms, also affect how mentoring is enacted and experienced, further limiting the direct transferability of international research findings to the English system. While

some schools have flat organisational structure and foster collaborative cultures (e.g. Laursen et al., 2024), higher levels of distributed leadership (Eryilmaz & Sandoval-Hernandez, 2023), others operate within more hierarchical traditions where mentoring may be more directive or compliance-driven. In this way, the translation of international mentoring research into the English context requires careful consideration of differences in research frameworks, policy and accountability systems, school organisations, cultures, and leadership priorities. Without such consideration, policy and practice risk using findings that are ill-suited to local needs and priorities.

This rapid review addresses key gaps in existing international research and practice on mentoring for school leaders by both aggregating global evidence and contextualising it for the English education system. Drawing from a wide body of literature, the review identifies common patterns in mentoring approaches, activities, design, and implementation features, mentor and mentee characteristics, outcomes, and influencing factors, taking stock of what is currently known and unknown about mentoring for school leaders across diverse systems.

3. Methodology

3.1 Project aims and research questions

The aims of this Rapid Evidence Assessment (REA) on mentoring for school leaders were:

1. To identify and describe models or approaches for mentoring school leaders,
2. To examine the characteristics of mentees and mentors in school leadership mentoring,
3. To assess the available evidence on the impact of mentoring school leaders,
4. To explore the research instruments used to evaluate the impact of mentoring school leaders.

To address these aims, the following specific research questions were formed:

5. What are the different models or approaches currently employed for mentoring school leaders?
6. What are the key characteristics (e.g., professional experience and expertise, demographic information) of mentees and mentors in school leadership mentoring relationships?
7. What is the available evidence regarding the impact of mentoring on school leaders?
8. What are the factors that influence outcomes of mentoring for school leaders?
9. What research instruments and methodologies have been utilised to evaluate the impact of mentoring school leaders?

In undertaking this REA on mentoring for school leaders, it is crucial to delineate the nature and purpose of a "rapid review" and justify its selection over other more extensive methodologies. An REA, unlike a full systematic review, employs streamlined systematic review methods to accelerate the synthesis of evidence (Ganann et al., 2010). This typically involves pragmatic choices to expedite the process, such as limiting the scope of literature searches, focusing on specific study designs, or omitting certain stages of a full systematic review (e.g., extensive grey literature searching or dual independent screening at all stages). Our decision to pursue an REA was primarily

driven by the need for timely insights to inform policy and practice regarding school leader mentoring. A full-scale systematic review, while offering a more exhaustive and robust synthesis, demands significantly greater time and resources, which were not available within the project's constraints. Furthermore, a meta-analysis, which statistically synthesises quantitative findings, was deemed inappropriate given the predominantly qualitative nature of the existing evidence base on school leader mentoring. Therefore, the rapid review approach allowed us to efficiently identify, appraise, and synthesise the most salient evidence, providing valuable insights within a practical timeframe without sacrificing the core principles of systematic evidence synthesis.

We completed this REA by following a structured process, which included a needs assessment, topic selection and refinement, protocol development, a literature search, screening and study selection, data extraction, quality appraisal, and synthesis. Unlike a full systematic review, our method was agile and iterative, prioritising ongoing dialogue with the Department for Education (DfE). This constant communication was key to ensuring the review process and its ultimate findings remained relevant and useful for policymaking. In preparation for the protocol, the project lead at the National Institute of Teaching (NIoT) met with the DfE to clarify the REA's purpose and scope. To inform these discussions about the kinds of evidence to synthesise, the team carried out a preliminary scoping search.

3.2 Pilot and scoping search

To prepare for the scoping search, the project team worked with school leadership experts at NIoT to develop a search string (Table 1) and inclusion and exclusion criteria (Table 2).

Table 1. Database search string

Category	Terms
Population	"headteacher" OR "principal*" OR "head teacher" OR "CEO" OR "governor" OR "school leader*" OR "school manager*" OR "education* leader*"
AND	
Intervention	"leader* train*" OR "coach*" OR "mentor*" OR "leader* development"
AND	
Context	"K-12" OR "secondary education" OR kindergarten* OR "primary school*" OR "first school" OR "middle school*" OR "high school*" OR "elementary school*" OR "secondary school*" OR "nursery school*" OR "early years" OR "early childhood education" OR "trust" OR "academy"

Table 2. Initial inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
The paper is a primary study or an evidence synthesis.	The paper is a master's thesis, conceptual piece, or commentary.
The paper focuses on mentoring for school leaders.	The paper focuses on a) mentoring for school teachers who do not hold leadership positions at schools; b) mentoring for pupils; c) mentoring in other contexts.
The paper is published between 2014 and 2024.	The paper is published before 2014.
The paper is published in English.	The paper is published in a language other than English.

The following databases were used to identify the relevant studies:

- Web of Science
- Scopus
- EBSCOHost (including ERIC)
- ProQuest
- Google Scholar
- OpenAlex

A pilot search of literature published from 2014 to 2024 was executed on January 6, 2025. The project team identified 184 potentially relevant studies by applying the search string detailed in Table 1. Subsequent title, abstract, and full-text screening, guided by the inclusion and exclusion criteria presented in Table 2, culminated in the production of an interim evidence brief. This document, presented to the DfE, offered an initial evaluation of the availability and quality of evidence pertinent to their brief. It highlighted that while numerous recent publications provide qualitative data on participants' perceptions and experiences of mentoring, correlational and causal evidence regarding the effectiveness of mentoring for school leaders remains limited.

3.3 Main search

Following consultation with the DfE, the REA's scope was extended to cover publications from 1994 to 2024. This expanded timeframe also allowed for the possible inclusion of research reports from government bodies and various research organisations such as the Education Endowment Foundation, DfE, Gatsby Foundation, National Foundation for Educational Research, and Nuffield Foundation. For the 1994-2013 period, our focus was narrowed to high-quality empirical impact evidence. We specifically sought studies from randomised controlled trials and quasi-experiments that met at least Level 3 of Nesta's Standards of Evidence scale (Puttick & Ludlow, 2013), ensuring they featured both control and treatment groups. Table 3 details the updated inclusion and exclusion criteria for the REA.

Table 3. Revised inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
The paper is a primary study or an evidence synthesis.	The paper is a master's thesis, conceptual piece, or commentary.
The paper focuses on mentoring for school leaders.	The paper focuses on a) mentoring for school teachers who do not hold leadership positions at schools; b) mentoring for pupils; c) mentoring in other contexts.
The paper is published between 1994 and 2024.	The paper is published before 1994.
The paper is published in English.	The paper is published in a language other than English.
If a paper is published between 1994 and 2013, it is a randomised controlled trial or a quasi-experiment.	If a paper is published between 1994 and 2013, it is a non-experimental study.

To maintain rigour in this REA, all identified studies were imported into EPPI Reviewer and underwent a two-stage screening process based on the criteria in Table 3. This involved initial assessment of titles and abstracts, followed by full-text screening, with duplicates removed. The project team lead also double-screened all included studies to ensure accuracy and consistency, resulting in the removal of additional irrelevant studies. We have documented this thorough process using a PRISMA diagram (Figure 1), which led to a final count of 133 included studies.

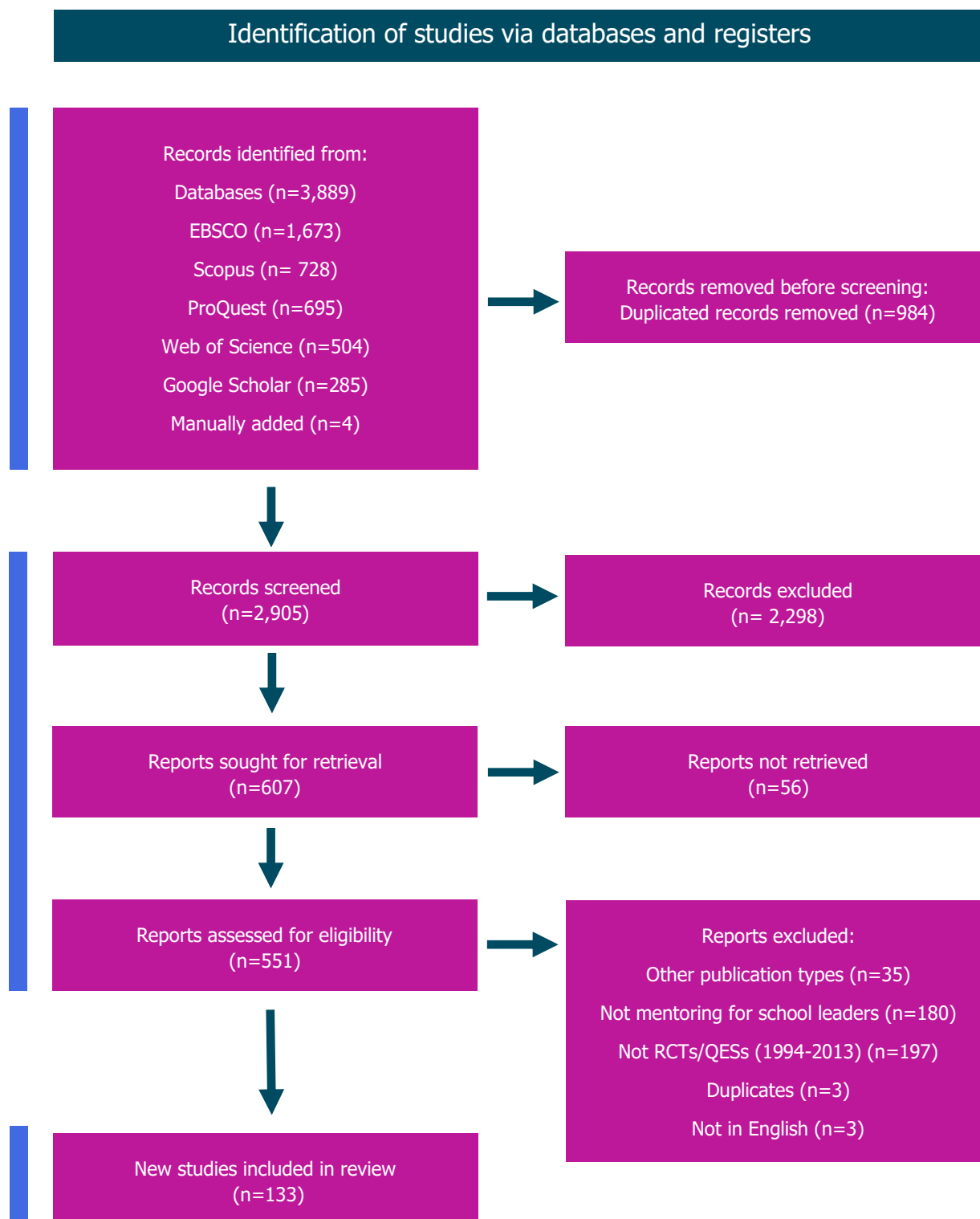


Figure 1. PRISMA Flow diagram (1994-2024)

3.4 Data extraction and management

Key information and data from the included papers were extracted using a bespoke data extraction framework. We designed this tool through an iterative process, informed by a thematic synthesis of mentoring research reports (Bond, 2023). Through weekly meetings over a seven-week period, the project team collaboratively discussed and refined the data extraction tool, ensuring its robustness and comprehensiveness. The tool was further improved by incorporating feedback from DfE partners, ensuring its capacity to capture pertinent and valuable information.

Data extraction initially prioritised impact evidence from included randomised controlled trials and quasi-experiments. The subsequent phase of data extraction focused on compiling descriptive information and qualitative evidence regarding various mentoring approaches or models for school leaders from all included publications. All data extraction activities were conducted on EPPI Reviewer.

3.5 Quality assessment

When conducting this review, we took several steps to assess the quality and robustness of the included studies. The steps that were taken include:

1. Development of a set of inclusion and exclusion criteria (Table 2 and Table 3) based on consultation with NIOT experts and the DfE. These criteria ensured that only studies meeting specific relevance and methodological standards were considered.
2. For publications between 1994 and 2013, we specifically focused on high-quality impact evidence from RCTs and quasi-experiments. To assess the methodological rigour of these studies, we applied Nesta's Standards of Evidence scale (Puttick & Ludlow, 2013). This allowed us to include only studies graded at a minimum of Level 3, meaning they featured both control and treatment groups.
3. A quality assessment was conducted on all included studies (n=133) using a simplified assessment tool developed based on CASP Critical Appraisal Checklists and JBI's Critical Appraisal Tools.

Below are the criteria used for each type of study:

Qualitative studies

1. Is the design and rationale clearly described?
2. Are tools (e.g., interviews/focus groups) and procedures well documented?
3. Is the sampling strategy (e.g., purposive, theoretical) mentioned and justified?
4. Are methods like coding, theme development, or triangulation explained and appropriate?
5. Does the study reflect on the researcher's positionality?

Quantitative studies

1. Is the design clearly stated and suitable for the question?
2. Is the sampling process appropriate, and is the sample size justified?
3. Are tools/instruments validated?
4. Are appropriate statistical methods used and reported accurately?
5. Are potential biases or alternative explanations considered?

Mixed methods studies

1. Are the qualitative and quantitative components clearly defined?
2. Are samples for both strands adequate and justified?
3. Are data collection procedures for both qualitative and quantitative parts rigorous and clearly explained?
4. Are the two strands integrated meaningfully in analysis and interpretation?
5. Does each component (qualitative and quantitative) independently meet expected standards of methodological quality?

Quasi-experimental studies

1. Is the non-randomised design clearly explained?
2. Are intervention and control groups similar at baseline?
3. Is the intervention replicable and well-documented?
4. Are outcomes measured before and after intervention?
5. Are external influences or alternative explanations addressed?

Randomised controlled trials

1. Is the random allocation method clearly explained and adequate?
2. Are participants and/or assessors blinded to group allocation?
3. Was the sample size justified statistically (e.g., power analysis)?
4. Are dropout rates explained and handled appropriately?
5. Was intention-to-treat¹ used to minimise bias?

Evidence syntheses

1. Is there a registered or pre-published protocol?
2. Are databases, search terms, and dates clearly reported?
3. Are these explicitly defined and consistently applied?
4. Are included studies assessed for quality/bias?
5. Is the method of synthesis (e.g., narrative/meta-analysis) appropriate and thorough?

¹ "Intention-to-treat" analyses data according to the initial random assignment, regardless of whether participants follow their assigned intervention. For instance, some mentors may not fully use the mentoring approach in focus or may adopt the control method instead.

Quality assessment was performed by the principal investigator of this project by reading the methodology section of individual studies. The methodology section was reviewed against each criterion and was marked as a) fully meets the criterion; b) partially meets; or c) does not meet. Then a confidence level is assigned to each study based on the following categorisation:

- **High confidence level:** 4-5 “fully meets” and 0 “does not meet”
- **Moderate confidence level:** ≤ 1 “does not meet” and others are “fully meets” and/or “partially meets”
- **Low confidence level:** 2+ “does not meet”

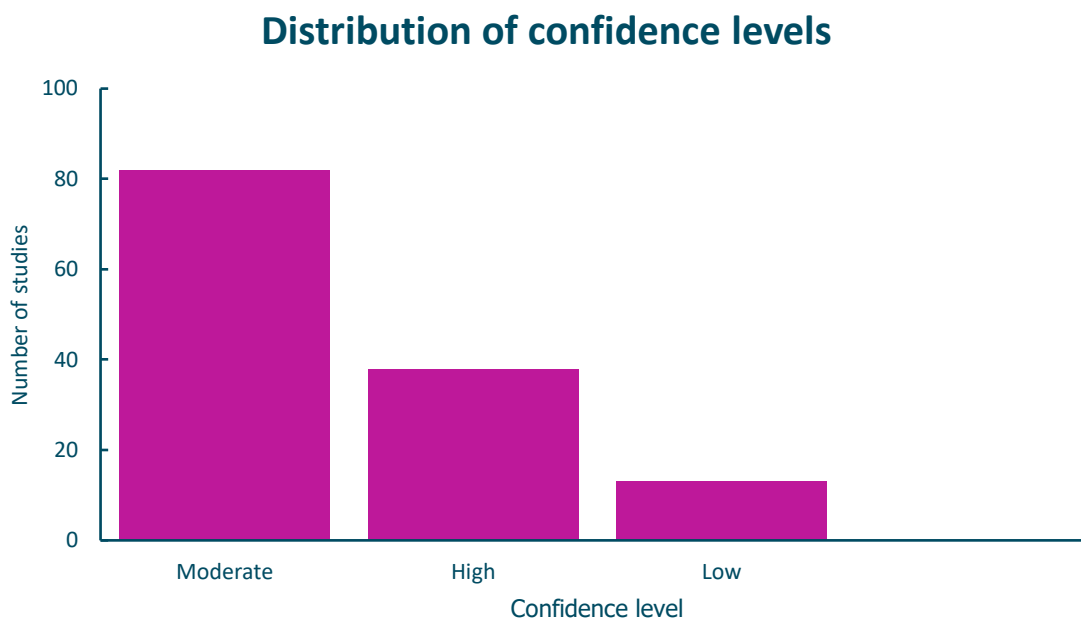


Figure 2. Confidence levels of included studies (n=133)

According to Figure 2, out of 133 studies in the dataset:

- 38 studies (29%²) are rated as having high confidence,
- 82 studies (62%) are rated as moderate confidence, and
- 13 studies (10%) are considered to have low confidence.

² Percentages listed in the three bullet points do not sum to 100% due to rounding.

Table 4 provides a further breakdown of study quality by study types. This distribution suggests that most of the studies are methodologically robust or at least moderately reliable, providing a solid evidence base while still highlighting some areas of potential caution. However, given the rapid nature of this review, another reviewer or specialists of different research designs were not involved. Thus, the outcomes of this quality appraisal should be treated as preliminary. Additionally, the judgement on quality is based on reported information and only information in the methodology section was read. It is possible that researchers have considered a criterion but did not report it due to length; this is especially relevant to journal articles that have strict word counts.

To facilitate understanding of the quality of the included studies cited in this report (Sections 4-15), two labels are assigned: an asterisk (*) is used to indicate studies that have a moderate confidence level while a cross superscript (+) refers to studies that have a high confidence level. We do not refer to studies with a low confidence level in this report.

Table 4. Confidence levels by study type

Study type	High	Moderate	Low	Total
Qualitative	26 (27%)	60 (63%)	10 (10%)	96 (100%)
Mixed methods	5 (25%)	13 (65%)	2 (10%)	20 (100%)
Quantitative	4 (40%)	5 (50%)	1 (10%)	10 (100%)
Quasi-experimental	1 (20%)	4 (80%)	0 (0%)	5 (100%)
RCT	1 (100%)	0 (0%)	0 (0%)	1 (100%)
Evidence synthesis	1 (100%)	0 (0%)	0 (0%)	1 (100%)

3.6 Relevance to policy and practice

To ensure the REA's findings are relevant to policymakers and schools, the project adopted a highly collaborative and iterative approach. Regular and structured meetings with the DfE were pivotal throughout the project's lifecycle, allowing for continuous alignment of the review's scope and outputs with their evolving policy needs. Crucially, input from the NIoT's programmes team directly informed the development of the search string and refinement of the inclusion and exclusion criteria to capture the most pertinent literature. This continuous engagement also extended to data extraction items, ensuring that the collected information directly addressed practical concerns for schools. Furthermore, preliminary findings were shared in an interim report, and an initial interactive evidence and gap map (EGM) was presented to the DfE, facilitating early feedback and enabling adjustments to the review's focus. This proactive consultation process ensured that the final findings were not only based on evidence but also directly actionable and aligned with the priorities of both policymakers and school leaders.

3.7 Data synthesis

We synthesised the extracted findings from 133 studies according to the research questions, using the data extraction tool co-developed by the Evidence Synthesis Team, the NIoT's College of Reviewers, and the DfE. We began with line-by-line coding based on the tool's themes, then moved to focused coding to combine and reorganise main and sub themes, developing a coherent narrative guided by the research questions. The resulting themes and sub-themes were integrated into an evidence and gap map, visually representing the available research, strength of evidence, and knowledge gap. The evidence and gap map, along with a discussion of the synthesised evidence, offers a thorough and high-level overview of the current and international state of knowledge in mentoring for school leaders.

4. Bibliographical and methodological information

The publication dates of the included studies range from 2012³ to 2024, encompassing a diverse array of publication types (see Figure 3), including doctoral dissertations (n=82), journal articles (n=42), reports (n=7), a conference proceeding (n=1), and an unpublished paper (n=1).

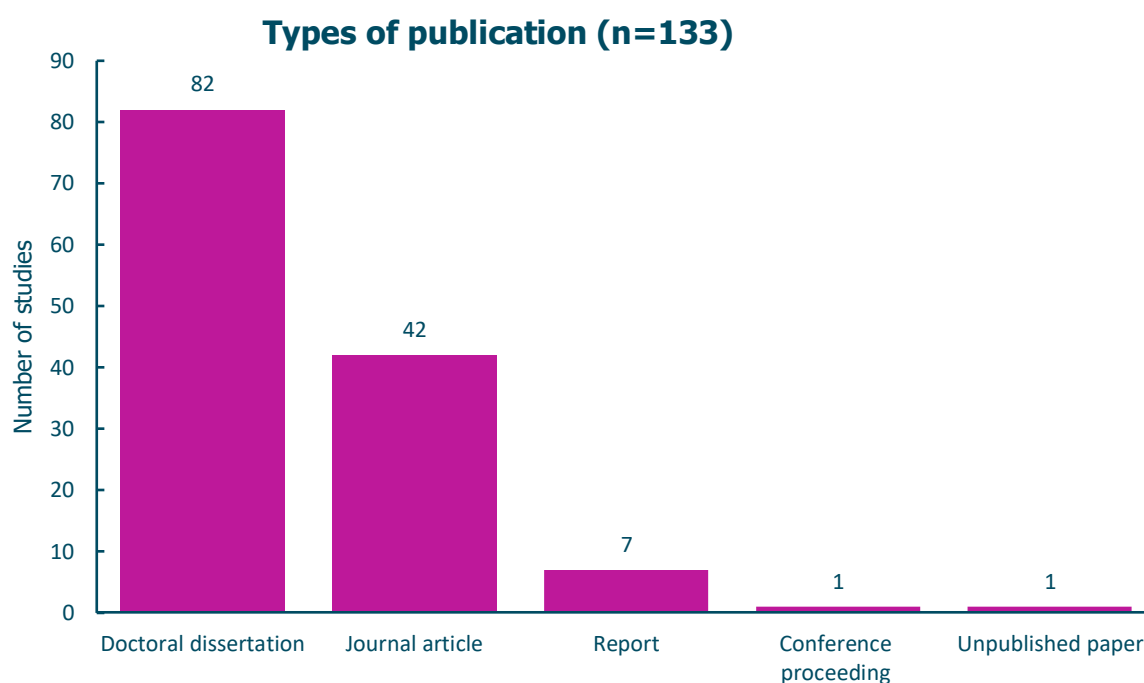


Figure 3. Types of publication of the included studies

³ We searched records published between 1994 and 2024. After applying the inclusion and exclusion criteria, the earliest records included were published in 2012.

Methodologically, the evidence base is varied, with studies employing qualitative approaches (n=96), mixed-methods methodologies (n=20), quantitative designs (n=10), quasi-experiments (n=5), one randomised controlled trial, and one review. Data collection strategies, presented in Figure 4, similarly vary, ranging from interviews (n=106), quantitative surveys (n=32), documents (n=21), open-ended surveys (n=19), notes (n=16), in-person observations (n=15), recordings (n=8), administrative data (n=6), ratings (n=2), public data (n=2), research studies (n=1) and sorting process (n=1).

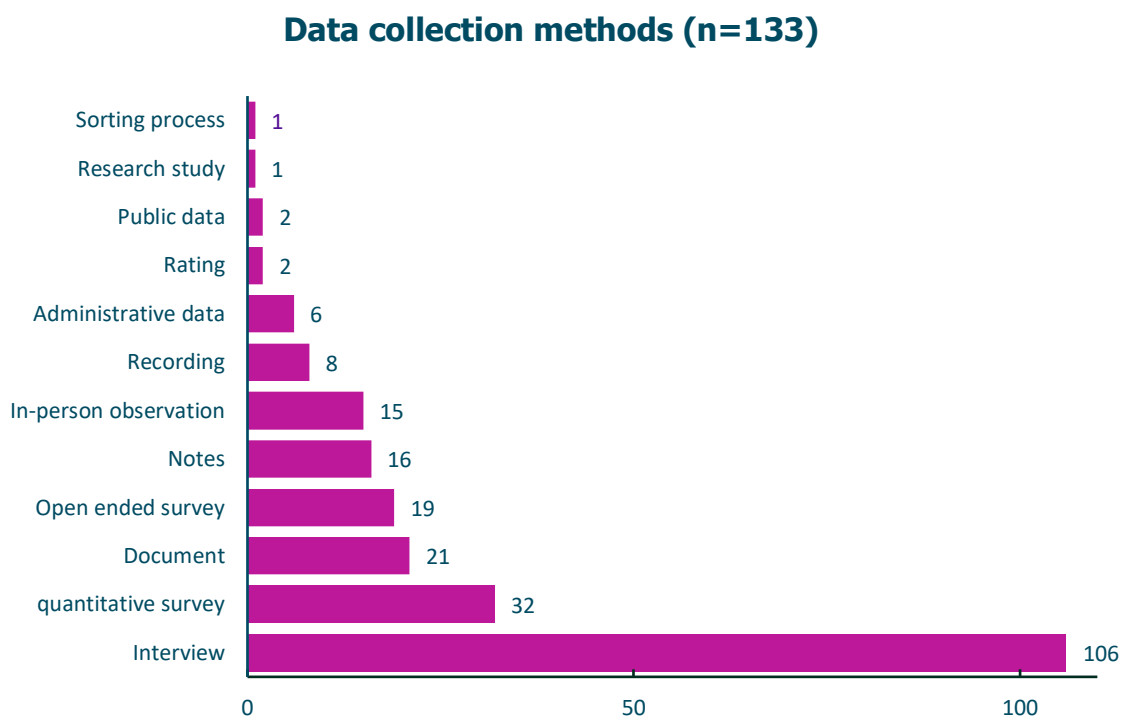


Figure 4. Data collection methods employed in the included studies

As shown in Figure 5, the total number of participants was fewer than 100 in the majority of studies (n=115), followed by studies with 100 to 499 participants (n=12). A small number of studies had larger samples of 500 to 999 participants (n=2) or more than 1,000 participants (n=2), while the remaining two studies did not report the number of participants. Two studies do not specify the number of participants or are secondary research studies.

