

Investigating Strategies for Effective Postgraduate Supervision to Improve Completion Rates Among Master's and Doctoral Students in Higher Education Institutions

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Abstract

Postgraduate completion rates remain a critical concern for higher education institutions globally, with supervision quality emerging as a pivotal determinant of student success. This comprehensive literature review examines effective supervision strategies and their impact on completion rates among master's and doctoral students, synthesizing evidence from 30 peer-reviewed studies published between 2023 and 2026. The review identifies seven key supervision strategies: structured supervision models, mentoring and relational frameworks, feedback and communication practices, co-supervision and team approaches, technology-mediated supervision, institutional support mechanisms, and cohort-based supervision models. Findings reveal that effective supervision is characterized by regular structured meetings, constructive feedback, strong supervisor-student relationships, institutional support systems, and adaptive approaches that respond to diverse student needs. Barriers to completion include inadequate institutional support, supervisor workload, insufficient training, and weak monitoring systems. The evidence demonstrates that integrated, multi-level approaches combining individual supervision excellence with robust institutional frameworks yield the most significant improvements in completion rates. Recommendations include mandatory supervisor training programs, formalized supervision policies, enhanced technological infrastructure for remote supervision, and systematic monitoring mechanisms. This review contributes to the growing body of knowledge on postgraduate pedagogy and provides evidence-based guidance for institutions seeking to enhance completion outcomes through improved supervision practices.

Keywords: postgraduate supervision, completion rates, doctoral education, master's programs, supervision strategies, higher education, student success

1. Introduction

The completion of postgraduate degrees represents a critical milestone in academic and professional development, yet completion rates for master's and doctoral programs remain persistently problematic across global higher education institutions. Research indicates that a substantial proportion of postgraduate students fail to complete their degrees within the expected timeframe, with some never completing at all (Mashau et al., 2023). This

phenomenon carries significant implications for individual students, academic institutions, and broader societal development, particularly in contexts where research capacity building is essential for addressing complex challenges.

Supervision quality has emerged as one of the most influential factors affecting postgraduate completion rates. The supervisor-student relationship serves as the cornerstone of the postgraduate experience, influencing not only academic outcomes but also student wellbeing, research skill development, and professional identity formation (Adedokun et al., 2024). Despite widespread recognition of supervision's importance, many institutions struggle to implement effective supervision practices systematically, resulting in variable student experiences and suboptimal completion outcomes.

The period from 2023 to 2026 has witnessed intensified scholarly attention to postgraduate supervision, driven by several converging factors. The COVID-19 pandemic necessitated rapid adaptation to remote supervision modalities, prompting critical reflection on traditional supervision models (Apheth et al., 2023). Simultaneously, increasing diversity in postgraduate student populations, growing emphasis on research output metrics, and heightened awareness of mental health challenges have collectively underscored the need for evidence-based supervision approaches that can accommodate complex, multifaceted student needs.

This comprehensive review investigates strategies for effective postgraduate supervision with specific focus on their impact on completion rates among master's and doctoral students. The review addresses three primary research questions: (1) What supervision strategies and models have been identified as effective in recent literature? (2) How do these strategies impact postgraduate completion rates and student success outcomes? (3) What barriers and enablers influence the implementation of effective supervision practices in higher education institutions?

By synthesizing evidence from diverse geographical contexts including Africa, Europe, Asia, and other regions, this review provides a holistic understanding of supervision practices that transcend specific institutional or cultural boundaries while remaining sensitive to contextual variations. The findings offer practical, evidence-based guidance for supervisors, institutional leaders, and policymakers seeking to enhance postgraduate completion rates through improved supervision practices.

2. Literature Review

2.1 Theoretical Foundations of Postgraduate Supervision

Postgraduate supervision is theoretically grounded in multiple pedagogical frameworks that conceptualize the supervisor-student relationship and learning processes. Relational pedagogy emphasizes the interpersonal dimensions of supervision, positioning the supervisor as both shepherd and counselor who guides students through intellectual and personal development (Zizer, 2023). This perspective recognizes that effective supervision extends beyond technical research guidance to encompass emotional support, career mentoring, and holistic student development.

Communities of Practice theory, as articulated by Wenger, provides another foundational framework for understanding supervision, particularly in cohort-based models. This theoretical lens conceptualizes doctoral education as a process of legitimate peripheral participation wherein students gradually develop scholarly identities through engagement with disciplinary communities (Byrne et al., 2026). The theory emphasizes collaborative learning, peer interaction, and the social construction of knowledge as essential components of postgraduate education.

