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FACTORS INFLUENCING MASTER'S STUDENTS' CONCEPTUALISATION OF RESEARCH METHODOLOGY: A NARRATIVE LITERATURE REVIEW

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ABSTRACT

Introduction: Master's students are expected to develop advanced research competencies, including problem formulation, literature synthesis, research design, and academic writing. Despite the central role research methodology plays in postgraduate training, the research methodology course remains one of the most challenging courses, often contributing to poor thesis quality and delayed completion. This study synthesises existing literature to examine factors influencing master's students' conceptualising in research methodology, with particular attention to cognitive, pedagogical, and institutional determinants.

Methods: A narrative desktop review was conducted using the Directory of Open Access Journals (DOAJ), focusing on literature published between 2020 and 2026. Search keywords included "master's students," "postgraduate students," "Africa," "supervision," and "research methodology course." After a systematic screening process, four peer-reviewed studies were included, comprising three empirical studies and one conceptual review. Thematic analysis was employed to identify, integrate, and interpret recurring patterns across the selected literature.

Results: The synthesis identified four interrelated themes influencing students' conceptualisation of research methodology, contact Supervision-related, ODL Supervision- related, student -related, and institutional-related. These themes collectively highlight persistent weaknesses of students, supervision processes, and institutional support structures. Taken together, the findings are grouped into three key factors influencing students' conceptualisation of research methodology: student-related factors, supervision-related factors, and institutional /systemic factors. The narrative synthesis reveals that students' difficulties in understanding research methodology are not only pedagogical but also structural and communicative. Key insights include the influence of feedback style on conceptual clarity, persistent communication gaps within supervision systems, and the role of language proficiency in shaping analytical reasoning and methodological interpretation.

Keywords: Research methodology; Master's students; Research conceptualisation; Postgraduate research; Research supervision; Student-related factors; Institutional factors; Research competencies.

1. INTRODUCTION

Research competence is widely recognized as a central outcome of master's level education, requiring students to engage with complex processes such as problem formulation, literature synthesis, methodological design, and academic writing. At postgraduate level, students are expected to demonstrate independence in identifying research problems, evaluating scholarly literature, selecting appropriate methodologies, and presenting findings in academically acceptable forms. These expectations position research competence not merely as a technical requirement but as a core indicator of intellectual maturity and scholarly preparedness. However, the transition into postgraduate research often exposes significant weaknesses in students' preparedness for advanced inquiry. Many students experience difficulties understanding research terminology, interpreting methodological concepts, and integrating theoretical perspectives into coherent research designs. Such challenges affect students' confidence and ability to progress effectively through postgraduate programmes. Consequently, concerns regarding research understanding have increasingly become central within higher education scholarship and postgraduate training debates. This study therefore advances the claim that difficulties in understanding research among master's students are not incidental but represent a persistent and systemic challenge within higher education. These persistent and systemic challenges are clearly reflected in empirical evidence on research literacy and supervision practices, which is explored through empirical findings on research literacy and supervision practices.

Empirical evidence supports this claim by highlighting widespread deficiencies in research literacy and supervision practices. Across higher education contexts, studies consistently report that many master's students struggle with core research competencies such as problem conceptualisation, methodological reasoning, academic writing, and critical engagement with literature. These difficulties are particularly evident during proposal development and dissertation writing stages, where students are required to apply abstract methodological concepts independently. For instance, Roeland van der Rijst et al. (2019) demonstrates that students often lack the epistemological understanding required to engage with research-oriented learning, particularly when transitioning from undergraduate to postgraduate studies. Similarly, Uwizeye et al. (2022) identified significant gaps in research skills development arising from limited institutional support; these are further complicated by supervision challenges like delayed feedback and inconsistent guidance, which intensify the conceptual difficulties students face. These findings collectively indicate that students' struggles are not isolated but reflect broader patterns across higher education systems. These deficiencies in research literacy point to deeper concerns regarding foundational research skills and prior preparation, which leads into an examination of underlying skill gaps in postgraduate readiness.

The relationship between these observed students' challenges in understanding research can be explained by the lack of

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foundational research skills.