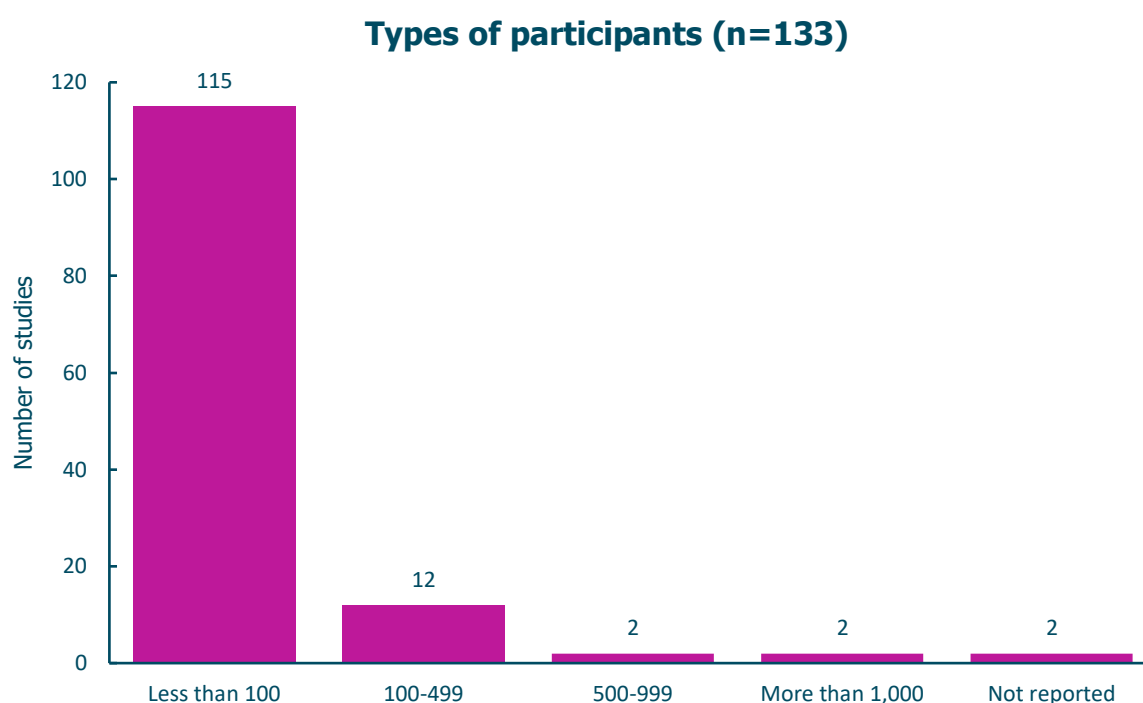


Figure 5. Number of participants in the included studies

According to Figure 6, the majority of the included studies were conducted in North America (n=111), as well as in Asia and Middle East (n=9), Europe (n=7), Africa (n=5), and Oceania (n=4).

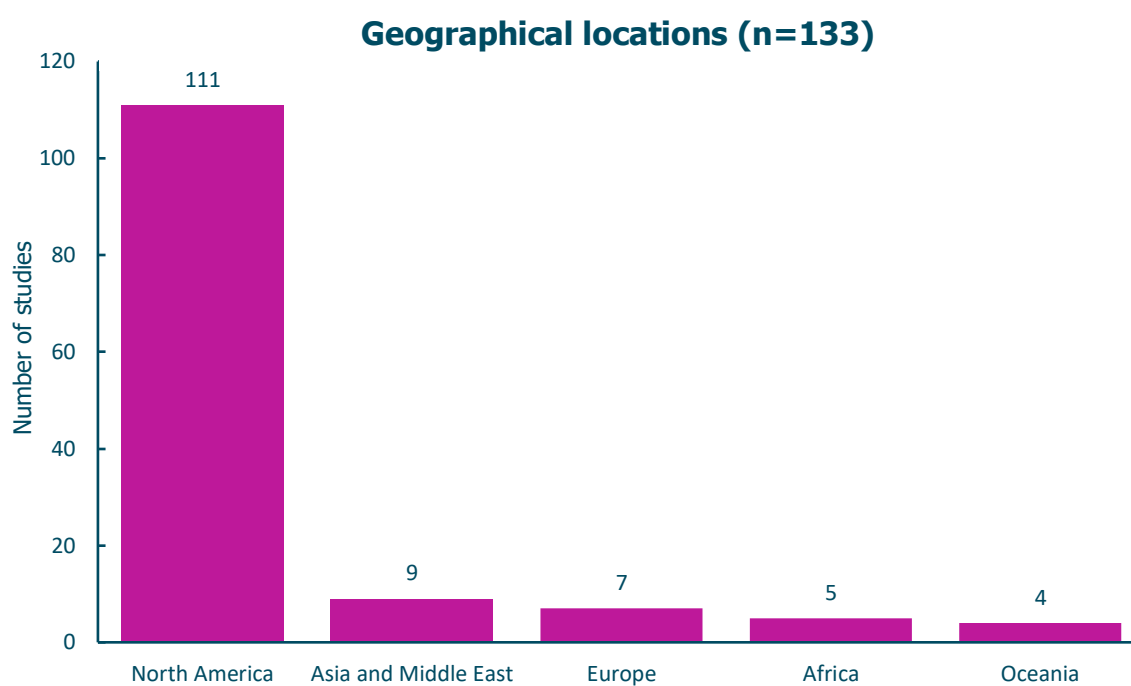


Figure 6. Geographical locations of the included studies

Some studies were conducted in more than one location resulting in the total number larger than 133. Geographic regions of study vary (albeit mostly US-centric), from specific districts in Illinois (Anderson, 2016*; Arellanes et al., 2023+; Kramer, 2020*) and North Carolina (Bastian & Drake, 2023+; Carroll, 2015*; Ellis-Lewis, 2015*; Griffin, 2017*) to broader regions like the Northeast United States (Bragg-Bullock, 2018*), Pennsylvania (Beiter, 2021*), South Carolina (Carrero, 2022+), and New York City (Moyer, 2024*; Felicello, 2014*). The scope of schools studied is broad, encompassing low-performing schools (Airola et al., 2014*), urban K-12 settings (Arroyo, 2018*; Bickman et al., 2012*; Fulk, 2021+; Griffin, 2017*; Gibson & McDaniel-Hall, 2017*; Lochmiller, 2018*), and rural schools (Klar, 2024*; Cox, 2021*). Studies have also spanned various levels, including early childhood, elementary, middle, and high schools (Anderson, 2016*; Barnett et al., 2017*; Beiter, 2021*; Dennis, 2023*; Dutton, 2015+; Jones et al., 2021*; Lochmiller, 2014*; Mannie, 2022*), with some research specifically addressing elementary school principals (Carroll, 2015*; Dodson, 2022+; Gentry, 2018*; Huddleston, 2022*; Levings, 2022+; Jarocki, 2019+; Jugmohan & Muzvidziwa, 2017*; Kim, 2018*; McGeeney, 2018*).

5. Mentee characteristics

Mentoring plays a significant role in the development of school leadership, supporting various stages of leaders from aspiring to experienced roles. An analysis of the included studies reveals the following leadership positions and stages of mentees (Table 5).

Table 5. Leadership position and stage of mentees

Theme	Sub-theme	Number of studies	Examples of studies
Emerging and aspiring leaders	New leader	35	Alshamrani (2020) ⁺ Arroyo (2018) [*] Bennett (2023) ⁺ Bowar (2019) [*]
	Aspiring leader	28	Abdelrahman et al. (2021) [*] Almager et al. (2021) ⁺ Alshamrani (2020) Hume (2015) ⁺
Mid-level leaders and managers	Assistant principal	25	Hume (2015) ⁺ Arroyo (2018) [*] Barnett et al. (2017) [*] Klar et al. (2024) [*]

Senior leaders	Principal	82	Airola et al. (2014)* Alege (2019)* Anderson (2016)* Andrea (2023)*
	Senior leader	9	Bernadette (2022)* Bragg-Bullock (2018)* Cowin et al. (2016)+ Klar et al. (2024) *
	Director	6	Hume (2015)+ Arroyo (2018)* King (2017)+ Smith (2022)*
	Superintendent	5	Anderson-Hume (2015)+ Daniels (2021) * Deborah (2024)+ Ellis-Lewis (2015) *
Not specified		11	Sarandrea (2024) * Gardner (2016) * Morgan (2021) * Owen et al. (2018) *

Table 5, which details key leadership categories, stages of mentees, and their corresponding frequencies, reveals that "principals" is the most frequently studied leadership position, appearing in 82 studies. This is followed by "new leaders" with 35 studies, and "aspiring leaders" with 28 studies, highlighting a significant focus in the literature on the development and experiences of these particular groups. It is worth noting that studies can include multiple mentee categories.

Understanding the demographic concentrations and the diverse characteristics of mentees, such as their individual attributes, prior professional experience, and educational background, is crucial. These factors influence mentee's needs, learning preferences, and receptiveness to mentorship, thereby shaping the dynamics and effectiveness of mentoring initiatives for school leaders. This section will therefore dive into the various characteristics of mentees in the included literature, aiming to provide a perspective on how these profiles influence the mentoring process and outcomes in school leadership development.

5.1 Professional experience and expertise

This section reports the professional experience and expertise of the participants, examining how these factors are distributed across the included studies. We categorise the findings into distinct sub-themes based on the participants' prior leadership and teaching experience, their educational qualifications, and their prior knowledge of mentoring and training.

5.1.1 Prior leadership/teaching experience

Table 6 depicts information regarding the professional experience of mentees, particularly concerning their leadership and teaching roles within educational settings. The data highlight a spectrum of experience levels, from emerging to very experienced educators transitioning into leadership.

Table 6. Mentee professional experience and expertise characteristics

Theme	Sub-theme	Number of studies	Examples of studies
Professional experience and expertise	Prior leadership/ Teaching experience (Less than 5 years)	74	Dodson (2022) ⁺ Cole (2017) ⁺ Combrinck & Daniels (2023) [*] Dennis (2023) [*]
	Prior leadership/ Teaching experience (5-19 years in education)		Anderson (2016) [*] Abdelrahman et al. (2021) [*] Tee (2023) [*] Barnett et al. (2017) [*]
	Education/Qualification	31	Dutton (2015) ⁺ Gimbel (2018) ⁺ Gümüş (2019) [*] Bello (2022) ⁺
	Knowledge of mentoring and training experience	7	Almager et al. (2021) ⁺ Bennett (2023) ⁺ Combrinck & Daniels (2023)

A significant proportion of mentees are identified as "new principals" or administrators in their early years of leadership. For instance, Dodson (2022)⁺ observes that all three principals in their study are in their first two years of principalship, obtaining certification concurrently with their administrative careers. This indicates mentees are individuals who transition into leadership roles with limited direct experience.

Conversely, many mentees bring substantial prior experience from various educational capacities. Abdelrahman et al. (2021)* note mentee experience levels range from 3-5 years up to 10⁺ years, including teaching English learners, suggesting a foundation in pedagogical practice. Anderson (2016)* further diversifies this, with a significant percentage of principals having 10-19 years (30.3%) and 20-24 years (22.3%) of K-12 working experience. The study by Arroyo (2018)* reveals that the majority of school leaders have over three years of leadership experience within their district, often having started their careers as assistant or associate principals. Indeed, this diverse background, from extensive teaching to initial administrative roles, underscores the varied professional journeys of mentees.

5.1.2 Education qualification

A prominent trend within the studies is the prevalence of master's degrees among mentees. Abdelrahman et al. (2021)* report that all their 22 participants are female master's students in a principal preparation programme, indicating that ongoing graduate studies are common among those seeking leadership roles. This is echoed by Anderson (2016)*, where 64.4% of principals hold master degrees, and Bowar (2019)*, noting that mentees have master's degrees in curriculum and instruction or educational leadership, with one actively pursuing a master's.

Doctoral-level education, including a Doctorate in Education (Ed.D.) and a Doctor of Philosophy (Ph.D.), also features significantly. Anderson (2016)* reports that 18.4% of principals hold an Ed.D./Ph.D. Arroyo (2018)* highlights that two school leaders have earned educational doctorates, with another beginning a doctoral programme. This suggests a pursuit of advanced academic credentials to bolster leadership capabilities. Furthermore, Bennett (2023)⁺ emphasises that 93% of participants have completed their principal preparation programme as a university postgraduate programme, with all attaining state certification/licensure, reinforcing the academic rigour associated with these roles.

5.1.3 Knowledge of mentoring and training experience

Prior knowledge of mentoring among mentees is rarely mentioned in research (Nurik, 2015*, Combrinck & Daniels, 2023*). Some mentees enter programmes with a foundational understanding of mentoring, while others demonstrate prior mentoring experience and training. The training experiences of mentees vary, with some benefiting from structured formal mentoring programmes and others navigating less formalised professional development pathways (Almager et al., 2021⁺). For instance, Bennett (2023)⁺ points out that 93% of participants complete their principal preparation programme as a university postgraduate programme, indicating a structured and formal approach to their training and development.

However, some mentees engage in professional development that is less formally structured or may not precisely meet their leadership needs. Combrinck and Daniels (2023, p. 1)* reports that principals have "no formal preparation" before becoming principals but are exposed to various forms of professional development and training that "does not specifically address their needs." This suggests that while professional development is occurring, there can be gaps in its direct applicability to the challenges of new leadership roles.

5.2 Demographic information

This section systematically presents the demographic characteristics of the mentee participants across the reviewed studies. We discuss key attributes such as gender distribution, racial and ethnic representation, and age demographics. Table 7 provides a comprehensive summary of these findings, indicating the number of studies that report on each sub-theme and offering specific examples of the research from which this demographic data was extracted.

Table 7. Mentee demographic information

Theme	Sub-theme	Number of studies	Examples of studies
Demographic information	Gender	51	Daniels (2021)* Dennis (2023)* Francone (2017)+ Fulk (2021)+ Gentry (2018)*
	Race/Ethnicity	31	Abdelrahman et al. (2021)* Anderson (2016)* Barnett et al. (2017)* Carroll (2015)* Newton-Thompson (2020)+
	Age	20	Anderson (2016)* Bastian & Drake (2023)+ Beiter (2021)* Dutton (2015)+ Felicello (2014)*

5.2.1 Gender

Gender has been found to influence the mentoring experience for school leaders, a dynamic explored across the included studies. These investigations, including works by Abdelrahman et al. (2021)*, Alshamrani (2020)+, Anderson (2016)*, and Hume (2015)+, reveal distinct challenges and opportunities that arise due to gender in leadership progression. Among the prominent challenges, women leaders frequently encounter gender bias and stereotypes in relation to their roles, which can impede their access to leadership opportunities and shape perceptions of their leadership capabilities. This often stems from societal expectations and cultural norms (Alshamrani, 2020+; Anderson, 2016*). Furthermore, women may face limited access to informal professional networks and mentorship opportunities, hindering their career progression, compounded by a scarcity of female role models in senior leadership positions (Alshamrani, 2020+; Hume, 2015+). The pervasive challenge of balancing professional responsibilities with family and domestic duties also disproportionately affects women leaders (Alshamrani, 2020+; Anderson, 2016*), and male mentors may, at times, inadvertently underestimate the skills of their female mentees (Hume, 2015+).

Conversely, significant opportunities emerge within gender-informed mentoring. Mentorship serves as a crucial support system, offering guidance for women navigating gender-related obstacles in leadership (Anderson, 2016*; Hume, 2015+). Notably, female mentors can provide invaluable insights and strategies to overcome gender-specific barriers (Hume, 2015+). Women leaders frequently contribute to more inclusive leadership by fostering collaborative and emotionally intelligent approaches, which can enhance decision-making and cultivate positive school environments (Alshamrani, 2020+). Their successes in leadership roles also serve to dismantle traditional gender stereotypes, paving the way for future generations of female leaders (Abdelrahman et al., 2021*). Moreover, broader policy reforms and advocacy initiatives aimed at promoting gender equity in education are continuously creating expanded opportunities for women in leadership (Abdelrahman, 2021*). Collectively, these insights underscore the necessity of tailoring mentoring programmes to address specific gender-related needs and challenges, thereby fostering equitable and effective leadership development for all school leaders.

5.2.2 Race/Ethnicity

Mentee demographics regarding race and ethnicity show a notable presence of White/Caucasian individuals, but also significant representation from various ethnic minority groups, indicating efforts towards diversity within leadership development programmes.

White/Caucasian individuals constitute a considerable portion of the mentee population. Anderson (2016)* reports that 83.2% of their participants are Caucasian. Similarly, Cox (2021)* notes that all participants are White, with the exception of one African American female, and Dennis (2023)* shows that White identities represented 60% of participants. This demographic trend suggests a strong presence of this group in the leadership pipeline.

However, the included studies also reflect a diverse representation from other racial and ethnic backgrounds. Focusing on a virtual mentoring programme in the United States, Abdelrahman (2021)*, highlights that the majority of female participants are Latina (11), followed by White (7), and African American (4). Barnett et al. (2017)* provides a breakdown of 48% Hispanic, 33% White, and 19% African American. This diversity suggests that mentoring initiatives are reaching out to and supporting individuals from various ethnic communities in their leadership development.

5.2.3 Age

The age of mentees and principals varies across studies. For instance, Bastian and Drake (2023)+ report an average intern age of 37.25 years, while other research indicates diverse age distributions, including concentrations of participants between 35-54 years (Anderson 2016)* and 41-55 years (Moyer, 2024)*. While some principals begin their roles between 27 and 49 years old (Felicello, 2014)*, broader age ranges observed for participants include 25-44 years (Bello, 2022)+, 31-61 plus years (Everett, 2016)*, and 39-54 years (Fulk, 2021)+.

6. Mentor characteristics

A review of the included research identifies distinct categories of mentors, showcasing their varied roles and involvement levels. Table 8 presents the job titles and positions of mentors found in leadership development programmes.

Table 8. Positions of mentors

Theme	Sub-theme	Number of studies	Examples of studies
Experienced leaders	Principal	55	Bastian & Drake (2023) ⁺ Celoria (2015) ⁺ Cowin et al. (2016) ⁺ Levings (2022) ⁺
	Superintendent	14	Lochmiller (2014) [*] Ahmed (2023) [*] Liang & Slotnik (2024) [*] Roberts (2023) [*]
	Director	8	Abdelrahman et al. (2021) [*] King (2017) ⁺
	Inspector	2	Jugmohan & Muzvidziwa (2017) [*] Nicolaidou (2016) [*]
	Head	1	Lindle (2016) [*]

	Principal supervisor	4	Alege (2019)* Bello (2022)+ Rand (2020)* Rosenthal (2023)*
	Assistant principal	1	Hume (2015)+
External/Specialised leaders		16	Almager et al. (2021)+ Dodson (2022)+ Jarocki (2019)+ Mannie (2022)*
Peers		1	Stiell et al (2022)*
Not specified		35	Andrea (2023)* Moyer (2024)* Sarandrea (2024)* David (2018)+

The analysis of mentor positions and job titles reveals that mentors who are experienced school leaders are the most prevalent, with principals being the dominant type (n=55). Other significant formal roles include external/specialised mentors (n=16), comprising leadership academics, university instructors, individuals from business settings, mentors from regional professional development centres, and other types of professional mentors (n=16). This is followed by superintendents (n=14) and directors (n=8). In contrast, peer/colleague mentors are rarely mentioned, appearing only once. Notably, a portion of the included research (n=35) did not specify the positions and job titles of mentors.

6.1 Professional experience and expertise

6.1.1 Prior leadership/teaching experience

Referring to Table 9, mentors frequently possess significant leadership experience, often with specific qualifications. Basic requirements for a mentor in some studies include at least five years as a school leader or director (Gimbel, 2018⁺). Many mentors are experienced principals, with studies noting those with five to nine years of service (Carrero, 2022⁺), at least two years of experience (Nwokorie, 2023^{*}), or ranging from five to twenty-five years of experience (Service, 2021⁺). Sciarappa and Mason (2014)^{*} mention that mentors are expected to have at least five years in the principalship. Beyond direct principal roles, some mentors are principal supervisors with significant tenure and training (Rosenthal, 2023^{*}), or even retired school administrators (Roberts, 2023^{*}). Dodson (2022)⁺ highlights mentors who have been working with executives, administrators, and teachers since 2013, indicating a broad scope of leadership engagement. Master (2022)⁺ also notes mentoring from national experts, further underscoring the high level of leadership expertise.

Table 9. Mentor professional experience and expertise characteristics

Theme	Sub-theme	Number of studies	Examples of studies
Professional experience and expertise	Prior leadership/teaching experience	52	Jugmohan & Muzvidziwa (2017)* Klar et al. (2024)* Kramer (2020)* Lipke (2020)*
	Prior mentoring experience	26	Carrero (2022)+ Dodson (2022)+ Master (2022)+ Nwokorie (2023)*
	Education/Qualification	13	Gümüş (2019)* Levings (2022)+ Kim (2018)* Rice (2024)+
	Expertise	3	Abdelrahman et al. (2021)* Almager et al. (2021)+ Blake (2023)*
	Reputation	2	Codd (2015)* Huffman (2017)+

A significant number of mentors have substantial teaching experience, ranging from five to nineteen years of being a teacher. For instance, Cowin and Newcomer (2019)⁺ detail a mentor with fourteen years as an elementary teacher before transitioning into leadership, while Kim (2018)^{*} features a principal who spent seventeen years as an elementary classroom teacher. Beyond these ranges, some mentors boast over two decades of experience. Abdelrahman et al. (2021)^{*} describe a mentor/coach with 40 years in education in various roles, and Jamison (2020)^{*} highlights a high school principal with thirty years in education. Lindle (2016)^{*} also reports mentors with over twenty years of professional experience in education, whereas Rosenthal (2023)^{*} describes a mentor whose career progression, beginning as a teacher, strongly implies extensive, multi-decade experience.

6.1.2 Prior mentoring experience

Prior mentoring experience is a common attribute among mentors. Airola et al. (2014)^{*} and Bishop (2021)^{*} both mention highly trained, experienced professionals. Carrero (2022)⁺ details mentors who have specifically trained and mentored assistant principals, and Dodson (2022)⁺ notes their mentor's long history of working with various educational professionals. Ferrell (2014)^{*} indicates that mentors need successful experience working with new principals, whereas Gibson and McDaniel-Hall (2017)^{*} add that mentors require extensive experience supporting and mentoring principals. Mentor experience in this area varies widely, ranging from those in their first or second year of a formal mentor training program (Huffman, 2017⁺) to individuals with extensive backgrounds. Many mentors are experienced principals (Jamison, 2020^{*}; Kim, 2018^{*}; Nwokorie, 2023^{*}). Some possess broader mentoring or leadership development experience, spanning four to 20 years (Lofthouse, 2019⁺; Owen et al., 2018^{*}) or even decades of principal supervision (Mannie, 2022^{*}). Additionally, some mentors are formally trained inspectors (Nicolaidou, 2016^{*}).

6.1.3 Education qualification

Mentors typically possess significant education qualifications, which in the reviewed literature, frequently include advanced academic degrees. Several studies note mentors holding master's degrees (Levings, 2022⁺; McMillian-Burks, 2022^{*}; Rosenthal, 2023^{*}), with some specifically in educational leadership (Ellis-Lewis, 2015^{*}; Rosenthal, 2023^{*}). Doctoral degrees are also observed among mentors (Ellis-Lewis, 2015^{*}; Cowin & Newcomer, 2019⁺), and some studies provide detailed educational backgrounds, including specific degrees like a Master of Business Administration (Dodson, 2022⁺) or through tables illustrating education levels (Gümüş, 2019^{*}; Jarocki, 2019⁺). One study mentions an individual mentor who is a leadership professor (Almager et al., 2021⁺).

6.1.4 Expertise and reputation

Mentors in the studies frequently possess specialised training and experience in coaching methodologies. For instance, Almager et al. (2021)⁺ notes individual mentoring by a leadership professor whereas Dodson (2022)⁺ describes mentors trained by an executive coaching firm in areas like advanced feedback and culture sustainability. The study by Cox (2021)^{*} shows that all instructional coaches have Cognitive Coaching foundations, and Rosenthal (2023)^{*} highlights a principal supervisor highly skilled in coaching techniques and community building.

6.2 Demographic information

This section summarises the demographic makeup of mentors in the reviewed studies, focusing on gender, race/ethnicity, and age. Table 10 provides a detailed breakdown, including the number of studies reporting on each demographic and examples of the research sources.

Table 10. Mentor demographic information

Theme	Sub-theme	Number of studies	Examples of studies
Demographic information	Gender	26	Abdelrahman et al. (2021)* Cox (2021)* Ermeling (2015)* Huffman (2017)+
	Race/Ethnicity	11	Bastian & Drake (2023)+ Cox (2021)* McKinney (2018)* Smith (2022)* Van der Merwe (2014)*
	Age	7	Celoria (2015)+ Ellis-Lewis (2015)* Gümüş (2019)* Hayes (2021)+ Jarocki (2019)+

6.2.1 Age

Mentor demographics consistently show a range of ages. Studies by Bastian and Drake (2023)⁺, Ellis-Lewis (2015)^{*}, Gümüş (2019)^{*}, and Levings (2022)⁺ frequently report mentor ages spanning from early 40s to over 60, with an average of 45.67 years old (Bastian & Drake, 2023⁺). Some research, like Jarocki (2019)⁺, even include specific age distributions or controlled for mentor age.

6.2.2 Gender

The gender of mentors varies across studies. Several studies (Abdelrahman et al., 2021^{*}; Hume, 2015⁺; Cox, 2021^{*}; Ellis-Lewis, 2015^{*}; Lochmiller, 2014^{*}; Mannie, 2022^{*}; Van der Merwe, 2014^{*}) indicate a predominance of female mentors or mentees. For instance, Bastian and Drake (2023)⁺ report 56% female mentors, and Lochmiller (2014)^{*} shows a 3:9 male-to-female mentor ratio, while others like McKinney (2018)^{*} and Service (2018^{*}, 2021⁺) include mixed-gender mentors. Some studies provide specific gender data (Gümüş, 2019^{*}; Jarocki, 2019⁺) or imply mixed genders through descriptions (Jugmohan & Muzvidziwa, 2017^{*}; Nwokorie, 2023^{*}; Roberts, 2023^{*}).

6.2.3 Race/Ethnicity

Race and ethnicity of mentors, when reported, show varied representation. Bastian and Drake (2023)⁺ report 33% of mentors are people of colour, often sharing the same race/ethnicity as their mentees. However, some studies indicate a predominance of White mentors (Cox, 2021^{*}; Cowin & Newcomer, 2019⁺; Levings, 2022⁺, who also include Latin American mentors). Other research provides more diverse breakdowns, including African American, Asian, Black, Caucasian, Hispanic, and Indian mentors (Ellis-Lewis, 2015^{*}; Lochmiller, 2014^{*}; McKinney, 2018^{*}; Van der Merwe, 2014^{*}).