Archer's theory of the interplay between structure, culture, and agency offers a macro-level framework for analyzing how institutional structures, cultural norms, and individual agency interact to shape supervision outcomes (Mashau et al., 2023). This perspective highlights that effective supervision cannot be understood solely through individual supervisor-student dyads but must account for broader institutional contexts, support systems, and organizational cultures that enable or constrain supervision practices.

2.2 Global Context and Completion Rate Challenges

Postgraduate completion rates vary significantly across global contexts, with particularly acute challenges documented in African higher education institutions. Research from South African universities reveals that inadequate supporting structures contribute to students remaining enrolled beyond required residency periods, with many failing to complete their degrees (Mashau et al., 2023). Similarly, studies from Ugandan universities identify delayed completion as a persistent problem, particularly exacerbated during the COVID-19 pandemic when traditional supervision modalities were disrupted (Apheth et al., 2023).

The Council on Higher Education's doctoral program review in South Africa identified supervision as suffering from numerous challenges that result in student delays or non-completion (Mashau et al., 2023). These challenges include supervisor workload pressures, insufficient training in supervision pedagogy, inadequate institutional support systems, and weak monitoring mechanisms. Research from Zambia corroborates these findings, demonstrating that supervision quality significantly impacts completion rates across multiple institutional contexts (N.N. et al., 2025).

Beyond Africa, completion rate challenges persist in developed contexts as well. European research emphasizes the need for systematic supervisor development programs, with studies documenting the implementation of mandatory, large-scale training initiatives designed to professionalize supervision practices (Fossland, 2023). These initiatives reflect growing recognition that effective supervision requires explicit pedagogical knowledge and skills that cannot be assumed to develop naturally through research expertise alone.

2.3 The Role of Supervision in Student Success

Supervision influences postgraduate success through multiple interconnected pathways. First, supervision provides essential academic guidance, including research design support, methodological expertise, theoretical framing, and critical feedback on written work (Grohnert et al., 2024). The quality and frequency of this academic guidance directly impact research progress and the development of scholarly competencies necessary for degree completion.

Second, supervision shapes the emotional and psychological dimensions of the postgraduate experience. Strong supervisor-student relationships characterized by trust, respect, and mutual engagement foster student motivation, resilience, and persistence in the face of challenges (Adedokun et al., 2024). Conversely, problematic relationships marked by poor communication, misaligned expectations, or inadequate support contribute to student attrition and delayed completion.

Third, supervision facilitates professional socialization and identity development. Through modeling disciplinary practices, providing networking opportunities, and offering career guidance, supervisors help students develop professional identities as researchers and scholars (Nabwire, 2024). This socialization process is particularly critical for doctoral students who aspire to academic careers and must develop the multifaceted competencies required for success in contemporary academic environments.

3. Methodology

This literature review synthesizes evidence from 30 peer-reviewed studies published between 2023 and 2026, focusing on postgraduate supervision strategies and their impact on completion rates. The review follows a systematic approach to literature identification, selection, and synthesis, ensuring comprehensive coverage of recent scholarship while maintaining methodological rigor.

Literature Search Strategy: A comprehensive search was conducted across multiple academic databases including SciSpace, Google Scholar, and other scholarly repositories. Search terms included combinations of "postgraduate supervision," "doctoral supervision," "master's supervision," "completion rates," "student success," "supervision strategies," "supervision models," and related terms. The search was restricted to publications from 2023 to 2026 to capture the most current evidence and practices.

Inclusion Criteria: Studies were included if they: (1) focused on postgraduate supervision at master's or doctoral levels; (2) examined supervision strategies, models, or practices; (3) addressed completion rates, student success, or related outcomes; (4) were published in peer-reviewed journals or reputable academic outlets; and (5) were published between 2023 and 2026. Both empirical studies and conceptual/theoretical papers were included to provide comprehensive coverage.

Data Sources: The final dataset comprised 74 unique papers after deduplication, with 66 papers meeting the temporal criteria (2023-2026). The top 30 papers were selected based on relevance ranking for in-depth analysis. These papers represented diverse geographical contexts including South Africa, Uganda, Kenya, Zambia, Europe, Asia, Australia, and other regions, providing global perspectives on supervision practices.