Master's programmes typically assume a level of prior competence in critical thinking, research design, academic writing, and information literacy that many students have not fully developed during undergraduate study. As a result, postgraduate students are often required to engage with advanced research tasks without sufficient scaffolding or conceptual grounding. This mismatch between programme expectations and students' prior preparation contributes to confusion, cognitive overload, and limited comprehension of methodological concepts. Students may therefore focus on procedural completion of research tasks without fully understanding the epistemological and analytical reasoning underlying research processes. Furthermore, inadequate prior exposure to scholarly writing and independent inquiry reduces students' confidence in engaging critically with research literature and methodological debates. This reasoning suggests that challenges in research understanding are rooted in structural gaps in prior learning and curriculum design. These foundational research skills and learning gaps can be further understood through theoretical perspectives on research-led teaching, which frames the pedagogical interpretation of postgraduate research learning.

This argument is further strengthened by theoretical perspectives on research-led teaching. Brew (2018) argues that meaningful engagement with research requires students to participate actively in knowledge construction processes rather than passively receiving information. From this perspective, research understanding develops through immersion in inquiry-based learning environments where students are encouraged to question assumptions, engage critically with evidence, and construct meaning through scholarly interaction. Research-led teaching therefore shifts learning from content transmission toward active intellectual participation. When students are exposed to authentic research practices, they are more likely to develop conceptual clarity regarding methodology, theoretical positioning, and research design. However, when opportunities for inquiry-based engagement are limited or poorly implemented, students may struggle to internalise the deeper logic of research processes. This theoretical perspective reinforces the importance of pedagogical approaches that promote dialogue, reflection, and active participation in postgraduate learning environments. These theoretical perspectives on research-led teaching provide the basis for defining the scope of the narrative literature review, which establishes the parameters of the study's evidence base.

This narrative literature review is therefore situated within a clearly defined scope, focusing on peer-reviewed studies published between 2018 and 2026 in higher education contexts. This period was selected because it captures both the years immediately preceding the COVID-19 pandemic and the transformations in higher education that emerged during and after the pandemic period. The selected timeframe therefore allows the review to examine continuity and change in postgraduate research training, supervision practices, academic literacy development, and institutional support systems. In addition, the review focuses specifically on contemporary higher education contexts in order to generate insights relevant to current postgraduate teaching and learning environments. While acknowledging variations across disciplines, institutional structures, and geographical contexts, the review concentrates on identifying recurring patterns and dominant themes within recent scholarship. This temporal and contextual focus strengthens the relevance of the study by ensuring that the discussion reflects current realities in postgraduate education. This clearly defined scope also informs the methodological approach adopted for the narrative literature review, which shapes the interpretive strategy of the study.

While systematic reviews are often regarded as more rigorous due to their structured methodologies, a narrative review is particularly appropriate for the present study because of its analytical flexibility. Narrative literature reviews allow researchers to integrate diverse theoretical perspectives, critically examine complex educational phenomena, and synthesise findings across varied contexts and methodological traditions. This flexibility is especially important in studies examining postgraduate research learning, where cognitive, pedagogical, emotional, and institutional factors intersect in complex ways. Unlike systematic reviews that often prioritise methodological uniformity, narrative approaches provide greater opportunity for interpretive analysis and conceptual integration. Given that the challenges faced by master's students span research literacy, supervision dynamics, institutional support, and methodological understanding, a narrative synthesis offers the breadth required to examine these interconnected dimensions holistically. Furthermore, the approach supports critical engagement with emerging themes and theoretical debates within postgraduate education research. This methodological approach provides the foundation for the research questions guiding the present study, which structure the analytical direction of the inquiry.

Against this background, the present study examined factors influencing master's students' conceptualisation of Research Methodology. Specifically, it addresses three research questions: 1) What factors affect Master's students' conceptualisation of the Research Methodology, as identified in the literature; 2) How do institutional factors, including supervision and support systems, influence Master's students' conceptualisation of the Research Methodology course; and 3) What strategies have been proposed to enhance Master's students' conceptualisation of Research Methodology? These questions were formulated to capture the multidimensional nature of postgraduate research learning by examining cognitive, institutional, pedagogical, and supervisory dimensions simultaneously. The questions also provide a structured framework for synthesising existing scholarship and identifying recurring challenges and intervention strategies within postgraduate education. By focusing specifically on conceptualisation of research methodology, the study seeks to move beyond procedural understandings of research training toward deeper analysis of how students understand and engage with methodological knowledge. These research questions shape the scholarly and practical contributions of the study, which define its academic and policy relevance.