7. Mentoring approaches for school leaders

Five mentoring approaches are identified: transformational, instructional, needs-focused, theory-based, and relational (Table 11). Notably, transformational mentoring emerges as the most frequently mentioned approach, appearing in 31% of studies (n=41). Instructional (n=23), needs-focused (n=22), and theory-based (n=19) approaches are each represented in approximately 14% to 17% of the studies, while relational approaches are the least common, referred to in only 7.5% of studies (n=10). In addition, it is worth pointing out that a large portion of the included literature (36%, n=48) does not specify the mentoring approach adopted. In this section, the mentoring approaches are presented as distinct practices based on information extracted from the included studies; however, we acknowledge that these approaches may overlap in both definition and practice.

Table 11. Mentoring approaches

Theme	Sub-theme	Definition	Number of studies
Transformational (n=41) ⁴	Holistic development	Supporting professional, spiritual, and personal growth through value-driven leadership and reflective practice	11
	Support for novice leaders	Supporting early-career school leaders, particularly first-year principals, in their transition and growth	5

⁴ Some studies coded under this theme do not provide additional details so are unable to be assigned to a sub-theme.

	Development of leadership dispositions	Cultivating leadership traits such as compassion, initiative, service, and teamwork, while promoting well-being and reducing burnout	4
	Female leadership advancement	Using mentoring as a tool to overcome gender-based barriers and promote the career development of women in educational leadership roles	3
Instructional (n=23)	Instructional mentoring	Involving expert mentors to help mentees improve in specific areas such as teaching and learning outcomes	23
Needs-focused (n=22)	Needs-focused mentoring	Providing tailored mentoring for early-career school leaders, particularly first-year principals, to support their transition and growth	22
Theory-based (n=195)	Mentoring models	Using structured mentoring frameworks to guide conversations through goal setting, reflection, planning, and action	3

⁵ Some studies coded under this theme do not provide additional details so are unable to be assigned to a sub-theme.

	Social cognitive theory	Promoting self-direction and self-reflection through structured inquiry and the development of cognitive dispositions	2
	Transformational leadership theory	Focusing on building leaders' capacity to inspire and empower others	2
	Relational theory	Emphasising mentoring relationships built on trust, mutuality, and co-constructed learning experiences	2
	Instructional improvements frameworks	Using established models to support instructional leadership development	2
	Legitimate peripheral participation	Encouraging participation in authentic leadership tasks by shadowing mentors	1
Relational (n=10)	Collaborative mentoring and networking	Promoting relational learning and providing opportunities for professional networking	7
	Peer/ co-mentoring/ collegial mentoring	Cultivating trust between mentors and mentees of similar professional status who collaborate and reflect on complex issues	3

7.1 Transformational approaches

Transformational mentoring involves mentors working with school leaders to cultivate leadership capabilities, align personal, professional and organisational goals, as well as support well-being, morale, and resilience. Several sub-themes are noted across the reviewed literature. First, transformational mentoring is viewed as a holistic and transformative process that fosters professional, spiritual, and personal growth (Arroyo, 2018*; Lochmiller, 2018*; Morgan, 2021*). For example, headteachers in Lofthouse and Whiteside (2019⁺, p. 9) report that mentoring allowed them to align their values with practice, helping them to 'make meaning and find depth of purpose in their own leadership journey'. Second, transformative mentoring often targets novice school leaders, particularly first-year principals (Anderson, 2016*; Huffman, 2017⁺; Rice, 2024⁺; Lipke, 2020*; Huddleston, 2022*), providing structured support during the initial stages of their leadership journey. Third, transformational approaches aim to develop leadership qualities such as compassion, initiative, teamwork, and service (Jugmohan and Muzvidziwa, 2017*; Ward, 2018*), and to enhance leaders' mental wellbeing while reducing burnout (Moyer, 2024*; Griffin, 2017*). Lastly, transformational mentoring serves as a strategic tool for advancing female leadership. It addresses the systemic barriers faced by women in educational leadership and supports their career progression into senior roles, such as superintendents, which are equivalent to Directors of Education in the UK (Alshamrani, 2020⁺; Hume, 2015⁺; Heath, 2024⁺)

7.2 Instructional approaches

Instructional mentoring involves expert mentors, often experienced school leaders, supporting mentees in targeted areas, particularly teaching practices and student outcomes (e.g., math and literacy). The focus is on improving school leaders' skills, knowledge, and competencies (Stiell et al., 2022*), such as time management (Arellanes et al., 2023⁺). Instructional mentoring is linked to improvements in teaching and learning (Lipke, 2020*; Roberts, 2023*) and is also associated with increased leader retention (Gimbel & Kefor, 2018⁺; Roberts, 2023*) (see the section on outcomes).

7.3 Needs-focused approaches

Needs-focused mentoring is characterised by personalised and context-specific support tailored to the mentee's individual circumstances (e.g., Carroll, 2015*; Ferrell, 2014*; Fulk, 2021+). Mentors vary their support based on mentee's needs, often derived from daily leadership challenges (Cox, 2021*; Griffin, 2017*; Kramer, 2020*). Matching between mentors and mentees is determined based on specific needs (Gibson and McDaniel-Hall, 2017*; Lochmiller, 2014*), and mentoring goals and curricula are adapted accordingly (Nwokorie, 2023*). For example, Owen et al. (2018)* emphasises that mentoring content, which involves areas of professional growth, should be informed by the needs of the school leaders, their students, and the broader community. Mentoring strategies range from discussing pedagogy and learning theories to unpacking useful resources or working through the mentee's challenges, successes, and progress. Owen et al. (2018)* further mentions that in order to provide customised support, this approach requires an understanding of the negotiated expectations of both the mentee and the mentor. Starr (2021)* describes a comprehensive model in which the mentor facilitates a comprehensive needs assessment and guides the development of a strategic action plan, with a focus on areas such as school vision, culture for learning, managing change, teaching and learning, and accountability systems. Progress is monitored continuously in collaboration with the principal and the school (Starr, 2021)*.

7.4 Theory-based approaches

Theory-based mentoring is explicitly guided by theoretical frameworks or models. Several theories and models are identified in studies reviewed. First, mentoring models such as GROW are employed (Stiell et al., 2022*; Hayes & Burkett, 2021+), which guide mentoring conversations through four stages: goal setting, reality assessment, options exploration, and action planning. Nicolaidou et al. (2016)* apply a similar five-stage coaching approach in the PROFLEC (Professional Learning through Feedback and Reflection) model, emphasising problem identification, peer reflection, goal setting, and action planning.

Second, cognitive coaching, based on Bandura's (2001) social cognitive theory and developed by Costa and Garmston (2002), also influences leadership mentoring design (Cox, 2021*; Greatbatch & Tate, 2018+). By integrating structured inquiry conversations, this approach involves 'a process and set of strategies intended to mediate thinking of individuals and organizations aimed at growing self-direction and self-reflection' in terms of five cognitive dispositions: efficacy, consciousness,

craftsmanship, interdependence, and flexibility (Cox, 2021*, p. 22). A similar approach is Integrity Coaching adopted in Lofthouse and Whiteside (2019)⁺, where a coaching model is designed to enable school leaders to find purpose and meaning in their leadership journey.

In addition, transformational leadership theory is also used to shape mentoring programmes, focusing on developing leadership capacities that inspire and empower others. For example, Kim (2018)* applies this theory to examine practices of developing future administrators in K-6 settings in the US context, and Mannie (2022)* uses it to explore how principal supervisors provide feedback and coaching.

Several studies apply frameworks that focus on mentoring relationships. Cowin et al. (2016⁺, p. 12) utilises Relational Cultural Theory, which focuses on 'interdependent self-in-relation' through growth-fostering interactions and an exploration of systemic power. Jamison et al. (2020)* utilise the Educational Leadership Mentoring framework to establish mentoring relationships. Specifically, this framework outlines a developmental process of three stages: mentors and mentees first build trust and rapport, then deepen collaboration and reflection, ultimately fostering mutual growth and leadership development (Jamison et al., 2020*). Besides, Lipke (2020)* draws upon critical-constructivism, portraying mentoring as co-constructed learning experiences between mentors, mentees, and other district leadership team members. These examples highlight the importance of building trust in fostering positive mentoring relationships, positioning mentoring as a collaborative and mutually empowering process.

Other frameworks include instructional improvements models. For example, Ermeling et al. (2015)* adapt the Getting Results framework, which emphasises supporting school leaders in improving teaching practices and student outcomes, by replacing traditional in-person coaching with virtual methods of guidance and support. Gibson and McDaniel-Hall (2017)* apply Clinical Instruction Model that highlights providing mentees with practical and hands-on experience in real-life situations. In addition, informed by the notion of legitimate peripheral participation, which emphasises learning through meaningful involvement in a community of practice, Van der Merwe (2014)* reports how leaders develop their leadership by actively participating in real-life school contexts, gradually building competence and confidence as they take on more central responsibilities. Collectively, these theory-based approaches highlight the importance of connecting research and practice when designing effective mentoring programmes for leaders.

7.5 Relational approaches

Relational mentoring encompasses two aspects. The first aspect involves collaborative mentoring, which fosters relational learning and expands professional networks (Emelo, 2011). For example, Bishop (2021)* and Heath (2024)+ investigate how mentorship relationships and networking can facilitate the career development of female superintendents by connecting them with potential mentors. The second includes peer/co-mentoring, communities of practice, and collegial coaching, where mentors and mentees of similar status or experience engage in reciprocal and trust-based dialogue (Nicolaidou et al., 2016*). These relationships allow participants to safely discuss complex change issues through shared reflection.

8. Mentoring activities

The review of 133 studies identifies 16 types of mentoring activities (see Table 12) implemented in diverse school leadership mentoring programmes. All the activities are primarily distinguished by the format of tasks done by mentors and mentees and are incorporated into mentoring programmes reflecting diverse approaches to leadership development. Based on the primary objectives of the activities and the contexts in which they are implemented, the 16 activity types can be further categorised into three groups. The first group is problem-solving activities: These activities are predominantly used in mentoring programmes for in-service leaders and are implemented to support mentees in addressing challenges encountered in their leadership roles. The second category is capacity-building activities: These activities are identified in mentoring programmes targeting both in-service leaders and pre-service leaders, and are employed to develop mentees' overall leadership capacity. The third category is mentoring mechanisms: Apart from contributing to mentees' leadership development, these activities are designed to ensure and enhance the effectiveness of mentoring programmes, by drawing on knowledge and expertise from sources beyond the mentors, including team activities and partnerships, or by ensuring effective communication, such as, orientation and remote communication.

Table 12. Mentoring activity types

Theme	Sub-theme	Definition	Number of studies
Problem-solving activities	Reflection	Reflection usually involves a structured process through which mentees critically examine their mentoring experiences or leadership experiences and values. It highlights contextual variety and emphasises self-agency. It can take the form of reflective conversations or discussions with mentors, as well as written self-reflections. It can also refer to mentors critically examining their mentoring approaches and practices.	49
	Feedback	Feedback is a form of activity in which mentors provide ongoing, honest, critical, and constructive input on mentees' actions, behaviours, performance, planning, and overall progress. Feedback can be delivered in various forms, including written reports, live verbal comments, or reflective conversations. It can occur on a daily basis or at key stages throughout the mentoring process. It also includes peer feedback where mentees evaluate and support one another, and reverse mentoring where mentees give feedback to mentors, prompting mentors to reflect and make changes.	40

	Consultation	Consultation is an ongoing, flexible form of support in which mentees seek advice, guidance, or feedback from mentors through various means such as face-to-face conversations, emails, phone calls. Through these interactions, mentors offer insights into leadership thinking and practice, share relevant expertise and experiences, and assist mentees in analysing challenges, solving problems, and making informed decisions in their professional context.	35
	Site visit	Site visit involves mentors visiting mentees' schools, mentees visiting mentors' schools, or both. They may also include visits to third-party schools by mentees or both parties. These visits are practically oriented and typically include activities such as walkthroughs, shadowing, and classroom observations, all of which are embedded within the school's daily routines. The primary purposes of site visits are to enable mentors to better understand the mentees' contexts, support mentees in problem-solving, and provide opportunities for mentees to learn through modelling. Site visits are usually formally planned and scheduled, and are sometimes preceded and followed by structured reflection and feedback.	31

	Simulation	Simulation refers to mock-up activities conducted by mentors and mentees, or mentees themselves, to prepare them for challenging future tasks.	4
Capacity-building activities	Tailored support	Tailored support includes personalised mentoring activities in which mentors use tools, such as pre-mentoring surveys or assessments, to evaluate a mentee's strengths, weaknesses, priorities, and developmental needs, and then customise their guidance and support strategies to directly address the mentee's specific challenges and goals. This support may include skill-building, goal setting, role-specific advice, and strategic planning. In addition, mentors provide emotional support, advocate for mentees' progress, recommend relevant opportunities or roles, and actively help mentees to pursue and attain them.	32
	Modelling	Modelling includes mentors demonstrating leadership strategies and practices such as how to observe instruction, how to create and maintain a positive school environment, how to build trust, and sharing sample tools and protocols, so that mentees can learn through observation and shadowing.	31

	Internship	Internship includes job shadowing and hands-on leadership experiences. It involves mentors delegating authentic leadership tasks to mentees. Through these hands-on experiences, mentees develop key leadership qualities such as initiative, autonomy, decision-making, and problem-solving.	18
	Formal learning session	Formal learning sessions refer to formally organised learning sessions, such as workshops and seminars, offered to mentees or sometimes mentors. They are designed to develop specific knowledge, skills, or competencies related to school leadership or leadership mentoring.	13

	Networking	Networking refers to mentors connecting mentees with professionals that provide guidance and support beyond the mentees' school setting. In some studies, this was with district central office ⁶ personnel, encouraging participation in professional organisations and committees, and forming peer support groups. It also involves mentees attending community events and fostering professional relationships that provide guidance and support beyond mentees' school setting.	13
	Literature-focused learning	Literature-focused learning refers to either mentoring activities formally structured around reading and discussing leadership related literature, such as books, articles, or research reports, or mentors sharing relevant literature with mentees to deepen their understanding of leadership theories and practices.	9

⁶ A district central office is the central administrative body for a school district in the US school education system, accountable for areas such as curriculum materials selection, hiring, budgeting, professional development and student support. There is no direct equivalent in the UK school education system. The closest counterparts are local authority education teams for local authority maintained and funded schools, and academy trusts for academies and free schools.

	Guided visualisation	Guided visualisation activities include guided questioning, scenario planning, and vision-building exercises that help school leaders picture their future goals and leadership impact, and shape a clear sense of professional direction.	8
Mentoring mechanisms	Team activity	Team activities include small and whole group discussions, collaborative tasks among mentees and working through shared assignments, all of which emphasise peer collaboration.	24
	Remote communication	Remote communication refers to mentors and mentees exchanging information, guidance and support through emails, messages, phone calls, FaceTime, etc. It usually happens between and beyond formal mentoring sessions and enables constant communication between mentors and mentees.	12
	Orientation	Orientation is usually organised as meetings to orientate mentees or mentors and mentees to the mentoring programme in terms of its goals, formats, requirements, resources, etc. It also helps mentors and mentees to know each other, or get to know their peer groups or third-party partners.	6

	Partnership	Partnerships refer to collaborative relationships with organisations and specialists to support mentees' leadership development.	2
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The activities vary in scope as well. Certain activities are comprehensive and integral, such as consultation and internship, involving multiple stages, and targeting various challenges or leadership developmental aspects, while others are more narrowly focused, such as simulation and literature-focused learning, often consisting of single, standalone tasks and focusing on one-off challenge or a single aspect of leadership development. The majority of the mentoring programmes analysed utilise a combination of activities. The few that primarily employ a single activity are found to implement the comprehensive activity types, such as reflection (e.g. Cowin et al., 2016⁺), consultation (e.g. Isnawan & Sudirman, 2022^{*}), site visits (e.g. Tee, 2023^{*}), and modelling (e.g. Airola et al., 2014^{*}).

Some of the activity types are found to be more frequently employed in mentoring programmes than the others. For example, the most frequently mentioned activity type is reflection (n=49), followed by feedback (n=40), while orientation (n=6), simulation (n=4) and partnership (n=2) are identified in only a few studies.

The following sections provide detailed descriptions of each activity type, accompanied by examples from the reviewed studies.

8.1 Reflection

Reflection is usually implemented throughout a mentoring programme (Mannie, 2022*; Nicolaidou et al., 2016*; Liang & Slotnik, 2020*), and happens daily or weekly (Carroll, 2015*). It is sometimes used at the end of a mentoring stage for mentors and mentees to collaboratively monitor performance and progress (Klar et al., 2024*; Nwokorie, 2023*).

Reflection is used for diverse purposes. It is used to help mentees develop skills, build relationships, handle challenges and set goals. It is usually assessed highly by mentors and mentees in terms of its effectiveness (Codd, 2015*; Cowin et al., 2016+; King, 2017+; Lindle, 2016*; Lofthouse & Whiteside, 2019+). Some mentees mention they do not only develop leadership through reflection, but have also developed reflection as a way of thinking (Huddleston, 2022*) and learn to apply this activity when working with teachers (Huffman, 2017+).

It is typically encouraged through mentors using reflective questions that are deep, open-ended and thought-provoking during mentoring conversations, to support mentees to think about their own practices, reach their own realisation and solutions, and stimulate new ways of thinking (Abdelrahman et al., 2021*; Hume, 2015+; Cole, 2017+; Dennis, 2023*; Gibson & McDaniel-Hall, 2017*; Levings, 2022+; Lochmiller, 2014*, 2018*; Messer, 2019+; O'Donnell, 2021*; Owen et al., 2018*; Service et al., 2018*).

While reflection is mostly guided through questioning during mentoring conversations, it can be highly structured. For example, the mentoring programme in Nicolaidou et al. (2016)* adopts a five-stage developmental approach and includes five steps: presentation of the problem, clarifying questions, reflection from peers, person in-focus reflections, and goal setting.

Reflection can also be conducted in a written format. In some mentoring programmes, mentees are required to produce written reflections. For example, mentees are required to submit monthly reflections on their progress to their mentors (Sciarappa & Mason, 2014*) or mentees write self-ethnography (Cowin et al., 2016+). Mentees can also be given prompts such as open-ended questions, to guide their written reflections (Almager et al., 2021+). Sometimes when mentees are able to enact a community of practice, a shared online document will be made so that mentees can asynchronously share their practices and reflections and develop as a community (Owen et al., 2018*).

Mentees mention that the supportiveness, confidentiality, and sensitivity allowed for reflective conversations contribute to the effectiveness of reflection (Carroll, 2015*). Some programmes implement self-reflection through means other than mentor guidance. For example, in Master et al. (2022+), self-reflection is supported by literature learning and online tools.

Mentors can use this approach to improve their mentoring skills. For example, mentors reflect on mentoring sessions (Ellis-Lewis, 2015*), write reflections on each mentoring session (Abdelrahman et al., 2021*), or use reflective questions to help identify areas of improvements in their mentees (Nwokorie, 2023*).

8.2 Feedback

In many mentoring programmes, one of the major responsibilities of mentors is to give mentees' feedback on their practices and their personal and professional development (Abdelrahman et al., 2021*; Master et al., 2022+). Most often, feedback is not a one-off event, but embedded into the mentoring process (Arellanes et al., 2023+; Jamison et al., 2020*). The activity can be live feedback sessions following mentors' observation of mentees' practices, in which mentors provide positive feedback and suggestions to mentees and discuss possible next steps (Moyer, 2024*; Carroll, 2015*; Ellis-Lewis, 2015*; Messer, 2019+; Ferebee, 2022*). It can be feedback conversations following mentees' sharing of practices and experiences (Carroll, 2015*; Dennis, 2023*; Ferrell, 2014*) or based on mentees' self-reflection (Drake et al., 2023*). It can be the continuous feedback given by mentors during the process of working together on a task (O'Donnell, 2021*). It can be written feedback using feedback forms (Mannie, 2022*). It can involve the utilisation of tools. For example, in Arellanes et al. (2023)+, mentors give mentees feedback on their planning and progress based on mentees' Time Utilisation Analysis reports. In Nicolaidou et al. (2016)*, mentees complete an online-based self-assessment inventory "Competence Profile of School Management" and they are provided automatically-generated, individualised feedback reports (Huber & Hiltmann, 2011). Sometimes, feedback can be given in the format of assessment or evaluation (Jamison et al., 2020*; Mannie; 2022*). For example, in Moyer (2024)*, an exit interview is conducted at the end of the intervention and the leaders' skill improvement is calculated, visualised, and shared with them.

Feedback can be used in virtual mentoring programmes (Abdelrahman et al., 2021*). Frequent feedback can help compensate for the loss of in-person interaction in the virtual programme (Ermeling et al., 2015*).

Mentees consider effective feedback to be timely (Mannie, 2022*) and “honest, critical, constructive and suggestive in nature” (Beiter, 2021*, p. 91). Establishing trust and maintaining confidentiality are important for giving and receiving effective feedback (Huffman, 2017+). One specific feedback strategy mentioned in the studies is for mentors to paraphrase and elevate mentees’ own words to help shift mentees’ thinking perspectives and positionings (Cox, 2021*). Conducted effectively, feedback is found to deepen self-evaluation and facilitate continuous growth (Cowin & Newcomer, 2019+), provide reassurance and keep visions on track (Huffman, 2017+; Levings, 2022+), nurture mentoring relationships and develop mentees’ self-efficacy (Kim, 2018*).

The activity type is not limited to feedback from mentors to mentees. When team activities are conducted, feedback can also be shared between mentees (Cowin & Newcomer, 2019+; Ferrell, 2014*). In some programmes, mentees are required to provide feedback to their teachers under instruction and supervision and practise feedback skills through doing (Jones et al., 2021*; Ahmed, 2023*). Reverse mentoring can happen when feedback is given from a mentee to a mentor. It is the feedback from subordinates, for example, from assistant principals, that mentor leaders are exposed to (Carrero, 2022+). Such feedback is found to improve mentor leaders’ behaviours and practices.

8.3 Consultation

Consultation is frequently implemented in mentoring programmes. It is found to build a mentoring relationship in which consistent and dependable support and advice is expected (Hume, 2015+). In some programmes, mentees are encouraged to consult and seek advice from mentors whenever they feel there is a need (Carroll, 2015*). In some other programmes, the mentoring sessions are structured, for example, on a weekly basis (Cole, 2017+) or monthly basis (Gümüş, 2019*). In some schools, mentors will be onsite, and consultation can happen on a daily basis (Fulk, 2021+). When a long-term mentoring relationship is established, consultation can go beyond the formal sessions and turns into informal support along the process (Cole, 2017+). Sometimes, a mentee will reach out to their predecessors and consult and thus agentively establishes a mentoring relationship (Combrinck & Daniels, 2023*; Daniels, 2021*; Jugmohan & Muzvidziwa, 2017*).

Consultation topics span a broad spectrum and are largely initiated in response to mentees' needs (Carroll, 2015*). Some mentees seek consultation to avoid making mistakes (Jamison et al., 2020*). Sometimes, mentees seek consultation in challenging periods or situations (Levings, 2022+). In some programmes, consultation is to provide technical support to mentees, such as preparing for school assessments (Ellis-Lewis, 2015*). In some programmes, consultation serves as a platform for mentees to generate and refine ideas (Liang & Slotnik, 2020*; Lochmiller, 2014*) and for mentors to share their practices and experiences (Lochmiller, 2014*). In this way, mentoring relationship becomes more like a community of practice (Lochmiller, 2014*).

Mentees consider it valuable to have someone they can seek advice and opinions from and discuss ideas with (Bowar, 2019*). It helps mentees build confidence (Jugmohan & Muzvidziwa, 2017*; Messer, 2019+) and self-efficacy (Messer, 2019+). Trust between mentors and mentees is considered essential (Bowar, 2019*) and only when trust has been built that mentoring conversations can shift to in-depth topics (O'Donnell, 2021*). Confidentiality and a non-evaluative environment are regarded as important for effective consultation (Ferrell, 2014*). Preparedness is another factor that mentees regard as important to the success of consultation (Fulk, 2021+).

8.4 Site visit

Site visits are usually implemented to supplement other types of mentoring activities, for example, internships (Bastian & Drake, 2023+) and reflection (Cole, 2017+).

It can be in the form of walkthroughs in which mentors follow mentees in their daily leadership routines, observe their practices, identify problems, and give suggestions or collaboratively solve the problems (Carroll, 2015*; Codd, 2015*). It can also be mentors conducting walkthroughs with or without mentee leaders to better understand the mentees and their school environments, which allows for more targeted guidance and support (Cole, 2017+; Ferrell, 2014*; Gümüő, 2019*; Messer, 2019+; Starr, 2021*).

It can be mentors and mentees observing teachers in mentees' schools and then reflecting collaboratively on teaching and learning (Hood, 2014+). In certain programmes, the frequency of school visits by mentors is determined by how the mentees are tiered based on indicators such as school performance data and leadership experience and performance (Mannie, 2022*). A preference for more frequent visits, even if each visit is shorter in duration, is identified among some mentees (Ferrell, 2014*).

Site visits can be bi-directional. Mentees can also visit mentors' schools, to observe and learn (Alshamrani, 2020⁺; Fulk, 2021⁺; Huffman, 2017⁺; O'Donnell, 2021^{*}). By sharing their practices and school data with mentees and inviting feedback, mentors also foster trust and create a safe mentoring environment (Gardner, 2016^{*}). Site visits can involve schools outside the mentor-mentee partnership. For example, in Sunardi and Siswandari (2020)^{*}, a mentor takes the mentee to visit a third-party school so that the mentee can learn from that school too. It can involve peer learning. For example, in Tee (2023)^{*}, a group of mentees visit a peer school and observe in classrooms based on the school's improvement goals and give feedback.

8.5 Simulation

Simulation can be conducted one-on-one in which a mentor and a mentee role-play a challenging situation. For example, Cox (2021)^{*} presents an activity in which a mentee is offered a safe place by the mentor to role-play a potentially difficult staff discussion, and is helped to develop perspectives and empathy.

Simulation can be implemented as a team activity and based on hypothetical scenarios. In Rice (2024)⁺, mentees are presented with a video clip of a challenging scenario in which one teacher's negativity stops a team of teachers from working collaboratively in a meeting. At various points, the video invites mentees to assume the role of the principal in the video and discuss as a team how to respond to the facilitator who approaches the principal in the video.