Analytical Approach: A thematic synthesis approach was employed to analyze the literature. Each paper was systematically reviewed to extract information on: (1) supervision strategies and models described; (2) impact on completion rates and key findings; and (3) research methodologies employed. This information was synthesized across studies to identify common

themes, patterns, and evidence regarding effective supervision practices. The synthesis prioritized studies with empirical evidence while also incorporating conceptual frameworks and theoretical perspectives that inform supervision practice.

Quality Considerations: The review included studies employing diverse methodological approaches including qualitative designs (narrative inquiry, phenomenological studies, case studies), quantitative surveys, mixed-methods research, systematic reviews, and conceptual analyses. This methodological diversity provides multiple forms of evidence and perspectives on supervision effectiveness, enhancing the comprehensiveness and validity of the synthesis.

4. Findings

The synthesis of 30 studies reveals seven major categories of supervision strategies that impact postgraduate completion rates: structured supervision models, mentoring and relational frameworks, feedback and communication practices, co-supervision and team approaches, technology-mediated supervision, institutional support mechanisms, and cohort-based supervision models. Each category encompasses specific practices and approaches that contribute to supervision effectiveness.

4.1 Structured Supervision Models

Structured supervision models emphasize systematic, organized approaches to the supervision process, including regular meetings, clear timelines, explicit expectations, and formalized progress monitoring. Research demonstrates that structured approaches significantly enhance completion rates by providing students with clear roadmaps and accountability mechanisms (Mashau et al., 2023), (Apheth et al., 2023).

The CoMFes (Constructive and Motivational Feedback in Supervision) model represents one exemplar of structured supervision, integrating systematic feedback practices with motivational support throughout the doctoral journey (Singh, 2024). This model emphasizes regular, scheduled interactions between supervisors and students, with explicit protocols for providing constructive feedback that balances critical evaluation with encouragement and support. Implementation of such structured models has been associated with improved student progress and enhanced completion outcomes.

Participatory Action Research (PAR) approaches offer another structured supervision framework, particularly relevant for sustainable postgraduate supervision in resource-constrained contexts. PAR-based supervision emphasizes collaborative problem-solving, iterative reflection, and active student participation in shaping the supervision process (Molise et al., 2026). This approach structures supervision as a partnership wherein students and supervisors jointly identify challenges, develop solutions, and continuously refine practices based on ongoing evaluation.

Keeping doctoral research on track requires systematic progress monitoring mechanisms. Effective structured models incorporate regular milestone reviews, written progress reports, and formal assessment points that enable early identification of problems and timely

intervention (Naicker, 2023). These monitoring systems provide both students and supervisors with clear indicators of progress, facilitating proactive problem-solving before issues escalate to threaten completion.

Research from Ugandan universities identifies coordination as a critical structural element, with institutions establishing research coordination offices to track student and supervisor progress systematically (Apheth et al., 2023). These coordination mechanisms ensure that supervision does not occur in isolation but is integrated within broader institutional support systems that can provide additional resources and interventions when needed.

4.2 Mentoring and Relational Frameworks

Mentoring and relational frameworks conceptualize supervision as fundamentally interpersonal, emphasizing the quality of the supervisor-student relationship as central to supervision effectiveness. Research consistently demonstrates that strong, positive relationships characterized by trust, respect, mutual engagement, and emotional support significantly enhance student outcomes (Adedokun et al., 2024), (Zizer, 2023).

Relational pedagogy positions the supervisor as shepherd and counselor, recognizing that effective supervision addresses both intellectual and personal dimensions of the postgraduate experience (Zizer, 2023). This approach emphasizes empathetic dialogue, active listening, and responsiveness to individual student needs and circumstances. Supervisors adopting relational approaches view their role as extending beyond technical research guidance to encompass holistic student development, including emotional wellbeing, professional identity formation, and career preparation.

The concept of "doctorateness" in mentorship emphasizes humanizing aspects of supervision, advocating for approaches that balance academic rigor with attention to students' humanity and holistic development (Nabwire, 2024). This perspective critiques dehumanizing practices that prioritize productivity metrics over student wellbeing and calls for supervision environments that cultivate integrity, ethics, and well-rounded development. Humanized supervision approaches recognize students as whole persons with diverse needs, aspirations, and challenges that must be acknowledged and supported throughout the doctoral journey.

Mentorship-infused supervision models, particularly relevant in African contexts, integrate formal mentoring structures within supervision relationships (Oladimeji et al., 2026). These models recognize that effective supervision requires explicit mentoring competencies including career guidance, networking facilitation, and professional socialization. By formalizing mentoring as a core supervision component, these approaches ensure that students receive comprehensive support extending beyond immediate research project needs.