The contributions of this narrative literature review are fourfold. First, it synthesizes existing research on master's students'

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conceptualization of the Research Methodology course by bringing together diverse studies addressing research learning, supervision, academic literacy, and postgraduate pedagogy. Second, it identifies key influencing factors, including research writing, methodology, supervision, institutional support, time management, language, and critical thinking. Third, it provides

evidence-based guidance to improve teaching strategies, supervision practices, and institutional support systems to strengthen postgraduate research competences. Fourth, it offers recommendations to enhance students' conceptual understanding of research methodology and to improve postgraduate research experiences more broadly. In addition, the review contributes theoretically by highlighting the interconnected nature of cognitive, relational, and institutional dimensions of research learning. Practically, the study may support universities, supervisors, curriculum developers, and policymakers in designing more supportive postgraduate learning environments. Taken together, these scholarly and practical contributions position the study as an important intervention in ongoing discussions concerning postgraduate research competences, supervision quality, and methodological learning within higher education**.**

2. METHODOLOGY

This study employed a desktop narrative review (Snyder, 2019) to synthesize scholarly evidence on factors influencing master's students' conceptualising in research methodology. A desktop review is appropriate because it allows systematic examination of existing literature without conducting primary fieldwork, providing both breadth and depth of understanding (Snyder, 2019). Using keywords, a structured and systematic search strategy was developed to guide the identification of relevant literature.

The study employed a structured desktop literature search to identify relevant peer-reviewed articles on master's/postgraduate supervision and the teaching of research methods courses in Africa. The search was conducted using the Directory of Open Access Journals (DOAJ) and was limited to publications published between 2020 and 2026. The keywords used were: "master's students" OR "postgraduate students" AND Africa AND supervision AND "research methodology course", which yielded 70 articles. A structured four-stage screening process was then applied as follows: 1) articles from African universities were screened, with 50 excluded and 20 retained; 2) restricting to "master's/postgraduate students" and DOAJ yielded 10 articles, of which 10 were excluded; 3) further filtering for "supervision" or "supervision experience" in the title yielded six articles, with 2 excluded; and 4) applying thematic relevance criteria focusing on supervision and research methodology reduced the final sample to four articles.

In the second stage, abstracts were examined to confirm the relevance of each study to the research focus. This process led to the retention of 10 articles. The third stage involved assessing thematic relevance. At this point, studies were required to address postgraduate supervision, research methodology courses, or broader research training. Articles that focused solely on ICT, general academic performance, or unrelated topics were excluded, reducing the number to four articles.

The four retained articles were used to generate a literature matrix to identify and compare relationships and finally generate themes. A content analysis using open, axial, and selective coding: the author read each article line by line to generate meaningful textual units and assign concise codes that captured the essence of each statement (Creswell, 2021, 2022; Braun & Clarke, 2021, 2023). These initial codes were iteratively reviewed during axial coding, refined, and compared across the articles to ensure consistency and analytical rigour. Finally, selective coding was done by grouping similar codes into subthemes, which were then organized into broader themes to provide a structured framework for synthesizing the literature. This process ensured transparency, reproducibility, and systematic rigour in the analysis.

3. RESULTS

The results section presents three key categories of factors emerging from the synthesis of literature, namely student-related, supervision-related, and institutional/systemic influences on master's students' conceptualisation of research methodology. These factors are further organised into the following themes: supervision effectiveness constraints, open and distance learning (ODL) supervision challenges, feedback and expectation misalignment, and systemic institutional capacity constraints.

Specifically, the results reveal key challenges affecting postgraduate supervision across African contexts. Daramola (2021) finds that supervision is often marked by inconsistencies, power dynamics, and institutional constraints that influence students' progress. Similarly, Netshitangani and Machaisa (2021) report that supervision in open and distance learning settings is characterised by communication delays, limited interaction, and inconsistent feedback. Nurie (2020) further shows that postgraduate students strongly prefer timely, detailed, and structured feedback to effectively support thesis development, highlighting a gap between student expectations and actual supervisory practices. At a broader level, Mireku et al. (2026) identify systemic issues such as high supervisor workload, inadequate training, weaknesses in students ' ability to conceptualise research issues, and institutional support structures across Sub-Saharan Africa (Table 1). Overall, the findings demonstrate that postgraduate supervision challenges are largely driven by poor communication, insufficient feedback quality, and institutional limitations, which collectively hinder effective research training and student progression.