8.6 Tailored support

Understanding mentees' behaviours, attitudes, beliefs is essential in providing tailored support. Mentors achieve this by examining mentees' current practices (Dennis, 2023^{*}) and campus data (Huddleston, 2022^{*}; Daugherty et al., 2020^{*}) or through conversations (Starr, 2021^{*}). Tools are often utilised to understand mentees' behaviours, attitudes, and beliefs. before tailored support is provided. For example, Dodson (2022)⁺ presents how a mentor uses trust inventories and "Do-Know-Be Tree" to understand mentees and also guide mentees to understand themselves, and then helps mentees to create vision and set goals. Cole (2017)⁺ presents how a mentor utilises interviews, formal mentoring conversations, and a collaborative log to understand a mentee's needs, goals, practices and plans. Gümüş (2019)^{*} presents how mentors use pre-surveys to understand mentees' professional development needs, their strengths and weaknesses so that they can create an effective agenda for the programme. Progressive understanding of mentees' development is emphasised in

some programmes. For example, Huddleston (2022)* presents how mentors utilise Gallup Clifton Strengths to identify mentees' strengths and create mentoring agenda accordingly during mentoring process. Klar et al. (2024)* presents how mentors make use of an action research template to achieve continuous improvement. Monitoring progress is also highlighted in some programmes (e.g. Daugherty et al., 2020)*.

Collaboration is emphasised in tailored support in that mentors and mentees usually jointly identify needs, set goals and make plans (Carrero, 2022⁺; Cox, 2021^{*}; Gibson & McDaniel-Hall, 2017^{*}; Hood, 2014⁺). Customised approach is another characteristic frequently mentioned in studies. Different approaches to mentoring are adopted based on mentees' individualised needs. For example, a direct approach of providing hands-on instructions is adopted by mentors if mentees are to learn skills; otherwise, a guided approach is employed to help mentees set goals and to provide support and encouragement (Ellis-Lewis, 2015^{*}).

Tailored support is often implemented to develop mentees' leadership behaviours and help achieve outcomes. For example, in Bickman et al. (2012)*, a series of surveys are conducted to understand teachers' views on the mentee principals' learning-centred leadership, and the levels of trust between principals and teachers. Detailed feedback reports are then produced and provided to individual mentee principals. Mentors provide tailored support to mentees based on the feedback reports, in the form of guided reflection, goal setting, action planning and ongoing assessment and support. The process then helps develop the principals' instructional knowledge and skills.

Tailored support is found to assist mentees in utilising the skills and strategies learnt in the mentoring programme. For example, in Moyer (2024)*, the weekly mentoring sessions begin with a review of how mentees practise their learnt skills and strategies acquired in the past week, which provides an opportunity to "celebrate successes and troubleshoot challenges" (p. 33). Following the instruction on the skills and strategies of the week, a detailed implementation plan including "how, where, when, frequency, and what to do if barriers arise" (p. 46) is then jointly made.

Tailored support is also implemented to assist mentees' professional growth. It can involve mentors assisting mentees in identifying their strengths, developing specific skills for a leadership role, introducing mentees into professional networks, recommending job opportunities, providing references, etc. For example, Bishop (2021)* presents how tailored support is provided to female leaders to help them succeed. The personalised support from mentors is considered to play a critical role in their career trajectories by female leaders in Heath (2024)⁺

8.7 Modelling

Mentors demonstrate practical leadership tasks and skills such as how to enter a classroom, observe instruction, motivate teachers, check with students to see whether they were engaged in the lesson, implement parents' proposals, etc. to instruct mentees (Lochmiller, 2014⁺; Pariente & Tubin, 2024⁺; Van der Merwe, 2014^{*}).

Mentors also utilise modelling to exemplify behaviours and values expected of mentees. For example, Codd (2015)^{*} presents how a mentor models vulnerability, such as saying "I was wrong" to principals, to demonstrate desired behaviours, build relationships, and engender trust. Felicello (2014)^{*} shows that mentors develop mentees' autonomy through demonstrating autonomous decisions and actions. In Kim (2018)^{*}, a mentor models the value of person-centred approach in leadership practice, leading to mentees' development of leadership capacity. As mentors model to pass on leadership values and philosophy, they also become role models for mentees (Van der Merwe, 2014^{*}).

Modelling also involves mentors sharing samples and tools with mentees, such as, sample agendas, successful assessment and evaluation tools (Ellis-Lewis, 2015^{*}; Lochmiller, 2018^{*}). These tools serve as an opportunity to replicate desired practices (Lochmiller, 2018^{*}). Modelling can also involve mentors sharing their experiences and stories so that mentees learn from them (Huffman, 2017⁺; Lochmiller, 2014^{*}; Messer, 2019⁺; Nwokorie, 2023^{*}).

When mentors model leadership tasks, mentees observe to learn (Drake et al., 2023^{*}). Through observing mentors in relevant real-life scenarios, such as how they perform a task, handle a crisis or plan, mentees attach meaning to mentors' modelling and achieve learning from modelling (Carrero, 2022⁺).

8.8 Internship

Internships can be short and embedded in principal preparation programmes in which mentees have the opportunity to shadow mentors in schools (Service & Thornton, 2021⁺). They can also be onsite leadership development pathways for assistant principals (Everett, 2016^{*}).

During internships, mentees have the opportunity to try out leadership tasks under supervision (Daniels, 2021^{*}). The real tasks and hands-on experiences undertaken by mentees during internships foster authentic learning (Arroyo, 2018^{*}), develop

leadership capacity (Kim, 2018*; Ward, 2018*), and support mentees in exploring potential career paths (Ward, 2018*).

Granting interns or mentees autonomy and opportunities to take on leadership responsibilities is considered one of the most valuable mentoring relationships by mentees in their leadership development (Everett, 2016*). While some mentors give mentees great autonomy to play the leadership role on their own (Daniels, 2021*), interns can be given various types of tasks by their mentors during internships. Drake et al. (2023)* identify four types of tasks: shadowing tasks where interns observe, time-consuming leadership tasks with little variation, low-level routine tasks, and high-level leadership tasks. According to Drake et al. (2023)*, low-level routine tasks provide limited opportunities for leadership growth, such as “hall monitoring, cafeteria duty, or data entry” (P. 6), and high-level leadership tasks provide greater opportunities for growth, such as planning for events and conducting teacher observations. They suggest that the high-level leadership tasks provide interns “the opportunity to actualise complex leadership skills essential to an aspirational principal position” (Drake et al, 2023*, p. 7). It is found that trust between mentors and mentees is a crucial factor in influencing the types of tasks mentees are assigned and the level of inclusivity they experience during their internships (Jamison et al., 2020*).

8.9 Formal learning session

Formal learning sessions such as workshops and seminars often serve to complement other individualised mentoring activities (Arellanes et al., 2023+; Master et al., 2022+). Usually, they are structured and formalised. For example, Klar et al. (2024)* present 12 day-long professional learning sessions that are further divided into three sub-sessions. Each sub-session has a unique focus and format. The first sub-session introduces various mentoring practices and lenses to mentors; the second one is a mentoring session delivered by mentors to mentees; the third one involves mentors and mentees working in their role-like groups.

These sessions can be offered prior to mentoring programmes to provide initial training, to help participants understand the programme framework, and to build relationships to enable meaningful interaction, particularly if the mentoring programme is mainly conducted online (Ermeling et al., 2015*).

These sessions can also be structured into the mentoring programme to provide support for other mentoring activities. For example, in Nicolaidou et al. (2016)*, training workshops are offered to mentees to help them interpret and reflect on

feedback reports for an online self-assessment inventory they complete at an earlier stage of the mentoring programme.

The sessions can be workshops on a particular skill. For example, in Huffman (2017)⁺, mentors and mentees together attended a workshop focusing on communication skills for leadership, which participants reported as beneficial for mentees' decision-making and perspective development.

8.10 Networking

Networking can involve having access to people of various relevant roles. Mentors are found to offer networking opportunities to mentees by recommending committees they can join, suggesting relevant organisations (Bishop, 2021^{*}), or introducing them to individuals connected to their professional roles (Fulk, 2021⁺). From the mentees' perspective, Arroyo (2018)^{*} describes how having connections with district office personnel and other schools and school leaders is considered by mentees as valuable for decision-making and career development. Similarly, mentees in Kim (2018)^{*} value attending community events and networking with stakeholders.

Networking can be setting up a peer group in which mentees engage in collaborative practices and provide each other with developmental support (Codd, 2015^{*}). Peer groups can be utilised by mentees for professional support (Roberts, 2023^{*}). Networking with peers can also help mentees overcome the sense of isolation and improve their confidence (Greatbatch & Tate, 2018⁺).

Participation in gender-specific networks is found to be beneficial as well. For instance, women-only groups are perceived as creating spaces where female leaders feel more comfortable speaking up (Heath, 2024⁺).

8.11 Literature-focused learning

Literature-focused learning can involve mentors sharing academic literature with mentees to assist their leadership development. For example, in Dodson (2022)⁺, a mentor shares a piece of research on mindset with mentees to help mentees understand the relationship between language use and mindset and thus helps mentees improve their leadership practice. The shared literature can be on good leadership practices in general (Ferebee, 2022^{*}) or a specific aspect mentors found important for mentees' development, such as instructional leadership (Messer, 2019⁺).

It can be an organic part of the mentoring programme. For example, in Cowin and Newcomer (2019)⁺, mentees are required to study research publications on trust development so they can be better prepared for the next stage of writing and sharing self-ethnography in the mentoring programme.

It can be structured as an independent session. For example, in Huffman (2017)⁺, mentees are required to read selected chapters of a book. Following that, a mentoring session is devoted to small-group discussion and skyping with the book author.

8.12 Guided visualisation

Guided visualisation involves mentors utilising different means to guide mentees to build a vision for their schools. In Dodson (2022)⁺, the mentor requires mentees to create a vision for their schools in the form of a hashtag. This activity helps mentees to create a vision that ensures focused actions by staff and leads mentees to self-awareness of core values.

It involves mentors guiding mentees in goal setting and action planning. For example, Bickman et al. (2012)^{*} presents a mentoring programme in which mentors lead mentees to identify an area for change based on the teacher feedback reports mentees receive and collaboratively design clear steps towards goal attainment. Cox (2021)^{*} presents several mentors guiding their mentees to envision actions that lead to successful outcomes. For example, one mentor works with the mentee on how to communicate a proposed change to staff in a way that will minimise resistance and encourage support.

Guided visualisation can also involve mentors using guiding questions to lead mentees to visualise the potential impact of their leadership practice. For example, in Axelsen (2022), a mentee describes the mentor's questions such as "what do you want [school staff] to walk away with at the end or how do you want them to feel" (p. 60) as a catalyst for envisioning the potential outcomes of specific actions, leading them to a solid vision of their leadership.

8.13 Team activities

Team activities can involve mentees collaborating with peers within a mentoring programme, which help mentees to build mentoring communities. For example, mentees in Arroyo (2018)^{*} form a principal learning community to collaborate through observation, conversation, and common planning, and consider these collaborations a significant part of the mentoring programme. In Codd (2015)^{*}, mentees form their

professional learning communities, each having three or four principals engaged in collaborative practices. Within these self-established professional learning communities, mentees feel safe to challenge each other and are able to collaboratively solve problems. In Cowin and Newcomer (2019)⁺, mentees develop mutual understanding and build trust through team activities, which in turn contribute to the formation of mentoring communities that support other aspects of the programme.

Team activities can be organised as team mentoring sessions. For example, the mentoring programme presented in Dodson (2022)⁺ includes a series of cohort mentoring sessions apart from one-on-one mentoring. Mentees are required to complete homework before each cohort session, and the mentor and mentees debrief their homework together during the cohort session. These sessions also allow mentees to support each other (Nicolaidou et al., 2016^{*}).

Team activities are also widely used in peer mentoring programmes. Griffin (2017)^{*} presents how team activities are utilised to establish a professional learning community to realise peer mentoring in the absence of resources and structures to support novice principals. Working in teams, the principals are able to design and implement an intervention, and successfully decrease isolation and improve morale.

Another type of team activities takes the form of mentors forming a community to support each other. For example, Klar et al. (2024)^{*} present a mentoring programme in which mentors are provided group instruction on mentoring practices and are able to attend joint debriefing sessions. Through these team activities, mentors share their mentoring experiences and plan future mentoring sessions.

8.14 Remote communication

Remote communication is employed by mentors and mentees to stay in contact between scheduled meetings and provide timely support. In Ferrell (2014)^{*}, email correspondence and phone calls are used to offer support beyond face-to-face meetings. Mentees in Pariente and Tubin (2024)^{*} value the communication they have with mentors via phone calls, messages, emails, etc., beyond formal mentoring hours. It is found that communication and collaboration through remote communication contribute to a successful mentoring relationship between mentors and mentees (Gimbel & Kefor, 2018⁺).

Remote communication can be employed by mentors at the outset of mentoring to gain understanding and build relationships. For example, mentors in Huddleston

(2022)* start the mentoring programme by sending emails to introduce themselves and inviting mentees to complete “a pre-meeting get-to-know-you survey” (p. 219).

Remote communication can include reminder and feedback emails sent to mentees during the mentoring programme to help keep them on track. For example, in Moyer (2024)*, “[a] mid-week email was always sent to [mentees] which reviewed content, included praise, and reinforced the goal of the week” (p. 46).

Remote communication is also utilised in virtual mentoring programmes to maintain connections. For example, in the virtual mentoring programme in Ermeling et al. (2015)*, the mentor employs more frequent email exchanges as a strategy to compensate for the lack of face-to-face interaction. Apart from emails and messages, the virtual mentoring programme presented in Owen et al. (2018)* sets up an online community of practice to encourage mentees to develop and maintain connections.

8.15 Orientation

Orientation can be organised to introduce the programme. For example, the mentoring programme in Moyer (2024)* starts with a meeting to introduce the content and procedure of the programme and invite mentees to plan logistics.

It can be employed to establish relationships and understand expectations. For example, the mentor in Dodson (2022)⁺ uses a pre-mentoring meeting to introduce herself to mentees, and allow space for mentees to introduce themselves to the group and share their expectations of the mentoring sessions. Abdelrahman et al. (2021)* present a virtual mentoring programme that employs an online group meeting as the first step of the programme to “clarify expectations and establish norms” (p. 79). A mentor in Levings (2022)⁺ also uses the first meeting with their mentee to establish guidelines and personal responsibilities, and considers this strategy a key contributor to the mentoring relationship.

8.16 Partnership

Partnerships can involve collaborative relationships established with third-party organisations to leverage their expertise. For example, Codd (2015)* presents a long-term partnership established between principal development programmes and the University of Washington's Centre for Educational Leadership. The partnership with the university provides support for principals' instructional leadership development and forms the foundation of the principal development programmes.

Partnerships can involve specialists from a wider field who bring relevant expertise. For example, in King (2017)⁺, through the mentoring programme, mentees establish collaboration with specialists in the wider field of early childhood education, which assists a mentee's school in building integrated classroom settings to better address the needs of homeless students the school is serving.

9. Other mentoring features

This section synthesises main features of the mentoring programmes reported in the included studies from eight aspects: formality, modality, duration, contact intensity, focus, quality assurance, costs, and funding sources (as shown in Table 13). As not all studies provide full details for each aspect, this synthesis aims to highlight the key themes that emerge from the reported programmes.

Mentoring programmes mentioned in nearly half of the included studies are formally structured (n=61), and more programmes take place in person (n=38) than virtually (n=16) or through a hybrid approach (n=19). Among the 56 studies that specify duration, programmes range from two weeks to three years, with the most common length being one to two years, inclusive (n=37). Contact intensity ranges from 4-6 hours to over 500 hours each year.

The included studies identify eight focus areas in leadership mentoring: instructional leadership, professional and personal growth, relational leadership, equity, mentor–mentee relationships, leadership mentality, moral and ethical leadership, and technology leadership. Programme quality is often managed through mentor selection and training, mentee selection and training, and ongoing support or assessment.

Among the limited studies that report financial data (n=14), time and resource commitments emerge as key factors for effective implementation. Most programmes require substantial time investment from both mentors and mentees. Funding information is also limited. Among the studies that report it, most mentoring programmes are funded by governments (n=18), with a few supported by corporate sponsors (n=3), self-funding sources (n=2), or non-profit organisations (n=1).

Table 13. Mentoring features

Theme	Sub-theme	Number of studies
Formality	Formal/structured	61
	Informal/unstructured	36
	Job-embedded	29
Modality	In-person	38
	Hybrid	19
	Virtual	16
Duration	Within 1 year	9
	1-2 years (including 1 year)	21
	2-3 years (including 2 years)	17
	3 years and more	9
Contact intensity	Within 20 hours/year	6
	20-100 hours/year	5
	Over 100 hours/year	2

Focus	Instructional leadership	48
	Personal and professional growth	19
	Relational leadership	14
	Equity	11
	Mentor-mentee relationship	6
	Leadership mentality	6
	Moral and ethical leadership	4
	Technology leadership	3
Quality assurance	Selection of mentors	39
	Training for mentors	29
	Ongoing assessment and support	17
	Admission of mentees	8
	Training for mentees	2
Costs	Resource	12
	Time	9

Funding source	Government	18
	Corporate sponsor	3
	Self-funded	2
	Non-profit organisation	1

9.1 Formality

Formality refers to the extent to which mentoring programmes are intentionally structured and institutionally supported. Among the reviewed studies, formal or structured mentoring is the most frequently reported format, as coded in over 61 studies. These programmes typically include predefined goals, scheduled sessions, structured phases of development, and formal mentor-mentee pairings. For example, Cole (2017)⁺ describes a multi-stage mentoring model built around a structured framework, including groundwork, formal weekly mentoring conversations, feedback, and ongoing support. The programme uses guided interviews, collaborative reflection, and follow-up assessments to scaffold leadership mentoring across eight weeks. Similarly, Arellanes et al. (2023)⁺ report a highly structured programme with monthly mentoring sessions, weekly check-ins, and mandatory professional development. The programme specifies exact time allocations for different mentoring foci and includes foundational training sessions, makeup options, and repeated offerings for new participants.

By contrast, informal or unstructured mentoring is less frequently documented (n=36) and typically arises through ongoing professional interactions rather than formal assignments. These relationships are often responsive, flexible, and grounded in day-to-day collaboration. For example, Cox (2021)^{*} reports that a principal and mentor met regularly to discuss emerging school needs, but their conversations were spontaneous, unstructured, and focused more on daily instructional matters. However, informal mentoring is often not stand-alone; in most cases (in 21 out of the 36 studies), it exists alongside formal mentoring structures. Cole (2017)⁺ provides a clear example of this: while the early stages of mentoring followed a structured coaching cycle, the formal meetings eventually gave way to more informal support via phone calls and planning

sessions sustained throughout the year. Similarly, Felicello (2014)* shows how assigned mentors can evolve into long-term informal allies. Therefore, the boundaries between formal and informal formats are often blurred.

The third category, job-embedded mentoring, is identified in 29 studies where mentoring is integrated into the daily work of mentors and mentees. This format emphasises relevance, authenticity, and situated learning. For instance, Griffin (2017)* describes how principals engaged in a professional learning community that incorporated mentoring as part of ongoing, practice-based inquiry and reflective dialogue. Likewise, Lochmiller (2014)* outlines a university-based programme in which leadership mentoring occurs alongside school-based administrative tasks.

Importantly, job-embedded mentoring is not mutually exclusive with formal or informal mentoring, and they often co-exist within a single mentoring programme. For example, Pariente and Tubin (2021)* describes a national scheme where novice principals receive on-position mentoring over two years (job-embedded), with structured one-on-one meetings every few weeks (formal) taking place in the school setting, as well as ongoing communication through phone calls, messages, and emails between mentors and mentees outside formal sessions (informal).

9.2 Modality

Over half of the included studies (n=60) do not specify the modality of mentoring. Among those that do, in-person delivery is the most common (n=38), typically with scheduled, face-to-face sessions. A typical example is described in Arellanes et al. (2023)+ where principals engage in on-site mentoring monthly and in-person meetings every two weeks. Virtual mentoring, though less frequent (n=16), uses digital tools to support remote interaction, as seen in Ermeling et al. (2015)*. Some participants in virtual programmes express concerns about diminished spontaneity and reduced personal connection, which may affect relationship building (Ermeling et al., 2015)*. Hybrid approaches (n=19) blend in-person and online interaction, allowing greater flexibility while maintaining relational depth. For example, Lochmiller (2014)* describes a programme combining onsite sessions with remote follow-ups to support sustained engagement.

9.3 Duration

In the studies that report clear duration data (n=56), mentoring programmes vary substantially in length, ranging from one week to three years. For instance, Service and Thornton (2021)⁺ report a one-week short programme, Sciarappa and Mason (2014)^{*} describe a nine-month programme, and Lochmiller (2014)^{*} documents a three-year structured programme. To ensure consistency across the dataset, weeks and months are converted into years using standard rates (e.g., one week = 0.02 years). Most programmes last between one and two years inclusive (n=37). The mean duration of mentoring programmes is 1.55 years, with a standard deviation of 0.92 years.

Programme length alone is not sufficient to capture the full picture of engagement, so we also extract intensity data where available. 13 studies provide details about the intensity of mentoring through reported contact hours. Some programmes are relatively light-touch, such as monthly one-hour meetings (e.g., Owen et al., 2018^{*}), while others are more intensive. For example, Sciarappa and Mason (2014)^{*} require at least 72 contact hours over nine months, and Gimbel and Kefor (2018)⁺ involve 45 hours in the first year and 35 hours in the second. In several cases, weekly or biweekly meetings are reported, typically lasting 1-2 hours (e.g., Messer, 2019⁺; Lochmiller, 2014^{*}). The most intensive example is found in Carroll (2015)^{*}, where one principal reports meeting her mentor two full days per week for a year. Another high-intensity programme allocates over 200 hours to on-the-job mentoring activities (Sunardi & Siswandari, 2020)^{*}.

9.4 Focus

Leadership mentoring programmes serve a wide range of aims, as reflected in the multifaceted foci of these programmes. As shown in Table 13, programme foci can be grouped into eight key thematic categories. Foci differ from the outcomes reported in Section 10. Foci refer to the areas of leadership that a mentoring programme aims to address while outcomes are measurement of effectiveness based on specific research foci, which may or may not be the same as foci. The most common focus among the included studies is on instructional leadership (n=48), where mentoring aims to improve teaching and learning through the development of school leaders' capacity to support instructional quality, teacher well-being, and student outcomes (e.g., McGeeney, 2018^{*} and Lochmiller, 2018^{*}). As Gimbel and Kefor (2018)⁺ observes, mentoring that strengthens leadership capacity and helps new principals develop a vision grounded in their school context is especially valuable because it not only supports the leaders themselves but also contributes directly to improving student

achievement. Johnston et al. (2016)* also points out that school leaders tend to value mentoring more when it focuses on instructional leadership, as this directly supports their core responsibility of enhancing teaching effectiveness and student learning in schools. Some mentoring programmes have a broader vision, such as those described in Airola et al. (2014)* and Klar et al. (2024)*, the development of instructional leadership is explicitly framed as a pathway that drives sustained progress in school performance.

Another widespread focus of mentoring programmes lies in fostering both personal and professional growth among novice school leaders (n=19). Mentoring is not only about role-specific skills, but also about shaping the leaders themselves personally. For instance, in Guilford County's mentoring model, mentors aim to "grow the person professionally and in many cases personally," ensuring that new principals develop the skills needed to lead effectively (Ferrell, 2014, p. 48)*. In a similar vein, Messer (2019)+ observes that mentorship is deliberately designed to support principals both professionally and personally so they can serve their school communities confidently. Arroyo (2018)* explores a programme that targets the professional growth of novice urban school leaders and highlights how mentoring supports their transition into complex leadership contexts.

In addition, 14 studies report mentoring programmes that focus on developing relational leadership, which refers to the ability of school leaders to foster trust, collaboration, and strong interpersonal relationships within the school community (Cox, 2021)*. For example, Cowin and Newcomer (2019)+ explores how mentoring helps principal candidates learn to lead not only as instructional leaders but also as relational mentors, to support others through connection and empathy. The focus of relational leadership often extends to shaping school culture with shared values, beliefs, and practices. For example, Kim (2018)* highlights how mentoring supports school leaders in creating a culture built on effective working relationships. Cox (2021)* also shows that mentoring focuses on building strong teams and coherence, directly linked to shaping the collective culture of a newly established school.

Moreover, 11 studies report mentoring programmes that focus on equity. These programmes aim to support underrepresented groups in educational leadership and address systemic barriers. Among them, nine studies focus on gender equity and explore how mentoring helps women navigate school leadership and address gender-based prejudice. For example, Jugmohan and Muzvidziwa (2017)* examines the experiences of mentored female principals and investigates how mentoring supports their career advancement in K-12 education. In addition, two studies

(Smith, 2022^{*}; Bastian and Drake, 2023⁺) focus on racial and ethnic equity, both highlighting how mentoring can help diversify leadership pipelines and support leaders from racially marginalised backgrounds.

The included studies also identify some less common foci of the mentoring programme, including mentor-mentee relationship, leadership mentality, moral and ethical leadership, and technology leadership. Six studies emphasise the importance of trust and strong mentor-mentee bonds as a foundation for effective coaching (e.g., Ferrell, 2014^{*}; Jamison et al., 2020^{*}). Another group of six studies focuses on leadership mentality, such as raising school leaders' self-efficacy (Cox, 2021)^{*}, reducing feelings of isolation (Griffin, 2017)^{*}, cultivating positive mindset (Dodson, 2022)⁺, and supporting self-positioning (Pariente & Tubin, 2024)⁺. Moral and ethical leadership is addressed in four studies, in which mentoring reinforces values such as care, equity, and integrity. For example, Kim (2018, p. 52)^{*} introduces the principle of "people before paper" to prioritise human-centred leadership. Finally, three studies explore how mentoring can build school leaders' confidence in using technology for instructional improvement and school management, such as preparing principals for technology integration (Metcalf & LaFrance, 2013)^{*}.

9.5 Quality assurance

95 studies report at least one quality assurance measure to ensure the effectiveness and integrity of their mentoring programmes. Quality assurance in this context refers to systematic processes that maintain and improve the standards of mentoring, with the purpose of ensuring that mentors are prepared and supported, and that mentees are appropriately selected and trained. Mentor selection is the most frequently reported quality assurance mechanism (n=39). Mentor selection criteria often include leadership experience, interpersonal skills, and demonstrated instructional expertise. For example, in Sunardi and Siswandari (2020)^{*}, mentors are selected based on their professional competencies and peer recognition. Master et al. (2022)⁺ describes a formal mentor selection and matching process in which current or retired principals are trained and certified by National Center on Education and the Economy as mentors. These mentors are then matched to mentees based on contextual similarities such as school level, location, and student demographics to ensure relevance of experience and accessibility.