Research on student-supervisor relationships reveals that students highly value supervisory supports including regular communication, constructive feedback, emotional encouragement, and genuine interest in their success (Adedokun et al., 2024). Students report that supervisors who demonstrate authentic care, provide timely responses, and maintain consistent engagement significantly enhance their motivation, confidence, and persistence. Conversely, distant,

unresponsive, or overly critical supervisors contribute to student frustration, anxiety, and consideration of withdrawal.

4.3 Feedback and Communication Practices

Feedback quality and communication patterns constitute critical dimensions of supervision effectiveness, directly influencing student learning, progress, and completion outcomes. The CoMFeS model specifically emphasizes constructive and motivational feedback as essential supervision components, providing systematic frameworks for delivering feedback that promotes learning while maintaining student motivation (Singh, 2024).

Effective feedback practices are characterized by timeliness, specificity, balance between critique and encouragement, and actionability. Research indicates that students benefit most from feedback that clearly identifies strengths and weaknesses, provides specific suggestions for improvement, and is delivered in a supportive manner that maintains student confidence and motivation (Singh, 2024). Delayed or vague feedback, conversely, impedes progress and contributes to student frustration and uncertainty.

Communication frequency and modalities significantly impact supervision effectiveness. Regular, consistent communication—whether through face-to-face meetings, email exchanges, or virtual platforms—maintains momentum, provides ongoing support, and enables timely problem-solving (Apheth et al., 2023). Studies document that students experiencing infrequent or irregular communication with supervisors are more likely to encounter difficulties and delays in their research progress.

Integrating coaching approaches within supervision represents an emerging practice that enhances communication effectiveness. Coaching-informed supervision emphasizes powerful questioning, active listening, goal setting, and student agency in directing their own learning (Lundgren-Resentera, 2023). This approach shifts supervision from purely directive guidance toward facilitative support that empowers students to develop independent research capabilities and problem-solving skills.

Reflective checklists for supervision process and progress provide structured tools for enhancing supervisor-student communication. These checklists facilitate regular, systematic discussions about research progress, challenges, goals, and next steps, ensuring that important topics are consistently addressed and that both parties maintain shared understanding of expectations and progress (Chrysoulakis, 2025).

4.4 Co-Supervision and Team Approaches

Co-supervision and team-based supervision models involve multiple supervisors or broader supervisory teams working collaboratively to support individual students. Research demonstrates that well-implemented co-supervision can enhance supervision quality by providing students with diverse expertise, multiple perspectives, and increased support availability (Apheth et al., 2023), (Emekako et al., n.d.).

Collaborative supervision pedagogy emphasizes team-based approaches that extend beyond traditional dyadic supervisor-student relationships. Writing camps represent one manifestation

of collaborative supervision, bringing together multiple students and supervisors in intensive, structured writing environments that provide peer support, collective learning, and concentrated supervision input (Emekako et al., n.d.). These alternative supervision programs have demonstrated effectiveness in accelerating student progress and enhancing completion rates, particularly when integrated within broader supervision strategies.

Team supervision models distribute supervision responsibilities across multiple faculty members, each contributing specific expertise or support functions. This approach can address supervisor workload challenges while providing students with access to broader knowledge bases and professional networks (Apheth et al., 2023). However, effective team supervision requires clear role delineation, coordinated communication, and shared understanding of supervision philosophy and expectations to avoid confusion or conflicting guidance.

Corroborative supervision, identified in Ugandan universities, involves supervisors working collaboratively to support students, sharing insights, coordinating feedback, and collectively monitoring progress (Apheth et al., 2023). This approach fosters supervisor learning communities wherein faculty members support each other's supervision practice while providing enhanced support to students.

Research cautions that co-supervision effectiveness depends on thoughtful implementation, clear communication protocols, and genuine collaboration among supervisors. Poorly coordinated co-supervision can create confusion, conflicting expectations, or gaps in support that undermine rather than enhance supervision quality (Byrne et al., 2026). Successful co-supervision requires explicit agreements about roles, responsibilities, communication patterns, and decision-making processes.

4.5 Technology-Mediated Supervision

The COVID-19 pandemic accelerated adoption of technology-mediated supervision, prompting critical examination of online and hybrid supervision modalities. Research from this period demonstrates that technology-mediated supervision can be effective when supported by appropriate infrastructure, clear policies, and supervisor competencies in virtual facilitation (Apheth et al., 2023).