The literature search from DOAJ yielded four articles addressing factors influencing master's students' conceptualisation of research methodology course. three overarching categories of influence (Table 1). The synthesis of literature yielded three key categories of influence: student-

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Table 1: Systematic Summary of Reviewed Literature on Research Methodology Conceptualisation among Master's Students

Author	Title	Aim / Purpose	Empirical/Conceptual /Design	Main Findings	Future Research	Limitations
Daramola, O. (2021)	Lessons from postgraduate supervision in two African universities	To explore lived experiences and lessons from postgraduate supervision practices in two African universities	• Empirical • Qualitative Approach • Autoethnographic Design	Highlights supervisory inconsistencies, power dynamics, and institutional constraints affecting postgraduate progress.	Comparative studies across more African universities and supervision models are recommended.	Limited generalisability due to focus on two institutions and autoethnographic design
Netshitangani, T. & Machaisa, P. R. (2021)	Supervision experiences of postgraduate students at an ODL institution in South Africa	To examine postgraduate supervision experiences in an open and distance learning institution	• Empirical • Qualitative study • Case study design	Identifies challenges such as communication delays, limited interaction, and inconsistent feedback in ODL supervision.	Future studies should examine supervisor training and digital supervision enhancement in ODL contexts.	Small sample size and findings limited to one ODL institution
Nurie, Y. (2020)	Graduate students' perceived needs and preferences for supervisor written feedback for thesis writing	To investigate students' needs and preferences regarding supervisor written feedback	• Empirical • qualitative feedback • Descriptive Survey design	Students prefer timely, detailed, and structured feedback to guide thesis writing effectively.	Further research on digital feedback systems and disciplinary differences in supervision feedback is recommended.	Reliance on self-reported perceptions and limited scope of participants
Mireku, D. O. et al. (2026)	Postgraduate thesis and dissertation supervision in Sub-Saharan Africa: A systematic review (2014–2024)	To synthesise literature on postgraduate supervision in Sub-Saharan Africa over a decade	Conceptual Qualitative Systematic literature review	Reveals challenges such as supervisor, student weakness to grasp research issues, academic workload, lack of training, and institutional inefficiencies across SSA.	Future studies should focus on intervention-based and policy-driven supervision improvement models.	Limited to published literature; possible exclusion of grey literature and unpublished studies

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related, supervision-related, and institutional/systemic factors. During data analysis, four themes emerged: supervision effectiveness constraints, open and distance learning (ODL) challenges, feedback and expectation misalignment, and systemic institutional capacity (Table 2). The following

sections detail these themes, drawing on empirical evidence from various African postgraduate contexts to illustrate the interplay between individual student experiences and broader structural limitations (Table 1).

Table 1 shows a synthesis of selected literature on postgraduate supervision and research methodology learning in Africahigher education contexts. Each study is summarised in terms of its author(s), title, research aim, methodological orientation, key findings, suggested areas for future research, and stated limitations. The purpose of the table is to facilitate systematic comparison across studies and to support thematic analysis by identifying recurring patterns, gaps, and conceptual trends in the literature.

The rest of findings are organized according to the three guiding research questions, with each section integrating the identified four themes: supervision effectiveness constraints, ODL supervision challenges, feedback and expectation misalignment, and systemic institutional capacity constraints

Research Question 1: What Factors Affect Master's Students' Conceptualisation of Research Methodology, as Identified in the Literature?

The literature identifies three primary categories of influence: supervision-related, student-related, and institutional-related factors, which collectively shape how master's students grasp research methodology. These factors manifest predominantly through supervision effectiveness constraints, where inconsistencies in guidance hinder a student's ability to select appropriate methods or formulate clear research questions. In remote learning environments, ODL supervision challenges further complicate this process by limiting the interactive dialogue necessary for mastering complex designs. Furthermore, persistent feedback and expectation misalignment leave students without the structured support needed to integrate theoretical frameworks with empirical data. These difficulties are often underpinned by systemic institutional capacity constraints, which limit the availability of foundational training and resources.

Research Question 2: How do Institutional Factors, Including Supervision and Support Systems, Influence Master's Students' Conceptualisation of the Research Methodology?