Mentor training is mentioned in 29 studies, which often include structured sessions to familiarise mentors with mentoring models and developmental goals. For example, in Pearson (2023)⁺, mentors receive structured training through the International Coaching Federation (ICF)-accredited programme of the school district. Master

principals complete 30–60 hours of training, mentoring fellows complete 60-90 hours, and full-time mentors complete over 125 hours. Similarly, in Daugherty et al. (2020)*, mentors in the Targeted Intensive School Support model receive team-based mentoring training and participate in 55 to 135 hours of professional development, including both formal sessions and informal opportunities.

Mentee admission is reported in 8 studies, usually based on leadership potential, career stage, or nomination by superiors. For example, Ward (2018)* selects aspiring leaders through district-level talent identification. Mentee training appears in 2 studies, in which mentees participate in orientation or skill-building workshops to prepare for the mentoring process (e.g., Rice (2024)+ includes pre-mentoring induction sessions to build mentees' leadership self-efficacy). In addition, ongoing assessment or support is found in 17 studies, in which mentors receive continuous feedback or supervision during programme implementation. For instance, Dodson (2022)+ discusses the role of reflective supervision sessions to improve mentoring quality. Huffman (2017)+ notes that a leadership development administrator was responsible for overseeing the mentoring programme, with any relational or operational challenges reported to this office for timely resolution. Similarly, Huddleston (2022)* describes how district principal mentors engage in monthly meetings to collaboratively enhance their mentoring practices and ensure continuous professional growth and programme quality.

9.6 Costs

While direct financial data is often unquantifiable, a limited number of studies (n=14) indicate that both time and resource costs are essential for the successful implementation of mentoring for school leaders. Most programmes required substantial time investment from both mentors and mentees. For example, Dodson (2022)+ describes a blended model that requires participants to dedicate two hours per week for eight weeks, through both individual and group mentoring. Similarly, Cox (2021)* outlines a six-week programme pairing principals with individual mentors, where scheduling and personnel coordination revealed hidden resource demands, even if direct financial costs were not specified.

Several studies describe financial, logistical, or material demands, even when direct monetary costs were absent. Stiell et al. (2022)* characterises the National Association of Head Teachers (NAHT) Aspire project as low-cost compared to others, yet still requiring coordinated delivery across staff levels with moderate intensity. In Messer (2019)+ and Saffle (2016)*, mentoring relies on retired principals donating time or

school districts finding the capacity to support weekly meetings. Saffle (2016)* especially notes the strain on time and institutional capacity, with mentoring often perceived as competing with other professional obligations. Hayes and Burkett (2021)+ further highlights the struggle to sustain mentoring programmes for school leaders without dedicated funding. The Coaching Academy for Aspiring Principals programme depends on a university's provision of training space and mentors free of charge. In the absence of paid mentoring positions, only five volunteer mentors supported 25 to 30 participants over a school year. The cost-efficiency comes at the expense of workload distribution and scalability. Similarly, Calacone (2015) reports that while mentoring was perceived as effective, it was not viewed as a prudent investment beyond a principal's fifth year, signalling that cost-benefit assessments shape programme continuation. Finally, Owen et al. (2018)* describes how mentors in a virtual always-available community of practice felt constantly engaged, often needing to respond to mentees' requests and concerns in real time. Starr (2021)* describes a three-year leadership mentoring programme that reflected a deep, sustained time investment, though financial details are not provided. This was echoed in Sciarappa and Mason (2014)*, who documents a minimum of 72 mentoring contact hours over nine months, despite the absence of financial remuneration for mentors. The study further warns that unreliable funding streams (e.g., time-limited government or corporate support) threaten the continuity and scale of such programmes.

9.7 Funding sources

Similar to the lack of quantified financial data, the funding source information is largely unavailable in the studies. Only 24 studies explicitly specified their sources of funding. The most common source reported is government funding (n=18), typically from local education authorities or state departments of education. For example, Roberts (2023)* describes how a principal receives access to state-provided grant funding for leadership mentoring through her school district. Likewise, in Lofthouse and Whiteside (2019)+, a headteacher mentoring programme was funded by the National Education Union to support leadership development across the UK. Corporate sponsors (n=3), such as banks or consulting firms, also provided support, usually through targeted education initiatives or grants. Lochmiller (2014)*, for example, reports a leadership mentoring programme supported by a corporate sponsor for novice principals. In rare cases, mentoring programmes are also supported through self-funding (e.g., Jamison et al. 2020*) and non-profit organisations (Ferrell, 2014*).

10. Outcomes

This section discusses the impact of mentoring for school leaders, mainly as mentees but also as mentors (see Table 14). Among the 133 included studies, the most prominent impact category is leadership transition and growth, followed by cognitive engagement and decision-making, problem-solving skills, and relational and communication competence. Less frequently mentioned impact categories are instructional and organisational knowledge, and mentorship dynamics. The least mentioned aspect is school impact and organisational outcomes.

Table 14. A summary of leadership mentoring outcomes

Theme	Definition	Sub-theme and number of studies
Leadership transition and growth	It captures both the adjustment process (acclimation) and the developmental trajectory (growth) of leaders.	a) Leadership transition Attitude (n=16) Acclimation (n=12) Leader retention (n=11) b) Leadership growth Career development (n=27) Leadership effectiveness (n=22) Leadership skills (n=19) (i.e., Administrative skills (n=2); Planning skills (n=17))
Cognitive engagement and decision-making	It refers to how leaders think deeply, reflect, solve problems, and make informed choices	Self-reflection (n=27) Problem-solving skills (n=18) Decision-making (n=13) Analytical thinking (n=12)

Relational and communication competence	It refers to leaders' ability to build and maintain effective interpersonal and professional relationships, communicate clearly, and work collaboratively with people.	Working relationships (n=32) Trust (n=29) Collaboration (n=23) Communication skills (n=8) Feedback skills (n=3)
Instructional and organisational knowledge	It refers to how school leaders build knowledge, align with shared goals, and support teaching and learning across the school	Knowledge gain (n=28) Instructional leadership (n=22) Institutional shared understanding (n=3)
Psychological well-being	It is concerned with how leaders feel emotionally and mentally	Intrapersonal growth (n=27) Autonomy (n=8)
Development of mentors	It refers to how mentoring enhances mentors' skills, knowledge	Professional growth (n=15) Emotional impact (n=2)
School impact and organisational outcomes	It refers to how mentoring influences school environment, teacher growth, and student performance.	School culture (n=8) Teacher development and teaching (n=4) Pupil achievement (n=4)

10.1 Leadership transition and growth

Leadership transition and growth encompasses both the adjustment process and developmental trajectory of leaders, which includes career development (n=27), leadership effectiveness (n=22), leadership skills (n=19) (i.e., planning skills (n=17), administrative skills (n=2)), attitude (n=16), acclimation (n=12), and leader retention (n=11). An overview of mentoring's impact on leaders' transition and growth can be found in Table 15.

Career development (n=27) refers to the path of growth and development a leader follows in their work life (e.g., preparing for future leadership positions through mentoring; promotions). It focuses on principals' professional growth and their preparation for potential role changes, on which mentoring has a positive impact (n=26). For example, Bowar (2019)* mentions that a mentee decides to apply for a leadership position after she receives encouragement from her mentor. Similarly, Bragg-Bullock (2018)* indicates that most of the female leaders believe they would not have been promoted without their mentors. Beiter (2021)* shows that 72% of the participants see potential for career development after their mentorship experience. Nevertheless, mentoring may have limited impact on immediate job placement (n=1). Cowin et al. (2016)+ mentions that an intern principal candidate rarely gets hired directly at the intern school.

Leadership effectiveness (n=22) means how well a school leader can perform their responsibilities and meet the goals of their role. Among the 22 studies, 21 studies report that mentoring contributes to principals' success. For example, Van der Merwe (2014)* mentions that mentees' leadership knowledge, skills, and capacity is improved through mentoring. Additionally, leaders learn how to distribute and share work effectively as a result of their mentoring experience (Ferebee, 2022*). Despite the largely positive findings, Arellanes et al. (2023)+ argue that mentoring does not have a statistically significant positive impact on leadership effectiveness. One possible explanation is that mentees who are not taught or not encouraged to share control tend to follow the existing top-down structures and make less democratic decisions (Levings, 2022+). Levings (2022)+ also mentions that mentors often share experiences as stories, which mentees find challenging to apply to their difficult situations.

Leadership skills (n=19) consist of two aspects: planning skills (n=17) and administrative skills (n=2). The former includes the ability to set goals, develop strategies, manage time, and allocate resources to achieve objectives efficiently (e.g., prioritisation, time management), while the latter involves managing and

organising work effectively (e.g., running a school, financial management). Regarding planning skills, a few aspects such as expectation management (e.g., Gentry, 2018*), option prioritisation (e.g., Lofthouse & Whiteside, 2019+), time allocation (e.g., O'Donnell, 2021*), and measurable goals development (e.g., Petersen, 2015*) are fostered by mentoring experience. Nevertheless, the impact on planning skills is not necessarily a positive outcome. Levings (2022)+ mentions that little time is spent on planning next steps, and discussions between mentors and mentees often lack a focus on how to achieve desired goals. In terms of administrative skills, Combrinck and Daniels (2023)* and McGinnis (2024) mention that administrative (e.g., financial management) skills improve through mentoring.

Attitude refers to how leaders think and feel about their jobs, such as perceptions of adequate training (e.g., Alshamrani, 2020+). It is mentioned by 16 studies, 15 of which indicate that mentoring contributes to leaders' positive attitude and mindset towards work, such as feeling motivated and engaged (Carrero, 2022+), and feeling empowered and unstoppable in pursuing continuous improvement (Dodson, 2022+). However, Carroll (2015)* shows that mentoring for new principals does not change their attitudes because they have had some leadership experience as assistant principals prior to their participation in the mentoring programme of this study.

Acclimation refers to the early-stage role transition in which new school leaders adjust to their new roles and environments. A total of 12 studies indicate that mentoring could support new school leaders in navigating the transition. For example, Ferrell (2014)*, exploring the perceptions of new principals of a leadership preparation programme, find that mentoring is essential to their survival during the first year. Similarly, Gümüş (2019)* notes that the adjustment process of a new principal can be less challenging with the support from an experienced predecessor. However, some participants in two studies show that mentoring has limited impact on their acclimation. Specifically, Alshamrani (2020)+ dives into the perceived effectiveness of a leadership preparation programme for female headteachers in Saudi Arabia. Around 47% of headteachers consider having a mentor was effective, while more than 52% headteachers indicate that mentoring is not very helpful because of the perceived insufficient content and support. Moreover, Drake et al. (2023)* note that mentors are essential in determining the quality of work opportunities that intern principals receive. The involvement in low-stakes leadership tasks contributes little to intern principals' leadership growth and role transition (Drake et al., 2023*).

Mentoring supports the retention of school leaders (n=11). It focuses on leaders' willingness to remain in their positions over time. It is mentioned by 10 studies as a positive impact of mentoring. For example, most participants in Fulk (2021)⁺ believe that having a mentor helps their first-year retention and their ongoing work in their schools. Daugherty et al. (2020)^{*} notes that there is an increase in leaders' retention rate as a result of mentoring; however, it is not significant. Arellanes et al. (2023)⁺ also reports that though mentoring reduces the attrition rate and keeps principals in their positions, the effect is not statistically significant.

Table 15. Leadership transition and growth

Sub-themes		Positive impact	Negative impact	Limited/ no impact	Total ⁷	
Career development		26	0	1	27	
Leadership effectiveness		21	1	2	22	
Leadership skills	Planning skills	16	0	1	17	19
	Administrative skills	2	0	0	2	
Attitude		15	0	1	16	
Acclimation		12	0	2	12	
Leader retention		10	0	2	11	

⁷ The numbers in the table refer to the number of studies that mention positive/negative/limited/no impact. Some studies include more than one type of impact (e.g., positive and limited), so the numbers in the "total" column may not match the total number of studies in the first three columns.

10.2 Cognitive engagement and decision-making

Cognitive engagement and decision-making refer to how school leaders think deeply, reflect, solve problems, and make informed choices, which is composed of self-reflection (n=27), problem-solving skills (n=18), decision-making skills (n=13), analytical thinking (n=12) (see Table 16). All included studies on self-reflection (n=27), decision-making (n=13), and analytical thinking (n=12) reported a positive impact of mentoring.

An essential aspect in cognitive engagement and decision-making is self-reflection (n=27), which is concerned with learning about oneself. All 27 articles indicate that mentees become more aware of their strengths and weaknesses after being mentored (e.g., Combrinck & Daniels, 2023^{*}; Hayes & Burkett, 2021⁺). Cowin et al. (2016)⁺ also show that mentoring helps future school principals reflect on their core values that they have learnt from experienced influential leaders.

Problem-solving (n=18) focuses on the ability to identify, analyse, and resolve challenges effectively. In the 18 studies, all except one note that mentoring facilitates mentees' problem-solving skills. For example, mentees gain knowledge about how to get through potential challenges through sharing and discussing ideas with their mentors (Jugmohan & Muzvidziwa, 2017^{*}). However, Levings (2022)⁺, a study that explored how mentoring supports new principals in pursuing equity (e.g., inclusivity) for students in three Canadian elementary schools during the COVID-19 pandemic, find limited evidence of support from mentors when mentees experienced challenges.

Ferebee (2022)^{*} indicates that mentees can process and discuss situations with mentors before making decisions. Decision-making is the process of evaluating options and making choices. Felicello (2014)^{*} states that mentors help mentees make decisions that benefit schools. In addition to helping with immediate decisions, mentoring broadens vision and improves independent decision-making ability over time (Axelsen, 2022; King, 2017⁺).

Analytical thinking involves understanding ideas and viewing things from different perspectives. It often occurs when mentors introduce new directions or pose thought-provoking questions. For example, Gimbel and Kefor (2018)⁺ notes that mentors help mentees rethink their plans by asking them questions. Similarly, mentors help mentees think critically (Gümüş, 2019)^{*}.

Table 16. Cognitive engagement and decision-making

Sub-themes	Positive impact	Negative impact	Limited/ no impact	Total
Self-reflection	27	0	0	27
Problem-solving skills	17	0	1	18
Decision-making skills	13	0	0	13
Analytical thinking	12	0	0	12

10.3 Relational and communication competence

Relational and communication competence is the ability to build and maintain effective interpersonal and professional relationships, such as communicating clearly and working collaboratively. It includes working relationships (n=32), trust (n=29), collaboration (n=23), communication skills (n=8), and feedback skills (n=3) (see Table 17).

The most frequently occurring theme in relational and communication competence is working relationships (n=32), which emphasises the professional connections between individuals. Of the 32 studies, 31 note a positive effect of mentoring on the development and maintenance of working relationships. For example, Bishop (2021)* mentions that some mentees view mentoring relationships as long-lasting partnerships and friendships. Hume (2015)⁺ indicates that mentees broaden their professional connections through their mentors, which last beyond the mentoring programme. Nevertheless, some mentees feel disappointed about not being able to fully develop their relationships with their mentors (Jamison et al., 2020*).

A vital element closely related to effective working relationships is trust (n=29). All 29 studies note that trusting relationships between mentors and mentees develop over time (e.g., Carrero, 2022⁺). Carroll (2015)* shows that school leaders feel safe and share information with their mentors. Lindle (2016)* indicates that participants assigned mentors from the same districts are willing to open up to their mentors.

However, Bickman et al. (2012)* shows the impact of mentoring on trust development between principals and teachers is limited. Although trusting relationships develop during the mentoring process, they sometimes still break down when mentees feel misunderstood, experience top-down communication (e.g., the presence of district leaders makes mentees feel watched), vagueness (e.g., no clear expectations), or judgmental attitudes (e.g., evaluative rather than supportive and constructive feedback) (Tee, 2023*; Jamison et al., 2020*).

Mentoring also fosters opportunities to collaborate, share responsibilities, and support one another at work (n=23). A total of 22 studies reiterate the positive impact of mentoring on collaboration. Specifically, mentors help build school leaders' professional networks, which provides more opportunities to collaborate with other people (Bragg-Bullock, 2018*). Moreover, Gardner (2016)* indicates that mentoring itself is a collaborative process that requires mutual effort from both mentors and mentees. However, the collaboration can be harmful if it is centralised and hierarchical. For example, if a mentor relies too much on a principal's perspective, and the principal shares only information that supports his own views, the mentoring process can become biased and unbalanced (Ermeling et al., 2015*). Incorporating teachers' voices is essential for maintaining a fair and balanced mentoring structure (Ermeling et al., 2015*).

A total of eight studies note that mentoring can contribute to the development of communication skills. For example, Ray (2017)* indicate that school leaders, after receiving mentoring support, are able to manage difficult conversations. Moreover, a mentee in Levings (2022)+ claims that her communication skills improves due to her mentor's suggestions regarding wording and delivery.

Feedback skills refer to one's ability to offer clear and constructive comments, and to listen openly to feedback. Specifically, three studies mention that mentoring benefit school leaders in receiving and providing feedback, such as avoiding making people feel that communication is top down (Bennett, 2023+; Dodson, 2022+).

Table 17. Relational and communication competence

Sub-themes	Positive impact	Negative impact	Limited/no impact	Total ⁸
Working relationships	31	1	0	32
Trust	29	2	1	29
Collaboration	22	1	0	23
Communication skills	8	0	0	8
Feedback skills	3	0	0	3

10.4 Instructional and organisational knowledge

Tee (2023)* and Gardner (2016)* call for research into how mentoring supports principals' instructional leadership and links to student outcomes. Instructional and organisational knowledge focuses on how school leaders build knowledge, align with shared goals, and support teaching and learning across the school (see Table 18). Relevant themes are knowledge gain (n=28), instructional leadership (n=22), and institutional shared understanding (n=3). All studies show that institutional shared understanding, instructional leadership, and knowledge gain were positively influenced by mentoring.

The most frequently mentioned theme in this category is knowledge gain, which means the process of learning new information or developing understanding. For example, mentees are taught to interpret department guidelines and policies (e.g., Combrinck & Daniels, 2023*; Lochmiller, 2018*). Moreover, mentorship supports mentees in gaining

⁸ The numbers in the table refer to the number of studies that mention positive/negative/limited/no impact. Some studies include more than one type of impact (e.g., positive and limited), so the numbers in the "total" column may not match the total number of studies in the first three columns.

knowledge about how to ask thoughtful questions, listen actively, and provide constructive feedback (Gümüş, 2019*). Mentorship also helps mentees understand political atmosphere and relationships on the site (Petersen, 2015*).

Instructional leadership refers to school leaders' ability to improve teaching and learning within a school. For example, during mentoring process, school leaders are provided opportunities to participate in pedagogical discussions with subject teachers (O'Donnell, 2021*). Similarly, principals learn to be instructional leaders with support from mentors in real school environments (Lochmiller, 2014*).

Institutional shared understanding refers to the extent to which staff in a school agrees with the school's missions. Mentoring assists principals in developing a shared vision among teachers and the leadership team (Huddleston, 2022*; Lipke, 2020*; Petersen, 2015*).

Table 18. Instructional and organisational knowledge

Sub-themes	Positive impact	Negative impact	Limited/ no impact	Total
Knowledge gain	28	0	0	28
Instructional leadership	22	0	0	22
Institutional shared understanding	3	0	0	3

10.5 Psychological well-being

Psychological well-being refers to how people feel emotionally and mentally (e.g., confidence). Mentoring for school leaders has a positive impact on their intrapersonal growth (n=27) and autonomy (n=8) (see Table 19). Specifically, intrapersonal growth refers to one's internal development, such as confidence, stress management, and a positive mindset. For example, Abdelrahman et al. (2021)* explores perceptions of female principal candidates participating in a U.S.-based academic leadership preparation programme, where mentoring activities occur via video conferences. Participants highlight that they receive emotional support and encouragement from their mentors (Abdelrahman et al., 2021*).

Autonomy is a concept related to one's internal development, but it emphasises more on the willingness or capacity to take initiatives and complete tasks independently. Almager et al. (2021)+ investigates the development of aspiring leaders' instructional leadership, focusing on their ability to improve teachers' pedagogical competencies through mentoring. It shows that the aspiring leaders aim to improve their mentoring skills after the mentoring programme (Almager et al., 2021+). However, the impact of leadership mentoring on autonomy is not always beneficial (n=2). Both Drake et al. (2023)* and Jamison et al. (2020)* indicate that mentees become less autonomous when mentors are over-controlling (e.g., not allowing mentees to make independent decisions). Additionally, Drake et al. (2023)* report that the autonomy of some intern leaders remains at the same level after receiving mentoring.

Table 19. Psychological well-being

Sub-themes	Positive impact	Negative impact	Limited/no impact	Total ⁹
Intrapersonal growth	27	0	0	27
Autonomy	8	2	1	8

⁹ The numbers in the table refer to the number of studies that mention positive/negative/limited/no impact. Some studies include more than one type of impact (e.g., positive and limited), so the numbers in the "total" column may not match the total number of studies in the first three columns.

10.6 Development of mentors

Development of mentors refers to how mentoring enhances mentors' skills, knowledge (see Table 20). It consists of professional growth (n=15) and emotional impact (n=2). Mentoring is a reciprocal process that benefits not only mentees but also mentors. Professional growth is concerned with the development of mentors' leadership and mentoring skills. For example, mentors enhance their active listening and questioning skills through the mentoring experience (Bickmore & Davenport, 2019; Huffman, 2017⁺). Additionally, Huffman (2017)⁺ notes that the mentoring process contributes to mentors' leadership capacity improvement.

Emotional impact refers to the internal changes that mentors experience, such as increased motivation, satisfaction, connection, and a sense of being valued as a result of their mentoring involvement. Owen et al. (2018)^{*} indicates that mentoring helps mentors feel truly valued as educators. This satisfaction boosts mentors' confidence in their professional identities (Stewart, 2016). However, mentors can be less motivated when they feel unappreciated and misunderstood. For example, mentors may become frustrated and then stop trying to help if they feel their mentees already know everything and do not need support (Stewart, 2016). Another challenge arises when mentees expect mentors to tell them exactly what to do, which misaligns with mentors' goals of guiding.

Table 20. Development of mentors

Sub-themes	Positive impact	Negative impact	Limited/no impact	Total ¹⁰
Professional growth	15	0	0	15
Emotional impact	2	1	0	2

¹⁰ The numbers in the table refer to the number of studies that mention positive/negative/limited/no impact. Some studies include more than one type of impact (e.g., positive and limited), so the numbers in the "total" column may not match the total number of studies in the first three columns.

10.7 School impact and organisational outcomes

School impact and organisational outcomes refer to how mentoring influences the school environment, teacher growth, and student performance (see Table 21).

It consists of such themes as school culture (n=8), teacher development and teaching (n=4), and pupil achievement (n=4). All included studies on school culture and teacher development and teaching show a positive impact.

School culture is concerned with the ways staff work together in a school.

For example, Stiell et al. (2022)* reports that mentoring during lesson visits is valuable. A collaborative school culture is likely to develop if mentoring activities are grounded in open communication (e.g., pre-visit meetings to introduce expectations, short classroom observations, and follow-up activities on agreed-upon action points) (Stiell et al., 2022*). Another aspect is that school leaders recognise the importance of creating a positive school climate and know how to create and maintain it through mentoring (Gentry, 2018*).

Teacher development and teaching focuses on how mentored leaders support teachers' pedagogical development. For example, when mentored leaders develop skills such as using data to solve problems, they can pass on those skills on to teachers to address teaching challenges (Klar et al., 2024*). Additionally, mentored leaders can offer valuable insights that support teachers in enhancing their pedagogical growth (Almager et al., 2021⁺; Hood, 2014⁺; Starr, 2021*).

Pupil achievement, which is mentioned as an outcome in four studies, concerns how well students perform. Using a mixed of qualitative and quantitative data including interviews, administrative data, quantitative and open-ended surveys, three studies report improvements in student performance, particularly in subjects such as math (Arellanes et al., 2023⁺; Dennis, 2023*; Hood, 2014⁺). Nevertheless, Daugherty et al. (2020)* evaluates the impact of a leadership development programme for new principals and assistant principals in New York and find that students score lower in English language arts compared to those in schools without the mentoring programme (Daugherty et al., 2020*). Unlike Hood (2014)⁺ and others, Daugherty et al. (2020)* concludes that the mentoring programme does not make a significant difference in test scores of other subjects (e.g., math) and the overall school culture. Similarly, Arellanes et al. (2023)⁺ indicates that the positive impact of mentoring on pupils' achievement in math was not statistically significant.

Table 21. School impact and organisational outcomes

Sub-themes	Positive impact	Negative impact	Limited/no impact	Total ¹¹
School culture	8	0	0	8
Teacher development and teaching	4	0	0	4
Pupil achievement	3	1	2	4

10.8 Summary of impact and strength of positive impact

It is important to note that, in the included studies, these categories are not reported in isolation; very often, findings show that different kinds of impact intersect. Since most of the included studies are qualitative, we are unable to ascertain the specific relationship among the categories.

Although all included studies report positive outcomes, some outcome categories are consistently positive with no contradictory findings, while others are presented as positive in some studies while negative or limited impacts are noted in others or in the same study (see Table 22). Outcome categories that have strong positive evidence (i.e., without the mention of negative or limited impacts in other studies or within the same study) and weak positive evidence (i.e., with the presence of contradictory evidence in other studies or within the same study) are as follows.

There is **strong positive evidence** to indicate that mentoring has an impact on knowledge gain, instructional leadership, and institutional shared understanding. Additionally, with no contradictory findings, mentoring also contributes to mentees' cognitive engagement (i.e., self-reflection, decision-making skills, analytical thinking),

¹¹ The numbers in the table refer to the number of studies that mention positive/negative/limited/no impact. Some studies include more than one type of impact (e.g., positive and limited), so the numbers in the "total" column may not match the total number of studies in the first three columns.

psychological well-being (i.e., intrapersonal growth), relational and communication competence (i.e., communication skills, feedback skills), as well as leadership transition and growth (i.e., administrative skills). Furthermore, mentoring supports the development of a positive school culture and teacher development and teaching. As a reciprocal process, mentors also experience professional growth through mentoring.

In terms of outcome categories that have weak positive impact, the most frequently occurred theme is leadership transition and growth, including career development, leadership effectiveness, planning skills, attitude, acclimation, and leader retention. It is followed by relational and communication competence (i.e., working relationships, trust, and collaboration). Mentoring also shows a weak positive impact on four other aspects, which are problem-solving skills, autonomy, pupil achievement, as well as emotional impact.