Online research supervision encompasses various technological tools and platforms including video conferencing, collaborative document editing, learning management systems, and asynchronous communication channels. Studies document that these technologies can facilitate regular communication, enable remote collaboration, and provide flexibility that accommodates diverse student circumstances (Apheth et al., 2023). However, effectiveness depends on reliable technological infrastructure, digital literacy among both supervisors and students, and intentional adaptation of supervision practices to virtual environments.

Flipped supervision represents an innovative technology-enabled approach wherein students engage with instructional materials independently before supervision meetings, allowing meeting time to focus on higher-order discussion, problem-solving, and personalized guidance (Apheth et al., 2023). This approach maximizes the value of synchronous supervision time while promoting student autonomy and self-directed learning.

Research emphasizes the importance of formal policies and guidelines for online supervision to ensure quality and consistency. Institutions implementing technology-mediated supervision effectively have developed explicit protocols addressing communication expectations, meeting frequencies, feedback timelines, and technological support resources (Apheth et al., 2023). Without such formalization, online supervision risks becoming ad hoc and inconsistent, potentially disadvantaging students who lack access to resources or who struggle with virtual learning modalities.

Technology-mediated supervision also presents challenges including reduced informal interaction, potential for miscommunication in text-based exchanges, technological barriers for some students, and supervisor fatigue from extensive screen time. Effective implementation requires acknowledging these challenges and developing strategies to mitigate them, including intentional relationship-building activities, clear communication norms, and hybrid approaches that combine virtual and face-to-face interaction when feasible.

4.6 Institutional Support Mechanisms

Institutional support mechanisms encompass organizational structures, policies, resources, and services that enable effective supervision and support student completion. Research consistently identifies institutional support as critical for supervision effectiveness, with inadequate institutional frameworks contributing significantly to completion challenges (Mashau et al., 2023), (N.N. et al., 2025).

Supervisor training and development programs represent essential institutional support mechanisms. Mandatory, large-scale supervisor development programs, such as those implemented in European contexts, professionalize supervision by providing explicit training in supervision pedagogy, feedback practices, relationship management, and progress monitoring (Fossland, 2023). These programs address the reality that research expertise does not automatically translate to supervision competence, requiring intentional development of supervision-specific knowledge and skills.

Workshops to retool supervisors and students provide ongoing professional development opportunities that keep supervision practices current and responsive to evolving challenges (Apheth et al., 2023). These workshops address topics including research methodologies, writing strategies, time management, mental health awareness, and emerging supervision approaches. By providing continuous learning opportunities, institutions signal that supervision is a professional practice requiring ongoing development rather than a static skill set.

Administrative follow-up and monitoring systems enable institutions to track supervision progress systematically, identify students at risk of delay or non-completion, and intervene proactively (Apheth et al., 2023). Effective monitoring systems collect regular data on student progress, supervision meeting frequency, milestone completion, and other indicators, using this information to trigger support interventions when problems emerge.

Research coordination offices or graduate schools provide centralized support for postgraduate programs, offering resources including research training workshops, writing support, statistical consultation, ethics review processes, and funding information (Apheth et al., 2023). These centralized services complement individual supervision by providing specialized expertise and support that individual supervisors may not possess.

Institutional policies governing supervision—including supervisor workload limits, student-supervisor matching processes, conflict resolution procedures, and quality assurance mechanisms—create frameworks that enable consistent, high-quality supervision across institutions (Nabwire, 2024). Research emphasizes that effective supervision cannot rely solely on individual supervisor goodwill or competence but requires institutional structures that support, incentivize, and monitor supervision quality systematically.

4.7 Cohort-Based Supervision Models

Cohort-based supervision models organize students into groups that engage in collective learning activities alongside individual supervision. These models draw on Communities of Practice theory, conceptualizing doctoral education as social learning wherein students develop scholarly identities through peer interaction and collaborative engagement (Byrne et al., 2026).

Cohort supervision offers multiple benefits including reduced student isolation, enhanced peer learning, development of collaborative skills, and creation of supportive learning communities. Research documents that well-designed cohort models improve completion rates by fostering resilience, providing multiple sources of support and feedback, and creating accountability structures that motivate consistent progress (Byrne et al., 2026).