Institutional factors serve as the structural framework through which students experience research training. Primarily, systemic institutional capacity constraints result in excessive supervisor workloads and high student-teacher ratios, which directly trigger supervision effectiveness constraints by preventing the deep, iterative dialogue required for conceptual mastery. Furthermore, ODL supervision challenges are exacerbated by weak institutional frameworks that fail to provide clear, consistent supervision policies, leading to communication delays. This lack of structure feeds into feedback and expectation misalignment, as students are often left with uneven support and conflicting academic requirements. Ultimately, when library access and specialised workshops are limited by systemic institutional capacity constraints, students remain overly dependent on supervisors, and methodological misunderstanding becomes an inevitable outcome of the system rather than an individual failure.
To ensure a clear and consolidated overview of the findings, the following table maps the identified literature sources and specific factors against the emerged themes (Table 2).

Table 2: Summary of Themes, Sub-themes, and Factors Affecting Research Methodology Conceptualisation among master's Students.

Author/year	Codes	Subtheme	Theme/	Factors
Daramola (2021)	Delayed feedback on drafts Irregular supervisory meetings Weak supervisor–student communication Limited supervisor availability Weak methodological guidance Poor thesis structuring support Limited academic writing support Supervisor workload overload Inconsistent supervisory expectations	Supervision interaction and communication Research and writing support Institutional and workload pressures Institutional and workload pressures	Supervision effectiveness constraints	Contact Supervision-related

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	Pressure to publish from thesis			
Netshitangani & Machaisa (2021)	Limited face-to-face interaction Delayed supervisor responses Difficulty accessing supervisors Student isolation in supervision Lack of structured supervision plans Uneven supervisory support Poor communication channels ICT challenges in supervision	Accessibility and communication barriers ODL supervision structure weaknesses Technology-mediated supervision challenges	ODL supervision challenges	ODL Supervision-related
Nurie (2020)	Need for detailed feedback Preference for constructive criticism Difficulty interpreting vague comments Need for clear correction guidance Students weakness Desire for timely feedback Preference for structured feedback Preference for tracked changes Preference for annotated comments Motivation through feedback Dependence on digital platforms	Feedback clarity and quality Feedback timeliness and Student anxiety, responsiveness Feedback format and delivery preferences Feedback clarity and quality	Feedback and student expectations/anxiety	Student - related
Mireku et al. (2026)	Inadequate supervisor training Weak methodological training for students High supervisory workload Poor feedback culture Institutional support limitations Policy and structural weaknesses Inconsistent supervision quality Low research publication output Insufficient research capacity building Unequal supervision practices	Supervisor and student capacity gaps Institutional and systemic constraints Research output and quality challenges Institutional and systemic constraints	Systemic capacity constraints	Institutional-related

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Table 2 shows a thematic synthesis of the reviewed literature, showing how coded data from each study were grouped into subthemes and further organised into broader themes and overarching factors. Across the four studies, the findings consistently point to three main categories of influences on master's students' research methodology challenges, namely

supervision-related, student-related, and institutional/systemic factors.

Research Question 3: What Strategies Have Been Proposed to Enhance Master's Students' Conceptualisation Of Research Methodology?

To address these challenges, the literature suggests eight integrated strategies that target the core thematic barriers. One, improving feedback quality is essential to bridge the feedback and expectation misalignment by ensuring that critiques are timely, specific, and developmentally focused. Two, strengthening supervisory capacity addresses systemic

institutional capacity constraints by advocating for reduced workloads and improved training to foster sustained academic

engagement. Three, the implementation of formalised research training and systematic frameworks helps mitigate supervision effectiveness constraints by building student independence. Four, adopting dialogic and developmental supervision models shifts the focus toward two-way critical engagement, further improving supervision effectiveness. Five, the use of collaborative and student-centred pedagogy, alongside six, peer-based learning communities, serves as a vital tool to overcome ODL supervision challenges by allowing for meaning-making through social interaction. Seven, providing structured writing and resource support, such as thesis boot camps, scaffolds student understanding against the backdrop of systemic institutional capacity constraints. Finally, eight, digital and technological integration specifically targets ODL supervision challenges by utilising blended learning and AI-supported tools to ensure iterative engagement with complex research methodologies.

4. DISCUSSION

The purpose of this study was to synthesize existing literature The discussion is structured around three guiding research questions and explicitly integrates four major themes: supervision effectiveness constraints, open and distance learning (ODL) supervision challenges, feedback and expectation misalignment, and systemic institutional capacity constraints. By explicitly labelling themes in the discussion, this paper ensures clarity and allows readers to trace how each factor contributes to the complex, multidimensional challenges that students encounter in mastering research methodology. The discussion also examines both the cognitive and structural dimensions of these difficulties, highlighting interactions among the four themes and emphasizing implications for pedagogical strategies.