Table 22. Strength of positive outcomes

Strong positive outcomes	Theme	Sub-theme
	Instructional and organisational knowledge	Knowledge gain (28) Instructional leadership (22) Institutional shared understanding (3)
	Cognitive engagement and decision-making	Self-reflection (27) Decision-making skills (13) Analytical thinking (12)
	Psychological well-being	Intrapersonal growth (27)
	Development of mentors	Professional growth (15)
	School impact and organisational outcomes	School culture (8) Teacher development and teaching (4)

Weak positive outcomes	Relational and communication competence	Communication skills (8) Feedback skills (3)
	Leadership Transition and Growth	Leadership skills (Administrative skills) (2)
	Leadership Transition and Growth	Career development (27) Leadership effectiveness (22) Leadership skills (Planning skills) (17) Attitude (16) Acclimation (12) Leader retention (11)
	Relational and communication Competence	Working relationships (32) Trust (29) Collaboration (23)
	Cognitive engagement and decision-making	Problem-solving skills (18)
	Psychological well-being	Autonomy (8)
	School impact and organisational outcomes	Pupil achievement (4)
	Development of mentors	Emotional impact (2)

11. Contextual factors influencing mentoring outcomes

This section focuses on the contextual factors that influence the success and sustainability of mentoring programmes. The review of the studies selected for the project identified more negative factors than positive ones.

Seven negative contextual factors that can pose challenges to mentorship programmes emerged from the studies, listed here in order of frequency:

1. **Resource constraints** – both financial and non-financial, such as time limitations, are the most commonly reported barriers. Many studies highlight insufficient funding and competing demands on participants' time.
2. **Lack of stakeholder engagement and support** – limited buy-in from schools, districts, and policymakers undermines programme sustainability and accountability.
3. **Inherent limitations** – issues such as small school sizes, geographic location, shortages of qualified candidates, and retention challenges restrict programme reach and impact.
4. **External disruptions** – notably the COVID-19 pandemic, which caused significant interruptions and shifted priorities and engagement levels.
5. **Lack of clear vision or strategic direction** – hinders alignment and coherence of mentoring efforts.
6. **Organisational politics** – internal school politics can create distrust and reduce the openness critical for mentoring success.
7. **Communication issues** – such as language barriers, mentioned in one study, add further challenges.

Four positive contextual factors that create supportive environments for mentorship programmes were identified:

1. **Strong stakeholder support** – education offices, districts, and professional organisations provide resources, tailored mentoring, and talent development systems that bolster mentoring programmes.
2. **Collaborative culture** – such culture fosters teamwork and learning communities that enrich mentoring relationships.
3. **Large district size** – larger districts offer greater mentoring availability.
4. **Convenient location** – proximity facilitates timely, face-to-face interactions, improving mentor-mentee connection and responsiveness.

Tables 23 and 24 summarise the frequency with which each factor appears across the reviewed studies.

Table 23. Negative contextual factors

Negative contextual factors	Number of studies mentioning this factor
Resource constraints	25
Lack of stakeholder engagement and support	15
Inherent limitations	7
External disruptions	4
Lack of vision	2
Organisational politics	2
Communication issues	1

Table 24. Positive contextual factors

Positive contextual factors	Number of studies mentioning this factor
Strong stakeholder support	5
Collaborative culture	2
Large district size	2
Convenient location	1

Collectively, these factors illustrate the complexity of designing and sustaining effective mentoring programmes in education. An understanding of both favourable and unfavourable contextual elements can help stakeholders create conditions for success or anticipate potential challenges.

11.1 Positive contextual factors

While much attention has been paid to the barriers that hinder effective mentorship for school leaders, it is equally important to recognise the positive contextual factors that are crucial to programme success. This section highlights key factors that contribute to the effectiveness of school principal mentorship programmes.

11.1.1 Strong stakeholder support

Strong stakeholder support is essential for the success of mentorship programmes, providing crucial resources, tailored mentoring, and strategic talent development. Stakeholders whose support is vital include education offices, district boards, professional organisations and school boards. Education offices staff, as Alshamrani (2020)⁺ notes, can support headteachers in their transition into leadership roles. District boards' support is also instrumental. As Griffin (2017)^{*} points out, district offices can play an important role in allocating time and resources to build trust and align visions, encouraging principals and district leaders to collaborate and engage in team building, providing work embedded opportunities for principals and district leaders to spend time together, and giving feedback to principals, etc. Professional organisations can also provide an additional layer of support, such as mentoring

provided by leadership organisations on matters related to curriculum, instruction, and assessment (Sarandrea, 2024*). School boards can also support new principals by assigning and paying for mentors (Dalgıç & Bakioğlu, 2014+). Together, the different forms of support that different stakeholders can offer create a foundation for effective mentoring by aligning resources, expertise and vision, fostering an atmosphere where mentoring is valued.

11.1.2 Collaborative culture

A collaborative school culture fosters teamwork, shared learning, and mutual support, which significantly enhances the impact of mentoring programmes. Among the studies reviewed, two discuss this positive factor. Codd (2015)* identifies the creation of a culture of collaboration as a strategic priority, noting that teaming and collaboration are central to leadership efforts. Hood (2014)+ notes that mentoring programmes can help build larger learning communities among the district's principals, which in turn can foster a culture that encourages sharing of practice and peer support. These collaborative environments encourage principals to engage openly in mentoring relationships, share challenges and successes, and collectively improve leadership practices, thus amplifying the effectiveness of mentorship initiatives.

11.1.3 Large district size

Large district size positively influences the availability and formalisation of mentorship programmes, offering principals greater access to leadership development opportunities. Carrero (2022)+ discusses how district size affects exposure to different leadership styles, access to professional development, and networking resources. Johnston et al. (2016)* provides compelling evidence that principals in large districts are far more likely to receive required mentoring compared to those in smaller districts. Furthermore, assistant principals (APs) in larger districts also benefit from more structured and accessible mentoring, with "75 percent of principals in large districts reported that mentoring was required for first-year APs, compared with 46 percent in midsize districts and 39 percent in smaller districts." (p. 9). This evidence suggests that more mentoring opportunities are available for principals in larger districts to support their development.

11.1.4 Convenient location and proximity

Convenient physical proximity between mentors and mentees enhances mentoring effectiveness by enabling timely and face-to-face interactions. This factor is discussed in one of the studies reviewed. Finley (2016)⁺ highlights that close location proximity is “critically important to the effectiveness of the mentoring relationship” (p. 93), with multiple principals indicating a clear preference for in-person contact over remote communication methods such as phone or email. The ability to meet spontaneously, often with little or no advance notice, is cited as highly beneficial. This immediate availability strengthens relational trust and responsiveness, which are vital for successful mentoring relationships.

11.2 Negative contextual factors

Mentorship programmes for school principals have been widely recognised as a vital strategy to develop leadership capacity, enhance job satisfaction, and ultimately improve school performance. However, the effectiveness of such programmes is influenced by various contextual factors that can either facilitate or hinder their success. This section explores these factors, focusing primarily on negative influences identified in the literature.

11.2.1 Resource constraints

Resource constraints are by far the most frequently cited barriers to the effective implementation of mentorship programmes for school principals, with 25 studies mentioning or discussing this factor. These constraints broadly fall into two categories: lack of funding (n=9) and other resource-related challenges (n=16), such as insufficient time for both mentors and mentees to engage in their programme.

Adequate funding is foundational to establishing and sustaining mentorship programmes. From the studies reviewed, lack of funding impacts mentoring opportunities in several major ways. First, in socioeconomically disadvantaged districts, fiscal constraints mean that leadership development cannot be prioritised (Carrero, 2022⁺). Second, budget constraints create difficulties in employing outside-of-school district mentors (Dennis, 2023^{*}), which means that in some cases only informal or ad-hoc mentorship is possible, requiring mentees to “find or select a mentor on their own and basically design their own program” (McKinney, 2018^{*}, p.77). Third, budget constraints also adversely affect the time mentors can spend on mentees, as noted by an informant in Messer (2019)⁺, mentors had to be directed to “stay within their allotted hours every month in order to stay within budget”, hindering the support

novice principals can get from their mentors (p. 169). Reduced budgets also mean that mentorship programmes are not sustainable (Starr, 2021^{*}). Overall, funding limitations severely restrict the availability, accessibility, and sustainability of mentorship programmes, often leading to ad hoc or insufficient mentoring experiences, especially in under-resourced districts.

Besides funding, other resource constraints also pose significant challenges to effective mentorship. Time constraints emerged as the most pervasive barrier across studies, and these constraints affect both mentees and mentors. For mentees, “balancing time” is challenging (Almager et al., 2021⁺) because of the demands on the principals’ schedules and multiple priorities (Stiell et al., 2022^{*}; Dutton, 2015⁺; Nwokorie, 2023^{*}). Limited time also affects mentors’ availability to meet their mentees, as they also need to juggle their own responsibilities (Fulk, 2021⁺). Overall, both mentees and mentors face time constraints, and, as Owen et al. (2018, p. 6)^{*} notes, for both groups, “the motivation was there, but there just weren’t enough hours in the day”.

11.2.2 Lack of stakeholder engagement and support

The degree of engagement and support from key stakeholders, including district leadership, school boards, and educational offices, is critical to the success of mentorship programmes. However, 15 studies reveal a lack of such engagement and support from major stakeholders, such as the government (McKinney, 2018^{*}; Messer, 2019⁺), the Education Office (Alshamrani, 2020⁺), school districts (Heath, 2024⁺) and school boards (Codd, 2015^{*}), undermining programme implementation and sustainability. Lack of support from stakeholders can result in a shift from formal, centralised mentorship to informal arrangements, and as Nwokorie (2023)^{*} explains, the absence of centralised mentorship programmes and accountability systems results in ineffective mentoring: “The mentor is on his own... there is no support for the mentor to support the mentee... there is no system of accountability” (p.105, p.107). Insufficient engagement and commitment from key stakeholders, as different studies have shown, create systemic barriers that limit programme reach, mandate and efficacy, leaving mentorship efforts fragmented and undervalued.

11.2.3 Inherent limitations

Inherent limitations related to school size, geographical location and candidate availability present significant challenges to the effectiveness and reach of mentorship programmes for school principals. Smaller schools often face difficulties in implementing mentoring due to limited staff capacity and overlapping responsibilities. Stiell et al. (2022)* notes that in smaller schools, “staff were already ‘stepping up’ with several areas of responsibility”, which made mentoring harder to implement (p. 40). Johnston et al. (2016)* highlights limitations arising from the district size, with principals in large districts far more likely to receive mentoring than those in smaller or midsize districts. Specifically, “83 percent of school leaders in large districts reported that mentoring was required for first-year principals, compared with only 61 percent in midsize districts and 29 percent in smaller districts” (p. 9). Geographical location also acts as a barrier, with 43.5% of participants in Dutton’s (2015)+ study identifying it as an obstacle to mentoring participation. Candidate shortages and retention issues further limit programme effectiveness. Thomsen (2023)* reports districts struggling to find enough quality candidates to fill leadership positions and that retention issues mean that external applicants have to be sought. Together, these inherent limitations create structural challenges that restrict the scope, accessibility, and impact of mentorship programmes for aspiring and new school leaders.

11.2.4 External disruptions

Unpredictable external circumstances can severely disrupt mentorship programmes by shifting priorities and limiting engagement, ultimately attenuating the impact of mentorship programmes. The COVID-19 pandemic is a prominent example discussed in recent studies. These studies show that the pandemic caused disengagement from some principals (Arellanes et al., 2023+), shifting of priorities (Bishop, 2021*; Huddleston, 2022*) and difficulties in evaluating programme effectiveness (Levings, 2022+).

11.2.5 Lack of vision

A clear, shared vision for leadership development and mentorship is essential to align efforts and foster meaningful progress. Two studies identify the absence of such a vision as a contextual barrier. Codd (2015)* describes a situation with "no focus for the future, no single guiding vision for how to get there" and involving "too many efforts (e.g., differing ideals for instruction, efforts on curriculum, on standards, on governance, on accountability), which prevents educators from focusing on actual improvement – particularly because of the common emphasis on mandates and sanctions" (p. 166). This shows that a lack of vision can result in competing initiatives that distract from actual improvement efforts. Carrero (2022)+ reports that limited outlook on promotion and career advancement was a barrier negatively impacting leadership development and mentoring experiences. These findings highlight the need for a coherent vision guiding mentorship programmes and leadership development.

11.2.6 Organisational politics

Internal politics within schools and districts shape the environment in which mentorship occurs, often negatively, as shown in two of the studies. Tee (2023)* describes how "politics left principals with a negative impression of their supervisor" and "broader district culture resulted in apprehension, fear, and an unwillingness to be vulnerable" (p. 101). Hume (2015)+ highlights concerns about gender dynamics in mentoring: "Difficulties may arise when men mentor women," with fears of "accusations of impropriety" due to the private and frequent communication required (p. 247).

11.2.7 Communication issues

One study, Smith (2022)*, identifies language as a barrier in the mentoring process in multicultural/multilingual settings. However, the exact way in which this affects mentorship is not explicated in the doctoral dissertation. A Spanish participant notes that "There is still a language barrier despite being able to speak the language [English]" (Smith, 2022*, p. 80).

12. Design and implementation features influencing mentoring outcomes

The design and implementation of leadership mentoring programmes represent a key intersection between theory and practice, as both simple logistical factors or complex theoretical frameworks within the programme can improve or limit the impact of mentoring. This section examines the specific design and implementation factors that influence mentoring outcomes, drawing on evidence from existing literature to identify both positive and negative factors influences. Frequency tables (Table 25 and Table 26) of the number of studies belonging to each theme are presented, and each theme is descriptively analysed with relevant quotes. It is important to note that activities mentioned in previous sections are reported distinctly from the activities in the upcoming section, as they are discussed as discrete components of mentoring programmes that have positive or negative influences on the impact of the mentoring itself. Additionally, the failure or success of a mentoring programme is most likely due to a combination of multiple factors acting simultaneously. As such, the factors reported in this section should not be considered in isolation and when appropriate, the relationship and dynamic between different factors will be discussed.

12.1 Favourable features

This section explores the range of design and implementation features that improve the outcomes of mentoring programmes, highlighting elements that contribute to effective and meaningful leadership development. Based on findings, it identifies key factors such as how time is spent during programmes, the activities performed during mentoring, or the material content of the mentoring programme itself. These factors allow for mentees to make the most of their time on a mentoring programme while ensuring their wellbeing and maintaining consistent and fruitful guidance from mentors and peers. Programme designers may want to consider the following features to ensure programmes can elicit meaningful impact on participants. A summary of the favourable feature findings is presented in Table 25.

Table 25. Positive design and implementation features of mentoring

Theme	Sub-themes	Definition	No. of studies
Activities	- Goal setting - Task ownership - Meetings - Custom support	Mentoring activities undertaken by mentors and mentees, including observations, meetings, leadership activities, goal setting, group work and networking (see Section 8 on activities for a detailed breakdown).	35
Time	- Regular meetings - Longitudinal approaches - Intentional use of time	Timing, frequency, consistency or duration of mentoring.	33
Delivery	- Prior process knowledge - Structured and focussed programmes	The format, formality, and modality of mentoring, as well as the rigidity, flexibility and cohesiveness of the programme itself.	24
Feedback	- Critical reflection - External viewpoints	Aspects of feedback given to mentees from mentors or other key stakeholders.	20
Discussion	- Safe discussions - Truthful conversations	Interactions between mentors and mentees.	20

Content	- Provision of resources - Professional and emotional support	Materials, frameworks, evidence base and techniques taught to mentees during the programme.	19
Collaboration	- Learning communities - Networking	Aspects of collaboration between mentors, mentees and other key stakeholders.	14
Recruitment	- Personal Selection of mentors - Increased external staffing	The process of recruiting mentors and mentees, including total numbers, selection and availability of mentors and mentees.	12
Training	N/A	Availability of training during the programme and in preparation for the programme. Applies to both mentors and mentees.	4
Technology	N/A	Availability and use of technology within programmes.	1

12.1.1 Activities

To enable effective mentoring, participants must have ample opportunities to transform abstract discussions with mentors into concrete leadership development through authentic learning experiences. Activities were the most frequently cited enablers of successful mentoring, with a total of 35 studies stating its importance. In a study by Ermeling et al (2015)* investigating virtual coaching methods, participants are encouraged to lead the instructional leadership team themselves, passing ownership of the instructional improvement process to mentees and enabling their professional growth. Mentors in Alege's (2019)* credited allowing open-ended, reduced-scaffolding questioning allowed mentees to take more ownership of their tasks and solutions, enhancing their leadership skills. Furthermore, Nurik (2015)* determines that the strategies and approaches used by mentors had a significant impact on leader practices within schools. Examples of approaches included: customising support to needs, context and situation; using research, influencing school leader's beliefs, frequent school visits and goal setting. However, programme activities do not always have to be complex models that participants should follow. Hood (2014)+ reports that such simple activities as meetings for both mentors and mentees would enable the sharing of effective strategies being employed in other schools.

12.1.2 Time

Successful programmes recognise that meaningful and effective mentoring requires significant time investment and protected opportunities for mentor-mentee discourse and development. Codd (2015)* stipulates that allocated time for engagement and learning is "one of the most important structures to consider when planning learning opportunities" (p. 171). Furthermore, the number of visits enables frequent discussion between mentors and mentees. Nurik (2015)* finds significant correlations between both the frequency of mentor visits and the presence of explicit visit goals and the eventual impact on leadership practices. These findings align with evidence-informed mechanisms for effective professional development of teachers (EEF, 2021). Additionally, mentoring participants report consistent reporting of feedback to be beneficial and even necessary for leadership development (McMillian-Burks, 2022*). Overall, well-planned time is an important factor in ensuring mentoring success and is summarised effectively by Lee (2024)*: "time is a valuable resource and must be utilized intentionally" (p. 183).

12.1.3 Delivery

Well-designed mentoring programmes with adequate frameworks, clear processes and well-planned logistics provide mentors and mentees with the scaffolding necessary for effective professional development while maintaining flexibility for personalised experiences. Beiter (2021)* finds that even in largely informal mentoring arrangements, participants valued knowing how the process would unfold and what kind of support was on offer, highlighting a need for some form of structure within mentoring. When developing mentoring strategies, designers integrate aspects of structure to ensure participants are guided. Somewhat contrastingly, Thomsen (2023)* describes adapting different aspects of mentoring programmes to the specific needs of mentees, resulting in a better experience for participants. This introduces challenges for mentoring programme designers, as too much structure may hamper organic relationships between mentors and mentees; it also limits flexibility surrounding school leaders' schedules. As such, it may be beneficial for designers to consider the particular mentoring model they wish to introduce when structuring programmes (Jamison et al., 2020*).

12.1.4 Collaboration

While providing ample opportunities for the mentor-mentee relationship to flourish allows for greater professional development, arranging space for collaboration between other colleagues and stakeholders may provide mutual benefits for all involved. Codd (2015)* reports of "triads", self-determined arrangements between principals and colleagues that form a learning community, which encourage collaboration and provide the necessary environment for principals to reflect in a safe space. This in turn allows principals to "share problems in practice, conduct instructional walk-throughs, and discuss leadership challenges within their own school context" (Codd, 2015, p. 171*). Furthermore, Francone (2020)+ reports that the provision of networks of participants can have a positive impact on instructional leaders, providing opportunity for collaboration and support from other experts in the field. Additionally, having a collaborative mindset is a sought-after trait for mentees, as it enables a positive relationship with mentors (Parfitt, 2020*; Newton-Thompson, 2020+).

12.1.5 Content

Effective mentoring programmes provide participants with practical, relevant, and informative materials that meet the needs of learners to enable positive development. A study from King (2017)+ presents the importance of mentees having access to resources and materials to ensure they were well-equipped to handle tasks: "All of the

protégés recalled receiving resources that were shared with them by their mentor. These resources provided them with the ability to address their challenges in ways conducive to their specific needs for support” (p.82). This is further reflected in Newton-Thomson’s study (2020)*, where participants are given professional and emotional support in addition to resource materials to ensure they had well-rounded development of their leadership skills. Additionally, it may be beneficial to provide mentees with autonomy in selecting whatever resources they feel suit their needs best, providing a degree of flexibility throughout a programme as professional needs shift (Taylor, 2015*).

12.1.6 Feedback

Regular and high-quality feedback forms an integral part of mentoring programmes, allowing mentors to guide mentees towards positive change. Feedback has been posited as a crucial aspect of a successful mentor-mentee relationship, allowing mentees to be “true to oneself”, giving opportunities for critical reflection and providing a “second set of eyes” to shape their thought process (Beiter, 2021*, p. 91).

Furthermore, external opinions outside of one’s organisation may provide substantial benefits concerning the feedback and reflection process. Dalgıç (2014)+ reports that partaking in an external coaching programme that is not connected to the same school allows for an open and true reflective thinking process that is free of predispositions and bias. Additionally, the frequency of feedback being given can have a significant impact on the reflective process. McMillian-Burks (2022)* quotes that in a programme, “many felt the need to be consistent with feedback from their principal was necessary for their overall leadership growth” (p. 72).

12.1.7 Discussion

The quality of discussions within mentoring partnerships influences their effectiveness, meaning mentors must have personal skills to create effective communication. For dialogic strategies, Cole (2017)+ states that having truthful conversations improves the chances of mentoring success: “Traditional top-down conversations can fail to produce desired outcomes when members concentrate on avoiding conflict rather than speaking the truth” (p. 93). Additionally, safe spaces allowing for confidentiality can lead to more fruitful and rich discussions, enabling meaningful changes within organisations. This is documented in Farver’s (2014)* study, in which confidential conversations serve as a “springboard” (p. 94) to enact research-based strategies, leading to overall school vision and goal alignment.

12.1.8 Recruitment

Strategic mentor-mentee pairing and matching that encourage compatibility and diverse backgrounds enhance programme effectiveness and participant satisfaction. Bennett (2023)⁺ found that “interns who chose their mentor were more satisfied with their mentor and rated their mentor’s effectiveness higher than interns who were assigned their mentor” (p. 72). This highlights an important consideration for mentoring programme designers, as integrating a more personable mentor selection process may provide better mentoring outcomes in the longer term. Additionally, the benefits of careful recruitment design may provide benefits outside of the mentor-mentee relationship. Lindle (2016)^{*} reports benefits for rural and small school districts that have staff capacity challenges, as educators participated in cross-district mentoring programmes and spent time working across district lines.

12.1.9 Technology

The rather limited research on technology within leadership mentoring represents a significant gap in the research literature. From the reviewed studies, only Ermeling et al. (2015)^{*} investigates the use of technology through a study investigating a virtual mentoring programme. Principals judged the virtual platform “a more than adequate substitute” (p. 22) for face-to-face meetings; they also referenced the programme’s flexibility and access to digital resources as an enabler to effective mentoring. Importantly, mentors still ran periodic in-person institutes to enable more meaningful interactions face-to-face and complement the virtual setting. These institutes provided a physical space to provide opportunities for mentees to collaborate, enable authentic interactions with one another.

12.1.10 Training

Structured mentor training emerges as a success factor that allows mentoring to provide adequate and intentional support for mentees. Hood’s (2014)⁺ research demonstrates that introducing a structured three-day training format, delivered by programme coordinators at the Consortium for Educational Change, provided mentors with explicit frameworks and evidence-based practices that had previously been absent from their preparation. This training was critical to the success of the programme as it enabled effective leaders to become effective mentors and provided cohorts of high-quality and impactful mentors.

12.2 Unfavourable features

This section examines the design and implementation features that limit the effectiveness of mentoring programmes. Drawing on the available evidence, it identifies barriers to mentoring outcomes such as time, training, content, roles or delivery. These factors collectively undermine the benefits of mentoring programmes, often resulting in less impactful mentoring programmes. Importantly, some of the factors presented in this section have components that may be considered positive influences, as discussed in the previous section, highlighting the complex dynamics that can exist within mentoring programmes. Understanding these limitations allow programme designers to identify areas in which programmes can be improved to improve outcomes. A summary of the unfavourable features is presented in Table 26.

Table 26. Negative design and implementation features of mentoring

Theme	Sub-themes	Description of theme	No. of studies
Recruitment	- Numbers of mentors - Incompatible mentor selection - Lack of available mentors	The process and planning of enrolling mentors and mentees onto mentoring programmes.	16
Time	- Infrequent meetings - Short mentoring durations	Timing, frequency, consistency or duration of mentoring.	16

Content	- Irrelevant taught content - Narrow scope of learning materials	Materials, theoretical frameworks, evidence base and techniques taught to mentees during the programme.	10
Training	- Under preparation of mentors - Mentor awareness of programmes	Availability of training during the programme and in preparation for the programme. Applies to both mentors and mentees.	7
Delivery	- Lack of formal programme framework - Inadequate modalities	The format, formality, and modality of mentoring, as well as the rigidity, flexibility and cohesiveness of the programme itself.	7
Roles	- Unclear mentor duties - Mismatched workloads	The designated roles of mentors, mentees and other key stakeholders in a programme (such as principals or superintendents)	7

12.2.1 Recruitment

The process of selecting and matching mentors with mentees often poses difficulties and capacity constraints that limit mentoring effectiveness. From the reviewed literature, a total of eight studies cited the recruitment of mentors and mentees as being a limiting factor in the impact of mentoring, of which poor mentor-mentee matching often surfaced as a primary factor. Bennett (2023)⁺ demonstrates that mentees allowed to choose their mentor rated the experience far more highly than those who were assigned one. The same study also showed that “relationship between the intern and the mentor prior to the internship was found to be the variable that was most critical to how an intern rated their mentor” (p. 65), highlighting the importance of mentor-mentee dynamics and resulting mentorship effectiveness.

The provision of high-quality, trained mentors is also important. In a study by Alshamrani (2020)⁺, mentees “considered the mentors who worked at their schools to be unqualified and unable to provide the support they were expected to offer” (p. 196), revealing a preference for mentors to be experienced and knowledgeable. Dutton's (2015)⁺ survey of 222 educators shows 67% of mentoring participants cited the “availability of mentors” as a negative influence on their mentoring programme. Additionally, some districts may struggle to find local experts, forcing supervisors either to import outsiders who lack context or to rely on under-qualified staff. This is also reflected in a lack of mentors from similar backgrounds as the mentees (Gimbel & Kefor, 2018⁺).

12.2.2 Time

Time constraints represent one of the more notable barriers to effective mentoring programmes, as the frequency, timing and duration of mentoring directly impact whether or not mentoring takes place and to what extent. This is especially important considering the often-strained workloads of many teachers and principals, reducing the time available to undertake mentoring programmes. Frequent mentor-mentee meetings are key to ensuring positive progress is maintained: “mentors explained that the new school leaders are struggling to find sufficient time to meet with their mentor... They voiced concern that the “overall impact” is lessened and would, therefore, not be as effective as it could be with more time” (Gimbel & Kefor, 2018⁺, p. 34). Additionally, disruptions in mentoring frequency or duration may reflect badly on mentor-mentee relationships, causing a lack of trust in stakeholders or the programme itself (O'Donnell, 2021^{*}).