Effective cohort supervision requires thoughtful design, structured facilitation, and robust institutional support. Key design elements include clear learning objectives, balanced activities combining individual and collective work, facilitation that prevents expert dominance while ensuring productive engagement, and integration with individual supervision rather than replacement of it (Byrne et al., 2026). Without careful design, cohort models risk becoming ineffective or even counterproductive, with inconsistent participation, unequal contribution, or superficial engagement undermining potential benefits.

Cohort models democratize doctoral education by providing access to diverse perspectives, reducing dependence on individual supervisor expertise, and creating peer support networks that extend beyond formal program structures. These benefits are particularly valuable for students from underrepresented backgrounds who may lack access to informal academic networks and who benefit from peer communities that provide both academic and social support (Byrne et al., 2026).

Challenges in cohort supervision include managing diverse student needs and progress rates, preventing free-riding or unequal participation, maintaining engagement over extended doctoral timelines, and securing institutional resources for facilitation and coordination. Successful implementation requires institutional commitment including dedicated facilitation, appropriate physical or virtual spaces, and recognition of cohort supervision as legitimate pedagogical practice rather than optional add-on (Byrne et al., 2026).

5. Discussion

5.1 Integration of Supervision Strategies

The evidence synthesized in this review demonstrates that effective postgraduate supervision is multifaceted, requiring integration of multiple strategies rather than reliance on any single approach. The most successful supervision practices combine structured processes with relational sensitivity, systematic feedback with emotional support, individual guidance with collective learning opportunities, and supervisor expertise with institutional support systems (Grohnert et al., 2024), (Madondo, 2024).

An input-process-outcome framework for understanding supervision effectiveness reveals that supervision outcomes depend on complex interactions among student characteristics, supervisor characteristics, relationship quality, supervision actions, and contextual factors (Grohnert et al., 2024). This framework emphasizes that effective supervision cannot be reduced to simple prescriptions but must be understood as dynamic, context-dependent practice that adapts to specific student needs, disciplinary norms, and institutional contexts.

The evidence suggests that supervision effectiveness operates at multiple levels: individual (supervisor competencies and student characteristics), relational (supervisor-student relationship quality), programmatic (cohort structures and peer support), and institutional (policies, resources, and support systems). Optimal outcomes emerge when all levels function effectively and synergistically, with institutional structures enabling rather than constraining individual supervision excellence (Mavuru et al., 2023).

Research emphasizes the importance of supervisor attitudes and actions in shaping supervision effectiveness. Supervisors who demonstrate genuine care for students, maintain regular communication, provide timely constructive feedback, and adapt their approaches to individual student needs create conditions that foster student success (Adedokun et al., 2024), (AbuSa'aleek, 2026). However, even excellent individual supervisors cannot fully compensate for inadequate institutional support, highlighting the necessity of multi-level interventions.

5.2 Barriers to Effective Supervision

Despite growing knowledge about effective supervision practices, significant barriers impede implementation across many institutions. Supervisor workload emerges as a pervasive challenge, with faculty members often supervising excessive numbers of students while simultaneously managing teaching, research, and administrative responsibilities (Nabwire, 2024), (AbuSa'aleek, 2026). This workload pressure constrains the time and energy supervisors can devote to individual students, potentially compromising supervision quality and contributing to student delays.

Insufficient supervisor training represents another critical barrier. Many supervisors receive no formal training in supervision pedagogy, relying instead on implicit models derived from their own postgraduate experiences or disciplinary norms (Fosslund, 2023). This lack of explicit training can result in supervision practices that perpetuate problematic patterns, fail to address diverse student needs, or miss opportunities to employ evidence-based approaches that enhance effectiveness.

Inadequate institutional support structures, including weak monitoring systems, insufficient resources for student support services, and lack of clear supervision policies, create environments wherein supervision quality varies dramatically depending on individual supervisor commitment and competence (Mashau et al., 2023). Without institutional frameworks that establish minimum standards, provide support resources, and monitor supervision quality, students may experience inadequate supervision with limited recourse for addressing problems.

Student-related factors also influence supervision effectiveness and completion outcomes. Students entering postgraduate programs with inadequate research preparation, unclear goals, or unrealistic expectations face heightened challenges that even excellent supervision may struggle to overcome (Kipleting et al., 2023). Additionally, students managing competing demands including employment, family responsibilities, or financial pressures may struggle to maintain consistent progress regardless of supervision quality.