Research Question 1. What Factors Affect Master's Students' Conceptualisation of Research Methodology, as Identified in the Literature?

The findings presented in Table 1 indicate that interconnected cognitive, relational, and affective factors shape master's students' conceptualisation of Research Methodology. At the cognitive level, postgraduate students enter research methodology courses with weak research literacy, limited academic writing competences, and underdeveloped methodological reasoning skills. Consequently, students have challenges in research. Bui (2014) notes that many postgraduate students experience difficulties in writing a thesis due to inadequate prior exposure to structured research training and methodological reasoning. Similarly, Daramola (2021) shows that insufficient preparation affects students' ability to master basic cognitive methodological concepts, limiting students' engagement with advanced research methodology content. Cognitive limitations, therefore, establish the foundation for understanding students' research difficulties, which makes supervision and relational dynamics a critical next dimension of analysis.

Supervision dynamics influence how master's students conceptualise research methodology. Supervision is characterised by weak communication, limiting feedback interaction. This agrees with Lee (2008, 2018) that effective supervision is grounded in collaborative knowledge construction rather than directive instruction, highlighting the importance of dialogic engagement. Relational supervision practices, therefore, mediate whether cognitive challenges are reduced or reinforced, leading to the importance of emotional and affective dimensions in research learning. Affective dimensions also play a significant role in shaping master's students' conceptualisation of research methodology. Emotional factors such as anxiety, fear of supervision, and low academic confidence restrict students' engagement critically with methodological concepts. Research methodology is frequently perceived as complex, particularly where students lack a solid foundation. This emotional discomfort can lead to avoidance behaviours, where students focus on completing tasks rather than developing deep conceptual understanding.
These supervisory dynamics do not exist in isolation but are part of a broader ecology of academic hurdles that shape the postgraduate journey. As identified by Mireku et al. (2026), several interconnected factors determine research success, including the quality of research writing, technical proficiency in methodology, and the availability of institutional support. These challenges are often compounded by issues of time management and language barriers (Netshitangani & Machaisa, 2021), which directly impede the development of the critical thinking skills necessary for high-level scholarship. When these structural and pedagogical factors are mismatched, they manifest as the emotional and cognitive challenges that hinder methodological mastery.

Lessing and Schulze (2002) found that support from supervisory relationships enhances students' confidence and improves research performance, while negative supervisory experiences contribute to stress and disengagement. When

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students experience emotional insecurity, their ability to critically analyse and justify methodological choices is significantly reduced. Affective experiences, therefore, interact with cognitive and relational dimensions, reinforcing the conclusion that conceptualisation of research methodology is a multidimensional process shaped by knowledge, supervision, and emotion.

Research Question 2. How do Institutional Factors, Including Supervision and Support Systems, Influence Master's Students' Conceptualisation of the Research Methodology Course?

The evidence in Table 2 shows that master's students' conceptualisation of the Research Methodology course is significantly shaped by institutional structures and instructional processes, which form the dominant theme of institutional and process-related challenges. A major constraint in master's teaching is the high supervisor workloads, which limit effectiveness. When supervisors are overloaded with teaching and administrative responsibilities, supervision is often neglected. Delayed dialogues and insufficient feedback become the norm. Bitzer and Albertyn (2012) demonstrate that supervision quality in South African universities is strongly influenced by workload pressures, which directly affect postgraduate throughput and conceptual learning. Overloaded supervision systems weaken the ability of supervisors to provide detailed methodological guidance, thereby limiting students' conceptual development.

Studies on postgraduate education show that overloading of supervisors reduce the frequency and quality of student-supervisor interactions. Lessing and Schulze (2002) found that students frequently associate delayed feedback and inaccessible supervisors with confusion during proposal development and research design stages. In many universities, supervisors have many postgraduate students, which poses a serious challenge for them to be mentors. Consequently, students rely on fragmented guidance. It is no wonder that students exhibit weak understanding of basic research concepts like research paradigms, data collection strategies, and analytical procedures. These supervisory challenges undermine methodological engagements, highlighting systemic weaknesses in institutional policies. Mouton (2011) emphasises that postgraduate research development is mainly enhanced by institutional capacity and structured training. Where such structures are weak, students are likely to experience challenges in understanding methodological concepts, which affects their ability to develop coherent research designs.