Contrastingly, there may also be a detrimental effect to simply increasing the number of mentoring sessions. A study by Bickman et al. (2012)* found that among principals who perceive measures or feedback to be less valid, the addition of more mentoring sessions had a negative effect on instructional leadership. This is suggestive that quality of mentor-mentee interactions may be more important than the frequency; however, as most studies report a need for further time spent on mentoring, it is likely that a balance of quality and quantity is optimal for mentoring effectiveness.

12.2.3 Training

The lack of mentor preparation signifies a key oversight in programme design and implementation that weakens the effectiveness of mentoring for leaders. An important and persistent barrier to positive outcomes is inadequate mentor preparation to train and guide mentees. These pitfalls manifest in both professional and personal skills. A case study by Levings (2022)+ demonstrates the need for trained mentors with the required personal skills to effectively mentor participants. This is further reflected in Gimbel and Kefor's study (2018)+, where training for mentors is often not standardised, meaning participants may receive different levels of quality mentoring depending on their pairing.

12.2.4 Content

More tangible aspects of a mentoring programme such as the materials, frameworks or evidence-based used have a direct effect on what and how the mentees will learn during their time on the programme. Pariente & Tubin (2021)* find that novice principals kept practicing "intervention skills" (p. 11) while essential diagnosis and inference capabilities were left undeveloped, creating a dependency on limited methods rather than building capacity to use techniques independently. The study revealed that mentees were not taught systematic approaches to identifying root causes of instructional problems or provided with evidence-based protocols for evaluating teaching effectiveness. Additionally, Neeta (2023)* notes some programmes emphasised management over instructional leadership, so new principals entered schools without the conceptual tools needed to evaluate teaching: "The lack of focus on effective teaching practices and strategies for school leaders causes them to walk into their schools unprepared" (p. 87). Moreover, Thomsen (2023)* adds that many view university leadership courses as "out of touch" (p. 127), prompting them to reinvent programmes that are relevant to local goals.

12.2.5 Delivery

The format, formality, and modality of mentoring programmes fundamentally shape the quality of leadership development experiences; yet many initiatives suffer from poorly designed structural elements that undermine relationship effectiveness. Daniels (2021)* notes principals struggle when no formal mentoring framework exists to guide them through role transitions, with programmes lacking clear protocols for different phases of development, standardised meeting formats, or systematic progression through competency levels: “[I]f principals are not exposed to a mentoring framework then they will struggle because they have no background to fall back on” (p. 130). Additionally, the modality of programmes may have a tangible impact on the effectiveness of mentoring. A study from Ermeling et al. (2015)* investigating the use of virtual mentoring methods for instructional leaders reports that participants felt a “loss of personal connection” (p. 24) due to dulled discussion and reduced spontaneous interaction between mentors and mentees. This is further reflected in Leving’s (2022)* study, where poor mentor-mentee relationships were formed due to a lack of mentoring structure.

12.2.6 Roles

Unclear roles between mentors, mentees and other stakeholders can create confusion and inefficiency when planning and delivering mentoring programmes. Alshamrani (2020)+ finds mentors spending time revising administrative files unrelated to students, signalling confusion about their instructional focus and a potential shift in priorities from mentors: “the mentors did not come to monitor the standards of students’ work which might help improve their school performance; instead their work focused on revising administrative files not associated with students.” (p. 197). Pariente & Tubin (2021)* describes mentoring dynamics that developed into a “master–apprentice” model, reinforcing dependence on the mentor rather than strategic autonomy from the mentees. Additionally, unclear instructions from programme organisers on the intended roles of mentors may directly affect the experience of mentees. Jamison et al. (2020)* adds that mentors of inexperienced mentees often lacked guidance on how much scaffolding to provide to mentees, varying between over-direction and a lack of support.

13. Personal factors influencing mentoring outcomes

In addition to contextual conditions and the design and implementation features of mentoring programmes, the personal attributes of both mentors and mentees are consistently identified as key influences on mentoring impact across the included studies. Five themes capture positively influencing personal attributes (Table 27), while three themes reflect negative influences (Table 28), presented in descending order of frequency.

Table 27. Favourable personal attributes

Theme	Definition	Number of Studies
Mentor credibility and expertise	Mentor's perceived credibility, knowledge, and relevant experience.	20
Facilitative dispositions	Personal traits (e.g., trustworthiness, humility, empathy) that enhance mentoring.	17
Commitment and engagement	Active participation and sustained effort in mentoring.	15
Mentee readiness	Mentees' preparedness, openness, and clarity of goals.	8
Demographics	Demographic factors (e.g., age, gender, race) that shape the mentoring experience.	3

Table 28. Unfavourable personal attributes

Theme	Definition	Number of Studies
Lack of commitment and engagement	Disengagement or inconsistent involvement in mentoring.	13
Inhibiting dispositions	Personal traits (e.g., defensiveness, fixed mindset, self-doubt) that hinder mentoring effectiveness.	10
Lack of mentor credibility and expertise	Mentor's insufficient experience or perceived inability to support mentees.	4

While Tables 27 and 28 separate favourable and unfavourable attributes for clarity, the following analysis integrates both aspects where relevant under the same theme. This approach offers a more comprehensive picture of how specific personal attributes may either support or hinder mentoring outcomes, depending on their presence or absence.

13.1 Commitment and engagement

Mentoring impact is strongly influenced by the commitment and engagement levels of both mentors and mentees, making this the most frequently coded personal attribute across the included studies (28 instances¹² in total: 15 favourable, 13 unfavourable).

When present, high levels of commitment from both parties tend to strengthen the mentoring relationship and amplify its developmental value. Mentees often demonstrate this through consistent participation (Tee, 2023*), initiative-taking (Jamison et al., 2020*), and great investment in time and energy (Starr, 2021*). For instance, Jamison et al. (2020)* describes an administrative intern who took initiative even before the official start of mentoring, such as by proactively contacting relevant departments and researching potential mentors. Such behaviours not only signal their willingness to be mentored but also place them in a better position to benefit from the experience.

On the mentor side, engagement typically involves responsiveness to mentees' needs (Dennis, 2023*), time investment despite tight schedules (Sunardi & Siswandari, 2020*), and a genuine interest in developing others (Gardner, 2016*). These features contribute to the development of trust and psychological safety within the mentoring relationship, which mentees often note as key to their professional growth. In Starr (2021)*, for example, one mentee describes a mentor who had taken time to understand their context: "She knew my school, she had done her homework... whatever this lady tells me to do, I'm gonna do it with very few questions" (p. 56).

Conversely, when mentors appear disengaged or unresponsive, mentees often report feeling unsupported and achieving limited or even no growth. For instance, Carroll (2015)* documents dissatisfaction stemming from the mentor's limited presence: "Maybe if the mentor had been more visible and present in my building, he could have seen some things that I didn't necessarily see" (p. 150). Notably, in some cases, a mentor's perceived disengagement stems not from physical absence but from a lack of meaningful engagement with the mentee's development. In Roberts (2023)*, for

¹² A single study may contribute up to two instances under the same theme if it discusses both positive and negative aspects. As a result, the total number of instances may exceed the number of studies combined.

example, the mentor's emphasis on task completion over addressing the mentee's needs contributes to an ineffective mentoring process.

Lack of commitment from mentees also compromised mentoring outcomes. In Jamison et al. (2020)*, for instance, one mentee's failure to demonstrate initiative, leverage prior experience, or plan proactively leads to an unproductive mentoring partnership. Likewise, Ellis-Lewis (2015)* describes similar challenging situations where mentees "did not respond to several types of interventions" (p. 76), despite the mentors' efforts to tailor their mentoring approaches. One participant attributes this resistance to fear of losing control, which suggests that disengagement may sometimes reflect underlying psychological or professional insecurities.

13.2 Facilitative and inhibiting dispositions

The second most frequently coded personal attribute influencing mentoring effectiveness across the included studies is dispositions (27 instances in total: 17 facilitative, 10 inhibiting). Several traits are consistently associated with positive mentoring outcomes, most notably mentors' active listening (Anderson, 2016*; Carrero, 2022*; Dennis, 2023*; Farver, 2014*; Finley, 2016*; Gardner, 2016*; Ray, 2017*; Sciarappa & Mason, 2014*), their empathy towards mentees (Fulk, 2021+; Starr, 2021*), and mentees' resilience and sense of self-efficacy (Anderson, 2016*; Carrero, 2022*; Newton-Thompson, 2020+). In contrast, mentees' low self-efficacy (Kim, 2018*; Tahir et al., 2024*), lack of growth mindset (Codd, 2015*; Messer, 2019+), and resistance to their mentors' feedback (Nwokorie, 2023*) are commonly identified as dispositions inhibiting mentoring effectiveness.

One study that merits particular attention is Hume (2015)+, which finds that male mentors' limited awareness of gendered barriers faced by female mentees reduces trust and perceived relevance. The study also highlights instances of "Queen Bee Syndrome" (p.167), where senior women resist supporting aspiring female leaders, driven by competition or perceived scarcity of leadership opportunities. These findings suggest that inhibiting dispositions are shaped not only by individual mindsets but also by structural dynamics, both of which can limit the developmental impact of mentoring.

13.3 Mentor credibility and expertise

The perceived mentor credibility and expertise is also identified as a key contributor to mentoring effectiveness, with 24 instances coded across the included studies. The majority (n= 20) illustrate how this personal attribute enhances the mentoring process, while a smaller number (n= 4) describe how its absence constrains mentees' development as effective school leaders. The following synthesis examines how this attribute influences mentoring outcomes by considering three core aspects: prior leadership experience, contextual knowledge, and instructional expertise.

First, mentors' previous experience in school leadership roles is frequently cited as enhancing their credibility and influence, as mentees are more likely to trust and act on the guidance of mentors who had themselves navigated similar professional challenges (e.g. Ferrell, 2014^{*}; Parfitt & Rose, 2020^{*}; Starr, 2021^{*}). For example, Klar et al. (2024)^{*} documents that experienced school leaders add strategic value by drawing on continuous improvement processes rooted in their own leadership practice. Fulk (2021)⁺ reinforces this point, reporting that mentees often express admiration for their mentors' accomplishments and appreciate their ability to offer insights and systematic knowledge. Collectively, this body of evidence suggests that mentors' professional track records help them gain credibility and trust from mentees, and in turn facilitate mentoring processes.

Second, mentors who demonstrate familiarity with the mentee's school, district, or leadership context are perceived as more credible and found to enable more relevant, trusted, and effective mentoring. Dennis (2023)^{*}, for instance, finds that mentors are better positioned to provide tailored advice if they actively engage with site-specific issues and devote to understanding organisational dynamics. Gibson and McDaniel-Hall (2017)^{*} further emphasises that such contextual alignment allows mentors to co-construct problem-solving strategies that resonate with the mentee's lived realities. Similar findings are reported by Bello (2022)⁺, where charter school leaders describe how mentors with deep sector-specific experience can support their autonomy, compliance needs, and leadership confidence by demonstrating a clear understanding of their unique institutional contexts. These findings suggest that contextual awareness not only enhances the perceived applicability of mentors' guidance but also deepens the interpersonal connection required for impactful mentoring.

Third, mentors' instructional expertise also influences how their guidance is received and applied by mentees. When mentors demonstrate strong knowledge of curriculum, pedagogy, or leadership strategies aligned with mentees' development goals, they tend

to be perceived as credible, and their advice is more likely to be adopted. Gardner (2016)* finds that participants value mentors who are well-versed in teaching and learning and able to engage in informed, substantive discussions around curriculum and leadership. Similarly, Ellis-Lewis (2015)* observes that formal mentoring credentials enhance mentors' credibility by signalling both content expertise and structured support. These examples show that mentors with instructional expertise are able to not only offer practical guidance but also model what effective leadership can look like in action. This modelling dimension may be particularly valuable for early-stage leaders seeking concrete examples of best practice.

By contrast, although less frequently reported, the absence of mentor credibility or expertise may lead to weaker mentoring impact. When mentors lack a proven track record or relevant expertise, their guidance is often viewed with scepticism. For example, one participant in Tee (2023)* explains that they ultimately disregard their mentor's feedback due to her lack of demonstrated success as a principal, stating, "I don't really use any of it because it would be harmful feedback for my teachers" (p. 101). Similarly, Bickman et al. (2012)* notes that when feedback is seen as invalid or irrelevant, its effectiveness declines, regardless of how frequently it is delivered. Dalgıç and Bakioğlu (2014)+ and Sunardi and Siswandari (2020)* further illustrate this issue in different national settings. In Turkey, mentors are frequently appointed without prior leadership experience (Dalgıç & Bakioğlu, 2014+), while in Indonesian primary schools, many lack adequate instructional and mentoring competence (Sunardi & Siswandari, 2020*). Despite contextual differences, both studies consistently find that insufficient preparation and expertise diminish mentors' legitimacy and hinder their ability to support professional learning. Overall, these studies lead to a shared conclusion: when mentors are not seen as credible or capable, mentees are less likely to engage with or benefit from their support.

13.4 Mentee readiness

Alongside mentor expertise, mentee readiness is identified as a personal attribute positively influencing mentoring outcomes in eight of the included studies. Mentees who have previously served leadership-related roles (e.g., deputy head teachers, instructional leaders, or committee members) tend to benefit more from mentoring relationships (Airola et al., 2014^{*}; Alshamrani, 2020⁺; Arroyo, 2018^{*}; Cliffe et al., 2018^{*}; Felicello, 2014^{*}). These experiences are seen to foster leadership confidence, organisational understanding, and cross-functional knowledge, laying the groundwork for more productive engagement with mentors. For instance, Cliffe et al. (2018)^{*} describes how rotational exposure to finance and governance responsibilities helps mentees develop a well-rounded foundation for leadership. Felicello (2014)^{*} similarly highlights how cross-role administrative experience enhances mentees' understanding of what effective leadership entails.

In some cases, mentee readiness also shapes access to mentoring. Carrero (2022)⁺ notes that principals are more likely to mentor assistant principals whom they already perceive as ready for leadership, suggesting that a mentee's preparedness can influence mentor investment. Beyond prior experience, openness to learning and a proactive mindset also play a role. Huffman (2017)⁺ reports that one new principal attributes her success in the programme to her own readiness to be mentored. Similarly, Jamison et al. (2020)^{*} emphasises the importance of assessing mentee preparedness and providing scaffolding to strengthen reflective engagement, as illustrated by the successful development of two interns in the study.

13.5 Demographics

Demographic factors are identified as relevant influences on mentoring experiences in three included studies. Anderson (2016)* provides quantitative evidence that age, ethnicity, and gender are significantly associated with variation in mentoring outcomes across multiple domains, suggesting that demographic characteristics may shape how mentoring is received or experienced. The other two studies examine how gender and cultural background influence access to and interpretation of mentoring. Felicello (2014)* reports that women are more likely than men to actively seek out mentors and view those mentoring relationships as meaningful, whereas men more often report having no mentor or finding the relationship less significant. Moreover, Smith (2022)* finds that Latina leaders frequently identify Caucasian mentors as central to their professional development, while also reflecting on how their own ethnicity and family background shape their leadership goals and values. These findings suggest that demographic identity and cultural experience may influence not only how mentoring relationships are formed, but also how they are valued and understood.

This section has thematically presented five key personal attributes influencing mentoring outcomes: (lack of) commitment and engagement, facilitative versus inhibiting dispositions, (lack of) mentor credibility and expertise, mentee readiness, and demographic factors. High levels of commitment of both mentors and mentees, mentors' active listening and proven track records, as well as mentees' prior leadership experience and demographic alignment with mentors are commonly linked to stronger mentoring outcomes. In contrast, disengagement from either party, mentors' lack of expertise, and mentees' resistance to guidance or low self-efficacy are commonly associated with limited impact. These personal attributes often shape, and are shaped by, the quality of interpersonal dynamics, which are the focus of the next section.

14. Relational factors influencing mentoring outcomes

This section presents key relational dynamics that influenced mentoring outcomes across the included studies. In addition to contextual conditions, programme features, and personal attributes, the quality of the mentor-mentee relationship was consistently reported as a central determinant of mentoring success. Three themes capture positively influencing relational factors (Table 29), while two themes reflect relational barriers (Table 30), presented in descending order of frequency.

Table 29. Favourable relational factors

Theme	Definition	Number of studies
Positive relationships	Relational closeness marked by trust, authenticity, mutual respect, emotional support, and open communication.	46
Mentor-mentee compatibility	Matches between mentors and mentees in values, styles, or identity characteristics (e.g. gender, race).	14
Shared understandings and goals	Mentor and mentee's mutual clarity on purpose and expectations of mentoring.	13

Table 30. Unfavourable relational factors

Theme	Definition	Number of studies
Mentor-mentee incompatibility	Mismatch between mentors and mentees, such as conflicting styles, values, or communication breakdowns.	11
Negative relationships	Relational dysfunction, such as mistrust, emotional distance, or fear induced by perceived surveillance or top-down pressure.	10

Following the same approach as in the previous section on personal attributes, this section synthesises both positive and negative cases to support a more holistic account of how relational dynamics influence mentoring outcomes. The analysis is organised around three key themes: (1) positive and negative relationships, (2) mentor-mentee (in)compatibility, and (3) shared understanding and goals. While the focus remains on relational features, it is worth noting that some of these intersect with personal attributes, a point that is further discussed at the end of the section.

14.1 Positive and negative relationships

Relationships between mentors and mentees are by far the most frequently coded relational factor, with 56 instances¹³ in total (46 positive and 10 negative). Despite this high frequency, a relatively consistent set of core relational features emerges across the included studies. Trust stands out as the most salient quality, often intertwined with emotional safety and mutual respect; a second cluster of features involves authentic connection and relational closeness. The presence of these elements tends to foster mentoring effectiveness, whereas their absence is likely to undermine the mentoring outcomes.

Trust is widely marked as the foundation of effective mentoring, as it enables a sense of psychological safety for mentees to open up and disclose their authentic thoughts. When mentors demonstrate respect and create a confidential, non-judgemental space, mentees are found more willing to reflect honestly and engage in difficult conversations (e.g. Cowin & Newcomer, 2019⁺; Heath, 2024⁺; Farver, 2014^{*}; Ferrell, 2014^{*}; Gardner, 2016^{*}). A clear example comes from Hood (2014)⁺, where mentees emphasise how trust is strengthened when mentors have no evaluative power and confidentiality is ensured. Under these conditions, they feel comfortable acknowledging areas of weakness and exploring solutions without fear of consequences.

Beyond trust, connections between mentors and mentees at a personal level are also identified as a positive contributor to mentoring outcomes. When mentors show genuine interest in mentees as individuals, the relationship moves beyond formal exchanges and becomes more personally meaningful, likely making mentees feel known and cared for. This, in turn, strengthens their emotional bond with mentors and increases the relevance and perceived value of the support they receive during mentoring programmes (Hume, 2015⁺; King, 2017⁺; Sciarappa & Mason, 2014^{*}). For example, Lofthouse and Whiteside (2019)⁺ highlights how regular one-to-one interactions help sustain this sense of closeness, while Roberts (2023)^{*} finds that mentees' admiration for their mentors' character further reinforces relational trust and openness.

¹³ A single study may contribute up to two instances under the same theme if it discusses both positive and negative aspects. As a result, the total number of instances may exceed the number of studies combined.

In contrast, when relational foundations are weak or dysfunctional, the effectiveness of mentoring is frequently compromised. If trust and authenticity are missing in the mentoring process, interactions often become superficial or even counterproductive (Jamison et al., 2020^{*}). For instance, Ray (2017)^{*} reports that when relational threat replaces trust and conversations feel inauthentic, mentees disengage with feelings of manipulation and loss of agency, which ultimately undermines the goals of the mentoring process. Notably, even seemingly cordial mentor-mentee relationships may not always generate positive outcomes if depth and direction are lacking, as observed in Levings (2022)⁺, where mentoring pairs interact politely but lack clear goals or constructive challenges, mentoring becomes “a performative act” for both parties (p. 156).

In summary, these findings illustrate that the quality of mentor-mentee relationships has a direct bearing on mentoring outcomes. When trust, personal connection, and authentic engagement are present, mentoring is more likely to foster professional growth and sustained commitment. Conversely, when these relational foundations are absent or weak, mentoring is less likely to generate meaningful development and, in some cases, even risk producing counterproductive effects.

14.2 Mentor-mentee (in)compatibility

Mentor-mentee compatibility or incompatibility has been reported as a relational factor influencing mentoring outcomes in 25 instances (14 positive, 11 negative). While this theme is closely related to the quality of mentoring relationships discussed in the previous section, it constitutes a more foundational condition that often shapes the developmental trajectory of mentoring. Compatibility typically refers to alignment between mentors and mentees in areas such as values, leadership orientation, or identity. Such alignment is frequently linked to more relevant, trusting, and effective mentoring (Ferrell, 2014^{*}). In contrast, mismatches in these areas may lead to relational strain, frustration, or reduced developmental impact (Dennis, 2023^{*}; Jarocki, 2019⁺; O'Donnell, 2021^{*}).

Several studies highlight the significance of identity-based compatibility, particularly in terms of gender and race. Bishop (2021)^{*}, for instance, finds that women of colour benefit from mentors who share similar identities and professional experiences, as such mentors are better able to offer empathetic support and act as realistic role models. This alignment helps mentees feel understood and affirmed, making it easier to build trust and engage in honest, reflective conversations. Similarly, Abdelrahman et al. (2021)^{*} and Bello (2022)⁺ both document that matches in race and gender between

mentors and mentees are more likely to result in effective mentoring, as identity alignment fosters trust-building and deeper engagement.

Regarding contextual match, O'Donnell (2021)* reports that participants describe effective mentors as those from a similar educational sector and school context, with one mentee calling his mentor "the perfect fit" (p.118). Hood (2014)+ reinforces this by showing that alignment in school grade level, community issues, and student demographics increases the applicability of guidance. Across these studies, compatibility in lived or institutional experience is consistently associated with more meaningful mentoring engagement and beneficial mentoring processes.

Personality fit also contributes to mentoring effectiveness. Taylor (2015)* concludes that mentors matter more than the structure of mentoring programmes and underscores the compatibility in leadership mindset as a key quality to identify suitable mentors. Hood (2014)+ echoes this by highlighting the importance of mentor-mentee alignment in personality, as well as strengths and weaknesses. Conversely, Dutton (2015)+ reports that over 60% of respondents view personality conflict as a barrier to mentoring, while in Saffle (2016)*, a participant explicitly expressed "A personality conflict... can be very detrimental to the whole situation" (p.79).

Furthermore, it is suggested that mentees should be granted a certain degree of autonomy in selecting mentors. Petersen's (2015)* qualitative study finds that principals who were consulted prior to mentor assignment report stronger mentoring relationships, while Bennett (2023)+ provides quantitative support, showing that mentees who selected their mentors rate the experience more positively and derive greater benefits than those assigned mentors without consultation. This pattern is further illustrated in Dennis (2023)*, where a woman of colour expresses frustration after her explicit request to work with a mentor of colour was denied without explanation. She believes that such a match would have strengthened the mentoring experience, and that the lack of agency in the assignment process exacerbates her dissatisfaction. In line with these findings, Carroll (2015)* and Gardner (2016)* call for clearer matching criteria and stronger district-level coordination to improve mentor-mentee pairing quality.

In summary, mentor-mentee (in)compatibility influences both the quality of relationships and the developmental value of mentoring programmes. Alignment in experience, identity, mindset, and personality is consistently associated with more trusting, relevant, and productive mentoring. Where such alignment is absent, particularly when mentees' needs or preferences are overlooked, mentoring is less likely to meet its intended goals, and may even result in negative consequences such as disengagement or frustration.

14.3 Shared understanding and goals

Shared understanding and mutually agreed goals between mentors and mentees are identified as relational conditions that facilitate mentoring outcomes in 13 included studies. This theme refers to mentor and mentee's mutual clarity on purpose and shared expectations regarding the aims, roles, and structure of the mentoring programmes. When both parties are aligned on what mentoring is intended to achieve and how it should be enacted, the mentoring is more likely to be perceived as focused, relevant, and effective.

Several studies emphasise that shared understanding of educational values and philosophies can reduce misalignment and enhance efficiency. For example, O'Donnell (2021)* reports that when mentors and mentees hold similar educational views, they are able to focus less on procedural matters, allowing more time for deeper pedagogical exchange. Likewise, Cowin and Newcomer (2019)+ documents how shared norms and values are gradually established through structured reflective activities, such as the self-portraiture process. By enabling participants to explore formative leadership experiences in a safe, non-judgemental space, this process fosters deeper trust and critical friendship. These conditions, in turn, support more open, reflective dialogue and enhance participants' readiness to lead and mentor others, highlighting how shared understanding can strengthen both the immediate and future developmental impact of mentoring.

The role of shared expectations is also recognised as a key factor facilitating mentoring effectiveness. Jamison et al. (2020)* finds that reviewing programme expectations and internship handbooks early in the mentoring process helps clarify roles and prevent miscommunication. Nurik (2015)* provides quantitative support for this point, showing through logistic regression that mentors who set clear goals for each meeting are over five times more likely to influence mentees' professional practice than those who do not. Starr (2021)* further reinforces the importance of aligning mentor support with the mentee's desired outcomes and school context, suggesting that outcome-oriented

mentoring is more likely to generate meaningful impact. Taken together, these findings underscore that intentional, goal-driven interactions support professional growth in mentoring programmes.

Beyond individual mentor-mentee pairs, shared values and goals at the group or programme level have also been found valuable. For example, an examination by Owen et al. (2018)* of a national professional development initiative in New Zealand finds that mentoring programmes which cultivate shared values and a collective sense of purpose among participants foster a collaborative culture conducive to mutual learning. In this context, 75% of mentors report enhanced professional growth and a stronger sense of being valued, attributing these benefits to the co-construction of mentoring goals. Similarly, Arroyo (2018)* concludes that when mentors and mentees maintain ongoing communication about evolving goals, their relationships are more likely to support mutual growth and sustainable leadership practices. These examples suggest that shared understanding and goals at the programme or team level contribute not only to consistent professional practice but also to the development of both mentees and mentors.

In summary, the quality of mentor-mentee relationships functions as a central determinant of mentoring outcomes across the included studies. Relational factors including trust, compatibility, and shared understanding underpin effective mentoring, while the absence of these elements often undermines relational depth and developmental impact. These dynamics not only shape how mentoring is experienced in practice, but also influence whether it fosters confidence, retention, and sustained leadership development. While the focus here has been on relational features, many of these are deeply intertwined with personal attributes, such as mentees' openness and mentors' empathy, highlighting the complex interplay between individual dispositions and relational conditions in shaping meaningful mentoring experiences.