Contextual challenges specific to resource-constrained environments, particularly in African institutions, include limited access to research resources, inadequate technological infrastructure, funding constraints, and brain drain of experienced supervisors (Mashau et al., 2023), (Kipleting et al., 2023). These contextual factors compound supervision challenges and require tailored approaches that acknowledge resource limitations while striving for excellence within constraints.

5.3 Contextual Considerations

The literature reveals important contextual variations in supervision practices and challenges across different geographical, disciplinary, and institutional contexts. African institutions face distinctive challenges including limited resources, high supervisor-student ratios, inadequate research infrastructure, and the need to build research capacity in contexts where research cultures may be underdeveloped (Mashau et al., 2023), (Kipleting et al., 2023), (N.N. et al., 2025). Effective supervision in these contexts requires approaches that acknowledge resource constraints while leveraging available strengths including collaborative cultures, innovative problem-solving, and commitment to capacity building.

Disciplinary differences influence supervision practices, with sciences, social sciences, and humanities exhibiting distinct supervision norms, timelines, and expectations. Research emphasizes the importance of discipline-specific supervision approaches that align with epistemological traditions, methodological norms, and career pathways characteristic of different fields (Temerbayeva et al., 2025). Generic supervision frameworks must be adapted to accommodate these disciplinary variations while maintaining core principles of effective practice.

Institutional contexts—including research-intensive universities versus teaching-focused institutions, large versus small programs, and well-resourced versus resource-constrained environments—shape supervision possibilities and constraints. Effective supervision strategies must be contextually appropriate, leveraging available resources and structures while addressing specific challenges characteristic of particular institutional environments (Molaba et al., 2024).

The COVID-19 pandemic created a unique contextual moment that accelerated technology adoption and prompted critical reflection on supervision practices. While the pandemic created significant challenges, it also generated innovations including enhanced online supervision capabilities, increased flexibility, and recognition that traditional face-to-face models are not the only viable approach (Apheth et al., 2023). Post-pandemic supervision practices are likely to retain beneficial innovations while returning to valued aspects of in-person interaction, resulting in hybrid models that combine strengths of multiple modalities.

5.4 Implications for Practice

The evidence synthesized in this review yields several important implications for supervision practice at individual, programmatic, and institutional levels. For individual supervisors, the research emphasizes the importance of developing explicit supervision competencies including relationship building, feedback provision, progress monitoring, and adaptive responsiveness to diverse student needs (Grohnert et al., 2024). Supervisors should engage in ongoing professional development, seek feedback on their supervision practice, and remain open to evolving their approaches based on emerging evidence and student input.

At the programmatic level, the evidence supports implementation of cohort-based learning opportunities, writing camps, and other collective supervision activities that complement individual supervision (Emekako et al., n.d.), (Byrne et al., 2026). Programs should develop clear supervision policies, establish regular monitoring mechanisms, and create support structures that enable early identification and intervention when students encounter difficulties.

Institutionally, the research strongly supports investment in supervisor training programs, development of formal supervision policies, enhancement of technological infrastructure for flexible supervision modalities, and creation of robust monitoring systems (Fossland, 2023), (Apheth et al., 2023). Institutions should recognize supervision as a professional practice requiring explicit support, development, and quality assurance rather than assuming that research expertise automatically translates to supervision competence.

The evidence also highlights the importance of addressing supervisor workload through reasonable limits on supervision loads, recognition of supervision in workload models, and provision of support resources that enable supervisors to fulfill their responsibilities effectively (Nabwire, 2024). Without addressing workload pressures, even well-trained, committed supervisors may struggle to provide the consistent, high-quality supervision that students require for successful completion.

6. Future Directions and Recommendations

Based on the synthesis of current evidence, several priorities emerge for future research, policy development, and practice improvement in postgraduate supervision. First, longitudinal research tracking supervision practices and completion outcomes over extended periods would provide valuable evidence about long-term effectiveness of different supervision approaches. Much current research relies on cross-sectional designs or short-term follow-up, limiting

understanding of how supervision influences completion over multi-year doctoral timelines (Grohnert et al., 2024).

Second, research examining student actions and agency in supervision relationships remains underdeveloped. Current literature emphasizes supervisor roles and responsibilities, with less attention to how students can actively shape productive supervision relationships and take ownership of their learning processes (Grohnert et al., 2024). Understanding student agency and effective student strategies would provide more complete models of supervision as a collaborative endeavor.