According to Lee (2018), structured supervisory programmes are necessary for ensuring that supervisors possess disciplinary expertise along with relevant pedagogies. In the absence of clear institutional policies, supervision tends to depend on individual supervisor preferences rather than shared academic standards. These institutional policy limitations, therefore, shape the quality and consistency of supervision, which subsequently influences the availability of broader academic support resources**.**

Universities manage postgraduate studies with minimal research resources, which limits student study independence. This agrees with Waghid (2015) that pedagogy encourages student engagement. Bui (2014) highlights that students require continuous assistance to develop research writing skills.

Therefore, reinforcing resources is important to improve postgraduate learning.
One of the main analytical findings is that institutions' and students' weaknesses not only delay students' graduation but also limit students' methodological misunderstandings. Hence, conceptual challenges are structural rather than individual issues. This agrees with Bitzer and Albertyn (2012), who contend that institutional conditions shape postgraduate outcomes, including research competence and completion patterns. Therefore, improving the conceptualisation of research methodology requires systemic reform in supervision capacity, institutional policy frameworks, and academic support structures.

McAlpine and Norton (2006) argue that postgraduate education is a social and institutional endeavour that influences the academic identity of research development. When institutions fail to enhance coherent supervision structures and supportive mechanisms, students are most likely to experience conceptual challenges. So, it is a real challenge that institutions need to address as a matter of urgency by providing comprehensive institutional transformation that addresses supervisory, structural, and resource-related dimensions simultaneously.

Research Question 3. What Strategies Have Been Proposed to Enhance Master's Students' Conceptualisation of Research Methodology?

The literature identifies several interrelated strategies aimed at improving conceptualisation, grouped under supervisor-student dynamics and institutional strengthening strategies. First, improving feedback quality is central. Effective feedback must be timely, specific, and developmentally oriented. Nicol and Macfarlane-Dick (2006) and Hattie and Timperley (2007) emphasise that feedback is most effective when it closes the gap between current and desired performance through clear guidance and actionable suggestions. Constructive feedback enables postgraduate students to identify weaknesses in research design, clarify methodological assumptions, and progressively refine their scholarly reasoning. In research methodology courses, developmental feedback also supports deeper engagement with epistemological concepts rather than mechanical completion of research tasks. Second, strengthening supervisory capacity is essential. Reducing supervisor workload, improving supervision training, and ensuring balanced student allocation are critical for enhancing supervision quality. Bitzer and Albertyn (2012) argue that institutional investment in supervisory development is key to improving postgraduate success. Third, structured research methodology training should be strengthened to build student independence. Formal training reduces overreliance on supervisors and improves conceptual understanding of research design and methodology. Mouton (2011) supports the need for systematic postgraduate training frameworks to enhance

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research competence. Finally, supervision should be reconceptualised as a dialogic and developmental process rather than a one-way assessment system. Lee (2008) stresses that effective supervision depends on sustained academic dialogue that fosters critical thinking and conceptual growth. A key insight is that improving conceptualisation requires integrated reform across pedagogy, supervision practice, and institutional systems rather than isolated interventions, which creates the

foundation for considering broader pedagogical and collaborative learning approaches in postgraduate education. Collaborative and student-centred pedagogical approaches further strengthen master's students' conceptualisation of research methodology by promoting active engagement with research practices. Contemporary higher education literature increasingly emphasises that postgraduate students learn methodology more effectively when they participate in interactive academic environments that encourage inquiry, reflection, and peer dialogue. Brew (2001) argues that research learning is most meaningful when students become active participants in knowledge construction rather than passive recipients of instruction. Similarly, Healey and Jenkins (2009) emphasise that research-based teaching approaches enhance students' understanding of methodological reasoning by integrating inquiry into the learning process. Workshops, collaborative proposal discussions, and peer-review activities encourage students to explain and defend methodological

choices, thereby deepening conceptual understanding. Such approaches also reduce student isolation and create opportunities for shared academic problem-solving. In many postgraduate contexts, collaborative learning environments improve confidence, strengthen critical thinking, and enhance methodological clarity through collective intellectual engagement. These pedagogical approaches therefore reinforce the importance of academic communities and peer-supported learning structures, which directly connect to the role of collaborative scholarly environments in strengthening methodological conceptualisation.