15. Measuring outcomes of mentoring for school leaders

A total of 36 studies in the review employ quantitative or mixed-method methodologies, with the majority relying on survey-based data collection to examine outcomes related to mentoring for school leaders (Table 31). The majority utilise validated or rigorously tested instruments. Many instruments are drawn from existing tools (e.g., the Illinois 5Essentials Survey; Principal Self-Efficacy Scale; The Maslach Burnout Inventory – Educator Survey) or are adapted from established measures and piloted with reported reliability metrics, such as Cronbach’s alpha values above the generally accepted threshold of 0.70 (e.g., Anderson, 2016*; Beiter, 2021*; Bennett, 2023+). Several studies further enhance instrument validity through exploratory factor analysis or inter-rater reliability measures (e.g., Ermeling et al., 2015*; Master et al., 2022+), while others utilise expert panels or Delphi techniques to ensure content validity (e.g., Alshamrani 2020+; Jarocki, 2019+). However, a few studies rely on bespoke tools with limited information about their development or psychometric properties (e.g., Bickman et al., 2012*; Jones et al., 2021*; Sciarappa & Mason, 2014*), limiting the validity of their findings.

The instruments are utilised to assess a wide range of outcomes aligned with the review’s seven outcome categories (see Section 10). Relational and communication competence is frequently measured, often using robust instruments such as the Mentor Evaluation Tool (Bennett, 2023+) or validated custom surveys (e.g., Sarandrea, 2024*). Leadership transition and growth, including areas such as career progression, self-efficacy, and professional attitudes, is another common focus, captured through mentoring surveys (Bragg-Bullock, 2018*), evaluation rubrics (Almager et al., 2021+), and leadership effectiveness frameworks (Ermeling et al., 2015*; Hood, 2014+). Fewer correlational studies explore instructional and organisational knowledge, often linked to broader school impact (e.g., Master et al., 2022+; Metcalf & LaFrance, 2013*), while psychological wellbeing outcomes appear in a smaller subset of quantitative studies (e.g., Felicello, 2014*; Moyer, 2024*). Two outcomes documented in Section 10, namely development of mentors, and cognitive engagement and decision-making, are not measured using quantitative instruments in the included studies.

Table 31. Overview of quantitative instruments to evaluate outcomes of mentoring for school leaders

Study	Type of study	Instrument	Validation	Outcome measured
Airola et al. (2014)*	Mixed method	Principal self-efficacy survey	Yes	Leadership transition and growth
Almager et al. (2021)+	Mixed method	Evaluation cycles rubrics	Yes	Leadership transition and growth
Alshamrani (2020)+	Mixed method	Headteachers' views questionnaire	Yes	Leadership transition and growth
Anderson (2016)*	Quantitative	Co-Creating leadership dispositional values survey	Yes	Relational and communication competence
Arellanese et al. (2023)+	Quantitative	Illinois 5 essentials survey	Yes	Leadership transition and growth
Bastian and Drake (2023)+	Quantitative	North Carolina's biennial teacher working conditions survey	Not specified	School impact and organisational outcomes

Beiter (2021)*	Mixed method	Self-designed questionnaire	Yes	Leadership transition and growth
Bennett (2023)+	Quantitative	The mentor evaluation tool	Yes	Relational and communication competence
Bickman et al. (2012)*	Quasi-experimental	Structured feedback survey and self-ratings	Not specified	Instructional and organisational knowledge; Relational and communication competence
Bragg-Bullock, (2018)*	Quantitative	Toland's (2006) mentoring and career advancement survey	Yes	Leadership transition and growth
Daugherty et al. (2020)*	Quasi-experimental	New York City school survey	Yes	School impact and organisational outcomes
Dutton (2015)+	Quantitative	Independent K-12 school administrator leadership survey	Yes	Relational and communication competence

Ermeling et al. (2015)*	Mixed method	Instructional leadership team global ratings	Yes	Leadership transition and growth
Everett (2016)*	Mixed method	Assistant principal's questionnaire	Yes	Leadership transition and growth
Felicello (2014)*	Mixed method	O'Connell et al. (2005) – a 125-item principal survey	Yes	Leadership transition and growth Psychological well-being
Gardner (2016)*	Mixed method	Q-methodology	Yes	Relational and communication competence
Hood (2014)+	Mixed method	Mentored Principals - Illinois mentoring programmes survey	Yes	Leadership transition and growth
Jarocki (2019)+	Mixed method	Delphi technique surveys	Yes	Instructional and organisational knowledge
Johnston et al. (2016)*	Quantitative	Wallace Foundation – funded survey	Yes	Relational and communication competence

Jones et al. (2021)*	Mixed method	Video capture and annotation technology and survey	Not specified	Leadership transition and growth
Kiley (2017)	Quantitative	Defining issues test 2 (Rest, 1975) mentoring survey	Yes	Leadership transition and growth
Liang and Slotnik (2020)*	Mixed method	Statewide principal, superintendent, and specialist and satisfaction surveys	Yes	Leadership transition and growth
Lindle (2016)*	Mixed method	Year-One six principles surveys	Yes	Instructional and organisational knowledge
Master et al. (2022)+	Randomised control trial	Baseline and final surveys (for principals and teachers)	Yes	Instructional and organisational knowledge
McGeeney (2018)*	Quantitative	Principal induction and mentoring survey	Yes	Leadership transition and growth

Metcalf and LaFrance (2013)*	Quasi-experimental	Principals' technology leadership assessment-based Survey	Yes	Instructional and organisational knowledge
Moyer (2024)*	Quasi-experimental	The Maslach burnout inventory – educator survey	Yes	Psychological well-being
Nurik (2015)*	Quantitative	School leaders' perceptions of mentoring survey	Yes	Relational and communication competence
Pearson (2023)+	Quantitative	Principal self-efficacy scale	Yes	Leadership transition and growth
Sarandrea, (2024)*	Mixed method	Experiences of novice department leaders questionnaire	Yes	Relational and communication competence
Sciarappa and Mason (2014)*	Mixed method	Self-designed survey	Not specified	Instructional and organisational knowledge

Stewart (2016)	Mixed method	Mentor program director survey, protégé questionnaire, assistant principal mentors' questionnaire	Yes	Relational and communication competence
Stiell et al. (2022)*	Mixed method	School Workforce Census data	No	Leadership transition and growth
Tahir et al. (2024)*	Mixed method	Deputy principal questionnaire	Yes	Relational and communication competence
Washington (2018)	Mixed method	Perceptions of professional development survey	Not specified	Leadership transition and growth
Yslas (2016) ⁺	Mixed method	The School Principal Preparation survey	Yes	Leadership transition and growth

16. Research gaps

This review reveals several important methodological and topic gaps across the existing evidence base on mentoring for school leaders (Tables 32 and 33).

Table 32. Methodological gaps

Methodological gaps	No. of studies	%
Design and methodology	67	50.38
Contextual representation	52	39.10
Longitudinal research	34	25.56

Table 33. Topic gaps

Topics gaps	No. of studies	%
Perspectives, needs, and expectations	30	22.56
Developmental relationships	22	16.54
Preparation, retention, and progression	19	14.29
Mentoring approaches	15	11.28
Contextual enablers and constraints	7	5.26
Outcomes and effectiveness	6	4.51
Mentee characteristics and preferences	4	3.01

16.1 Methodological gaps

16.1.1 Design and methodology

Across the reviewed literature, there is a strong call for more diverse and rigorous methodological approaches to studying mentoring and leadership development, especially in underrepresented or complex contexts. Several studies advocate for deeper qualitative inquiry into leaders' lived experiences. Morgan (2021) recommends portraiture and phenomenology to explore the trajectories of African American women leaders, while Ahmed (2023) and Pearson (2023) call for interviews and grounded theory to uncover early influences and context-specific leadership dynamics, particularly among ethnic minority leaders.

There is also a push to diversify research designs. Smith (2022), Ward (2018), and Thomsen (2023) advocate for mixed methods designs to enhance credibility through data triangulation. Pariente and Tubin (2024) proposes using alternative lenses, such as the theory of expertise, to better understand novice principal mentoring beyond traditional competency models. A notable gap is the lack of robust evaluations examining the outcomes and impacts of mentoring programmes. There is a need for empirical evaluations of both mentor training and its effects on school leadership outcomes, particularly in terms of adaptive leadership (Sciarappa & Mason, 2014) and instructional quality/practice (Jones et al., 2021; Jarocki, 2019; Dennis, 2023). A recurring critique is the overreliance on interviews; authors such as Nwokorie (2023) and Saffle (2016) recommend expanding data sources to include observations, document analysis, and triangulation with quantitative data to enhance validity. Finally, authors like Ahmed (2023), Roberts (2023), and Petersen (2015) urge the field to adopt quantitative designs that examine correlations between leadership preparation and leadership outcomes. Lastly, Taylor (2015) identifies a methodological gap: the need for time-linked metrics to assess the relationship between mentoring duration and its impact, which remains a largely unquantified variable in current studies.

16.1.2 Contextual representation

Many studies highlight the limited contextual and geographic scope of current research in mentoring and leadership development. Much of the literature is confined to single districts, school types, or education levels, limiting transferability. For example, Alshamrani (2020) studies only state schools in Saudi Arabia, excluding private institutions, while Tahir et al. (2024) note the absence of private primary school data. Similar limitations are found in Codd (2015), Dutton (2015), and Saffle (2016), who caution against generalising findings from rural or single-district studies. O'Donnell

(2021) and Roberts (2023) call for comparative analyses across school contexts and performance levels. Collectively, these studies advocate for cross-site, cross-sector, and cross-system designs to enhance generalisability.

Geographic concentration, especially in North America, is another concern. Heath (2024) and Taylor (2015) argue for replication across U.S. states, while Bello (2022), Gardner (2016), and Jones et al. (2021) call for cross-country studies to capture cultural and systemic variation. Newton-Thompson (2020) urges more Canadian research on Black school leaders, echoing broader calls by scholars such as Nwokorie (2023) and Thomsen (2023) for greater geographic diversity.

A lack of comparative research also limits understanding of how background characteristics or leadership roles shape outcomes. Ahmed (2023) suggests studying subject-specific leadership differences (e.g., humanities vs. STEM), while Pearson (2023) proposes comparing mentoring models. Heath (2024) and Dennis (2023) recommend examining differences in support experiences by gender or leadership position. These approaches could clarify what works best, for whom, and under what conditions.

Equity gaps persist, particularly regarding gender, race, and identity. Hume (2015) and Blake and Fielding (2023) highlight the neglect of gendered and intersectional dynamics, especially for women of colour. Newton-Thompson (2020), and Pariente and Tubin (2021) call attention to the exclusion of Black leaders and those with negative mentoring experiences, underscoring the need for more inclusive research frameworks.

Finally, many studies lump early years, primary, and secondary settings together, masking differences across educational levels. Ermeling et al. (2015), Jones et al. (2021), and Master et al. (2022) note that leadership and mentoring challenges vary depending on the types of schools and educational stages. Norton-Williams (2022) stresses the importance of age- and context-specific research to design developmentally appropriate mentoring models.

16.1.3 Longitudinal research

A prominent theme is the lack of long-term studies. Many evaluations are conducted within short time frames, ranging from days to months, limiting the ability to capture sustained effects of mentoring. Scholars such as Moyer (2024), Codd (2015) and Heath (2024), recommend tracking participants over time to understand how mentorship influences career progression, self-efficacy, and professional identity development. The importance of longitudinal data is reinforced in studies by Jones et al. (2021) and Pearson (2023), which call for follow-up data collection after leadership candidates assume official roles to assess real-world application and impact. Taylor (2015) and Starr (2021) similarly call for long-term studies on mentoring's influence on principal retention, networking, and instructional improvement.

16.2 Topic gaps

16.2.1 Perspectives, needs, and expectations

The literature on educational leadership mentoring reveals diverse stakeholder perspectives and differentiated needs, alongside persistent research gaps that limit the development of effective practices. A key gap is the limited inclusion of multiple voices beyond principals. Alshamrani (2020) and Tee (2023) call for multi-stakeholder research, including teachers and deputies, to better understand leadership development in varied cultural contexts. Moyer (2024) highlights the need to incorporate student perspectives to assess how leadership wellbeing influences school climate. Similarly, Gentry (2018) and Nwokorie (2023) urge inclusion of staff perceptions to understand how mentoring shapes leadership behaviours school-wide.

Studies also highlight the evolving nature of mentoring needs. Calacone (2015) and Barnett et al. (2017) emphasise that novice principals require more intensive support than experienced leaders, suggesting that mentoring should be role- and phase-specific. Celoria and Roberson (2015) stress the importance of addressing emotional challenges like isolation and self-doubt, an often-overlooked aspect of mentoring. Mentors' experiences and feedback mechanisms remain underexplored. Griffin (2017) and Nicolaidou et al. (2016) call for research on how mentors provide feedback and how mentoring translates into leadership behaviour change. Pearson (2023) and Service et al. (2018) propose capturing both mentor and mentee perspectives to evaluate mentoring quality, including practices like shadowing. School leaders' varied attitudes toward mentoring also warrant study. McKinney (2018) highlights the need to understand why some support mentoring and others do not, while Norton-Williams (2022) suggests exploring generational differences in mentoring responses among veteran leaders. Vázquez (2022) adds that principal feedback on district-run professional development could inform more context-sensitive programme design.

Finally, systemic and policy-level influences remain underexamined. Greenwood (2019) notes a mismatch between district expectations and the actual instructional roles of school leaders, while Lochmiller (2018) calls for research on how mentoring adapts to policy shifts. Ward (2018) underscores the need to study mentoring for underrepresented groups, including women and instructional mentors.

16.2.2 Developmental relationships

A central issue highlighted across multiple studies is the process of pairing mentors with mentees. Researchers such as Anderson (2016), Bennett (2023), Hood (2014), Huffman (2017), and Nurik (2015) stress the importance of examining how personal and professional factors, such as demographics, career stage, gender, race, and school context, shape the quality and outcomes of these relationships. Although there is a clear call for evidence-based matching practices, there remains little empirical guidance on which criteria best support professional development or leadership growth. Moreover, most research tends to focus on mentees, leaving the mentor's experience, including the benefits and challenges they encounter, underexplored. Closely linked to matching processes are the structures and conditions that underpin effective mentoring. Scholars such as Anderson (2016) and Francone (2017) highlight the need to examine how organisational support, networks, and specific actions contribute to the effectiveness of these relationships. This becomes especially critical in rural or resource-constrained settings, where Klar et al. (2024) note the importance of adapting mentoring models to local contexts.

Another recurring theme in the literature is the role of trust, which is frequently identified as a foundational element in successful mentoring (Arroyo, 2018; Gardner, 2016; Griffin, 2017; Rice, 2024; Rosenthal, 2023). Yet, despite this recognition, few studies have systematically explored how trust is developed, maintained, or challenged within these relationships. In particular, more research is needed on trust-building across diverse cultural and professional contexts, and on how trust is affected by role ambiguity, especially when mentors are also tasked with evaluation (Tee, 2023).

The content and quality of mentoring conversations also remain underexamined. Axelsen (2022) calls for deeper inquiry into the topics, values, and norms that emerge during mentoring dialogues and how these conversations contribute to leadership development or school transformation. Relatedly, Rosenthal (2023) and others point to the importance of vulnerability and collegiality within mentoring relationships, suggesting that authentic, open dialogue may foster deeper learning, which is not yet well understood in practice.

16.2.3 Preparation, retention, and progression

A consistent theme across the literature is the need for more structured and intentional training for mentors. Without adequate preparation, mentors may unintentionally assume roles that limit their impact on the development of novice principals (e.g., Huffman, 2017; Rice, 2024). However, the content, delivery, and outcomes of such training remain underexplored, including how mentors acquire their skills, whether formally or through experience, and how this affects mentoring success (McKinney, 2018). There is also interest in how transformational leadership training for mentors might influence mentee outcomes (Taylor, 2015). Similarly, real-world leadership experiences like internships, shadowing, and exposure to district resources are seen as critical, but their long-term impact on leadership development is not well understood (Arroyo, 2018; Sarandrea, 2024; Felicello, 2014). Drake et al. (2023) suggest that social network analysis could help track how such experiences build leadership capacity, particularly for principals of colour. The role of experienced principals in developing future leaders is also under-researched (Barnett et al., 2017; Service et al., 2018; Drake et al., 2023). Beyond mentoring, more research is needed on what drives principal retention and turnover. This includes the role of district incentives (Messer, 2019), reasons principals exit the profession (Pariente and Tubin, 2021), and how mentoring links to retention and school performance (Pearson, 2023; Starr, 2021). Finally, understanding how mentoring experiences differ between novice and experienced principals could inform strategies to strengthen leadership pipelines and job satisfaction (Pariente & Tubin, 2021).

16.2.4 Mentoring approaches

Recent literature on educational leadership mentoring reveals a growing range of models, from traditional dyads to virtual, peer-based, and centralised approaches, each offering distinct benefits for principal development. However, critical gaps remain in understanding their optimal use and impact on leadership and school outcomes. There is a push to diversify mentoring frameworks. Scholars such as Blake & Fielding (2023) and Codd (2015) advocate for peer and developmental models that bridge pre-service and in-service phases. Haller (2016) proposes hybrid models integrating career development, psychosocial support, and instructional leadership, while noting the lack of attention to structural elements like funding, partnerships, and credentialing.

Virtual and non-traditional mentoring approaches show promise, especially for underrepresented leaders. Studies by Bragg-Bullock (2018), Ermeling et al. (2015), Gentry (2018), Klar et al. (2024), and Jones et al. (2021) highlight the potential of e-mentoring and virtual communities. However, Jones et al. (2021) notes a gap in understanding how digital literacy shapes engagement, and Gentry calls for deeper inquiry into how informal virtual networks foster transformational leadership.

Centralised mentoring programmes also warrant more research. Nwokorie (2023) stresses the need to examine their design, implementation, and scalability compared to more fragmented systems.

16.2.5 Contextual enablers and constraints

The literature highlights key gaps in understanding the contextual factors that shape the effectiveness of leadership development and mentoring. While mentoring is widely studied, less attention has been given to how school- and district-level variables influence outcomes. Moyer (2024) calls for a deeper investigation into school-specific characteristics, such as size, demographics, resources, and culture, and their effects on leaders' wellbeing and burnout, suggesting that mentoring outcomes are highly context-dependent. Petersen (2015) echoes this, urging comparative research across school levels and performance contexts to determine whether mentoring impacts are consistent or vary by settings.

District-level resources and leadership experiences are also underexplored. Arroyo (2018) emphasises the importance of authentic learning opportunities and access to district supports, particularly for urban leaders; yet, evidence remains limited on how these factors concretely affect development. Similarly, Heath (2024) highlights how district culture and policies shape female leaders' trajectories, signalling a need for research on the structural conditions that promote gender equity.

Sustainability and funding are additional blind spots. Klar et al. (2024) argues for greater focus on how leadership programmes can be maintained in rural and high-poverty areas, where financial and structural constraints pose barriers. McGinnis (2024) introduces the overlooked distinction between internal and external mentoring, raising questions about how the source and proximity of mentors' influence leadership experiences and outcomes.

16.2.6 Outcomes and effectiveness

While leadership mentoring is increasingly promoted as a tool for leadership development in education, significant gaps remain in understanding its effectiveness. Bastian and Drake (2023) highlights a lack of empirical research on the outcomes of school leader apprenticeship and internship programmes. Key variables such as the quality of mentor principals, characteristics of placement schools, and oversight levels are rarely examined in relation to intern career outcomes like role attainment or leadership effectiveness. Mannie (2022) notes the absence of clear criteria or validated metrics for assessing the effectiveness of mentoring and supervisory feedback. This lack of standardisation makes it difficult to evaluate what constitutes high-quality leadership mentoring. Farver (2014) calls for studies that explicitly link mentoring to research-based leadership practices and measurable improvements in principals' evaluations, moving beyond subjective reports to evidence-based claims of impact.

There is also limited research connecting mentoring to student and school-level outcomes. Bello (2022) and Roberts (2023) emphasise the need for controlled studies examining whether leadership mentoring improves indicators such as academic growth, graduation rates, teacher retention, and attendance. Roberts (2023) specifically advocates for comparative designs using multiple success metrics to assess the mentor's broader impact on school performance. While some studies attempt to measure effects on leadership behaviour, decision-making, or professional confidence, there is a need for more rigorous, longitudinal, and mixed-methods research to determine how mentoring influences teacher development, student achievement, and the broader leadership pipeline (Bello, 2022; Farver, 2014; Haller, 2016; Taylor, 2015).

16.2.7 Mentee characteristics and preferences

Mentee characteristics and preferences are highlighted as important influences on mentoring effectiveness, yet these factors remain under-researched. Studies point to the need for greater understanding of the personal and professional backgrounds that mentees bring into mentoring relationships. Airola et al. (2014) notes the difficulty of isolating mentoring effects without accounting for variables like self-efficacy, while Nicolaidou et al. (2016) and Arroyo (2018) call for closer examination of antecedents such as leadership experience, readiness, and access to resources, particularly for novice urban leaders. Despite this, comprehensive profiles of mentees that capture these variables are lacking, making it difficult to explain variations in mentoring responsiveness. Ferebee (2022) adds that generational differences may shape preferences for mentoring models, with younger leaders favouring group-based formats, though the reasons behind such preferences remain unclear.

17. Limitations of the review

This REA is conducted using a systematic and transparent methodology to deliver timely, policy-relevant insights on mentoring for school leaders. Nonetheless, several methodological limitations, many of which are inherent to the rapid review format, should be acknowledged to support accurate interpretation of the findings.

Firstly, while the review follows a rigorous screening and appraisal process, the initial scope of the search (2014–2024) was limited in breadth, relying on a pilot search and scoping exercise. The expansion of the timeframe to 1994–2024 is implemented only after consultation with the DfE, enabling the inclusion of earlier high-quality impact studies. However, the extended scope applies different inclusion criteria for earlier studies, restricting them to randomised controlled trials and quasi-experiments meeting Level 3 of Nesta’s Standards of Evidence (Puttick & Ludlow, 2013). This approach, while ensuring a minimum standard of methodological robustness, may have excluded relevant non-experimental studies from earlier decades, especially those that contributed to the conceptual framing of school leadership mentoring (Bush, 2018).

Secondly, although 133 studies are ultimately included and quality-assessed using a simplified framework informed by CASP and JBI checklists, the review is constrained by the availability of time and personnel. A single reviewer conducted all quality assessments, which are not independently validated by a second assessor, which may have introduced subjectivity and inaccuracies in confidence ratings. The outcomes of this appraisal, categorised into high, moderate, and low confidence, should therefore be treated as indicative rather than definitive (Gough, 2007).

Another limitation concerns the synthesis process. Given the diversity of the included literature, which spans qualitative, mixed methods, and quantitative studies, the review employs a narrative synthesis approach (Harden & Thomas, 2005). While appropriate for integrating heterogeneous evidence, narrative synthesis is interpretive by nature and may be influenced by the reviewers’ judgment. Although line-by-line and focused coding are applied, and theme development is informed by a collaboratively designed extraction tool, the lack of inter-rater reliability checks limits the transparency of theme interpretation.

Further, the exclusion of non-English language studies, coupled with a selective grey literature search focusing mainly on UK-based sources, may have introduced language and publication bias. While the inclusion of government and research reports enhances policy relevance, some international or practitioner-led evidence may have been missed. This limitation is particularly relevant given the global interest in mentoring and the potential for transferable learning from other contexts (Schleicher, 2018).

This rapid review does not use formal frameworks like Grading of Recommendations Assessment, Development and Evaluation, Confidence in the Evidence from Reviews of Qualitative Research (GRADE-CERQual, Lewin et al., 2018) to judge how strong or reliable the overall synthesised evidence is. While each study, including qualitative ones, is reviewed using a simplified version of established quality checklists (e.g., CASP, JBI) and given a confidence rating, these ratings are not consistently used to shape or prioritise the final themes. As a result, despite efforts to be transparent about quality at the individual study level, the lack of a formal process at the synthesis level limits how confidently the review can make claims about the strength of the overall findings.

Finally, the highly collaborative nature of the review, including iterative input from DfE stakeholders, ensured that the outputs are directly aligned with policymaking needs. However, this focus on utility may have narrowed the conceptual and theoretical scope of the review. For example, critical or sociological perspectives on leadership development and mentoring, particularly those addressing equity, identity, or power relations (Lumby, 2013), are less prominent in the final synthesis.

These limitations are typical of rapid reviews and do not diminish the value of the insights provided. However, they do highlight areas where future work, such as a full systematic review or mixed-methods meta-synthesis, could build upon this review to provide a more comprehensive and critically informed evidence base.

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Sin-Wang Chong: conceptualisation (lead); methodology (lead); project administration (lead); supervision; writing – review and editing (lead). **Marta Ciesielska:** conceptualisation (supporting); methodology (supporting); formal analysis (equal); writing – original draft (equal). **Violeta Negrea:** conceptualisation (supporting); methodology (supporting); formal analysis (equal); writing – original draft (equal). **Qi Liu:** project administration (supporting); formal analysis (equal); writing – original draft (equal). **Patrick Covernton:** formal analysis (equal); writing – original draft (equal). **Clarice Chan:** formal analysis (equal); writing – original draft (equal). **Dominique Jiang:** formal analysis (equal); writing – original draft (equal). **Dongxia Nie:** formal analysis (equal); writing – original draft (equal). **Rui Yan:** formal analysis (equal); writing – original draft (equal). **Yi Zhang:** formal analysis (equal); writing – original draft (equal). **Anel Mustafina:** writing – original draft (equal). **Gene Payne:** writing – review and editing (supporting).

During the preparation of this work, the authors used Copilot (with enterprise data protection on), ChatGPT-4o, and ChatGPT-4.1 (with data sharing for AI training turned off and chats deleted) for writing assistance and proofreading. Claude Sonnet 5 (with data sharing for AI training turned off and chat deleted) was used for copyediting such as checking for internal inconsistencies. Grammarly was used by one author for proofreading. As authors, we confirm that after using the tools, we reviewed and edited the content as needed and take full responsibility for the content of the publication, in alignment with standards of ethical AI use in research and academic publishing such as those outlined by the British Educational Research Association and the Committee on Publication Ethics.

19. References

References with an asterisk (*) are included in the analysis. This review includes 5 quasi-experimental studies and 1 randomised controlled trial. Those cited in this report are indicated using the superscripts “Q” and “R” respectively.

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