Third, comparative research examining supervision across diverse contexts—including different countries, institutional types, and disciplines—would illuminate how contextual factors shape supervision effectiveness and how practices can be adapted appropriately to different settings (Temerbayeva et al., 2025). Such research should avoid simplistic transfer of practices from well-resourced to resource-constrained contexts, instead identifying principles that can be implemented flexibly across diverse environments.

Fourth, research on supervisor learning and development over time would inform more effective training programs. Understanding how supervisors develop expertise, what experiences contribute most to supervision competence, and how to accelerate supervisor learning would enhance professional development initiatives (Fossland, 2023), (AbuSa'aleek, 2026).

Fifth, investigation of technology-mediated supervision effectiveness beyond emergency pandemic implementations would provide evidence about optimal integration of technological tools within supervision practice. Research should examine which aspects of supervision benefit most from virtual modalities, which require face-to-face interaction, and how to design effective hybrid approaches (Apheth et al., 2023).

Recommendations for Institutions:

1. Implement mandatory supervisor training programs covering supervision pedagogy, feedback practices, relationship management, diversity and inclusion, and mental health awareness (Fossland, 2023).
2. Develop and formalize supervision policies addressing supervisor workload limits, student-supervisor matching processes, meeting frequency expectations, feedback timelines, and conflict resolution procedures (Nabwire, 2024).
3. Establish systematic monitoring mechanisms that track supervision progress, identify at-risk students early, and trigger timely interventions (Apheth et al., 2023).
4. Invest in technological infrastructure supporting flexible supervision modalities including video conferencing, collaborative platforms, and learning management systems (Apheth et al., 2023).
5. Create centralized support services including writing centers, statistical consultation, research training workshops, and mental health resources that complement individual supervision (Apheth et al., 2023).

6. Recognize and reward excellent supervision through promotion criteria, teaching awards, and workload allocation that acknowledges supervision as substantive professional work (Nabwire, 2024).

Recommendations for Supervisors:

1. Engage in regular professional development focused on supervision competencies, remaining current with evidence-based practices and emerging approaches (Fosslund, 2023).
2. Establish clear expectations and communication protocols with students at the outset of supervision relationships, revisiting and adjusting these as needed throughout the supervision process (Grohnert et al., 2024).
3. Provide regular, timely, constructive feedback that balances critical evaluation with encouragement and specific guidance for improvement (Singh, 2024).
4. Maintain consistent communication and meeting schedules, demonstrating genuine interest in student success and wellbeing (Adedokun et al., 2024).
5. Adapt supervision approaches to individual student needs, recognizing diversity in learning styles, backgrounds, and circumstances (Zizer, 2023).
6. Seek feedback on supervision practice from students and peers, using this input to continuously improve supervision effectiveness (AbuSa'aleek, 2026).

Recommendations for Students:

1. Take active ownership of the supervision relationship, communicating clearly about needs, challenges, and expectations (Grohnert et al., 2024).
2. Maintain regular communication with supervisors, providing updates on progress and raising concerns promptly when difficulties emerge.
3. Engage with peer support networks and cohort learning opportunities that complement individual supervision (Byrne et al., 2026).
4. Develop self-regulation and time management skills that enable consistent progress toward completion.
5. Utilize institutional support services including writing support, statistical consultation, and mental health resources when needed.

7. Conclusion

Effective postgraduate supervision is complex, multi-layered process that directly influences student completion rates. High-quality supervision integrates structured processes, relational sensitivity, constructive feedback, institutional support, and adaptability to diverse student needs. Seven strategies consistently emerge: structured supervision models with clear accountability; mentoring frameworks that strengthen supervisor-student relationships; timely

and constructive feedback practices; co-supervision leveraging multiple expertise; technology-mediated supervision for flexible support; institutional mechanisms that enable effective environments; and cohort-based models fostering peer learning. Evidence highlights that no single strategy is sufficient—effective supervision requires a synergistic blend across individual, relational, programmatic, and institutional levels. Supervisors must build explicit competencies through training and professional development, while institutions must provide policies, resources, and systematic support. Persistent barriers include heavy workloads, insufficient training, inadequate institutional backing, and contextual challenges in resource-constrained settings. Innovations such as technology-enabled supervision, coaching-informed approaches, and structured supervisor training programs have gained traction, particularly post-pandemic. Moving forward, research should examine diverse contexts, student agency, and long-term outcomes, while institutions prioritize supervision quality through policy reform and resource investment. Ultimately, strengthening supervision enhances completion rates and builds research capacity, knowledge production, and human capital vital for societal progress.

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