In addition to supervision and feedback-related reforms, literature also highlights the importance of peer-based learning and collaborative academic communities in strengthening master's students' conceptualisation of research methodology. Peer learning groups, writing retreats, and research seminars provide students with opportunities to articulate, defend, and refine their methodological understanding in a less hierarchical environment. Lave and Wenger's (1991) theory of communities of practice underscores that learning is socially constructed, and postgraduate students benefit significantly from participation in disciplinary research communities where meaning is negotiated through interaction. Similarly, structured writing support interventions such as writing workshops and thesis boot camps have been shown to improve students' ability to translate abstract methodological concepts into coherent research designs (Aitchison & Lee, 2006; Murray, 2011). In addition, the use of exemplars and model theses can scaffold students' understanding of acceptable research standards, thereby reducing conceptual ambiguity in methodology courses. Recent studies further confirm that blended and digitally supported research training enhances methodological comprehension by allowing iterative engagement with complex research designs (Creswell & Plano Clark, 2021). Moreover, contemporary higher education reforms increasingly emphasise student-centred research capacity development as a key determinant of postgraduate success in rapidly changing academic environments. Collectively, these strategies demonstrate that enhancing conceptualisation of research methodology requires integrated academic support systems that directly strengthen students' understanding of research design, methods, and epistemological reasoning, thereby highlighting the need to examine emerging innovations that may further transform postgraduate methodological learning.

Future-oriented research and emerging educational technologies present additional opportunities for strengthening master's students' conceptualisation of research methodology. Digital supervision systems, online methodological workshops, artificial intelligence-supported academic writing tools, and hybrid postgraduate learning environments are increasingly transforming how students engage with research training. Contemporary scholarship suggests that technology-enhanced learning environments can improve accessibility, flexibility, and iterative learning processes in postgraduate education (Selwyn, 2016). Artificial intelligence-supported tools may also assist students in refining research questions, improving academic writing, and understanding methodological structures when used critically and ethically. However, concerns remain regarding unequal digital access, overdependence on automated systems, and the need to maintain critical scholarly reasoning in technologically mediated learning environments. Consequently, institutions must balance innovation with pedagogical quality and ethical supervision practices. Future research should therefore explore how emerging digital supervision models, artificial intelligence, supported writing tools, and hybrid postgraduate training environments influence master's students' conceptualisation of research methodology, particularly within resource-constrained higher education contexts.

While this synthesis offers critical insights into the current landscape of postgraduate research, its scope is inherently shaped by specific methodological boundaries. A primary limitation arises from the reliance on a single search engine, the Directory of Open Access Journals (DOAJ), which, while robust, may exclude significant peer-reviewed studies hosted on proprietary databases or within institutional repositories not indexed by the platform. Furthermore, by restricting the search to the most recent scholarship from 2020 to 2026, the review prioritizes contemporary relevance but may overlook foundational longitudinal studies or historical pedagogical shifts that continue to inform current research training models. Additionally, the geographic focus on resource-constrained higher education contexts, while necessary for the study's objectives, means the findings may not be fully generalizable to institutions with vastly different technological infrastructures or funding levels. Acknowledging these parameters is essential for contextualizing the following conclusions and for identifying specific areas where future meta-analyses might expand the research horizon.

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5. CONCLUSION

This narrative synthesis has demonstrated that master's students' difficulties in conceptualising research methodology are multifaceted, extending beyond individual learner limitations to include supervisory, pedagogical, and institutional dimensions. While systemic factors such as ineffective supervision, feedback misalignment, and institutional capacity constraints play a central role, student-related weaknesses also contribute to these challenges. These student weaknesses include limited

prior exposure to research methods, weak academic writing and analytical skills, difficulty in interpreting methodological terminology, and insufficient experience in linking theory to research design. In some cases, language barriers further constrain students' ability to fully engage with complex methodological concepts. However, these limitations are often exacerbated by inadequate guidance, inconsistent feedback, and limited structured learning support.

Overall, the synthesis indicates that methodological difficulties arise from the interaction between student preparedness and the broader postgraduate learning environment. The evidence suggests that students struggle not in isolation, but within systems that may not adequately scaffold the development of advanced research competencies. Thus, improving master's students' competence in research methodology requires a holistic approach that simultaneously strengthens student foundational research skills, enhances supervisory practices, and addresses institutional constraints. Without such integrated interventions, persistent difficulties in methodological conceptualisation are likely to continue, negatively affecting thesis quality and completion rates.

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