



Aligning undergraduate nursing research with the Healey and Jenkins teaching–research nexus: Evidence-informed guidelines for lecturers

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Abstract

Undergraduate nursing research modules play a pivotal role in cultivating inquiry-driven practitioners, yet lecturers frequently encounter structural and pedagogical barriers that hinder students' readiness for postgraduate education. This study sought to create evidence-informed guidelines to enhance research lecturers' pedagogical practices within undergraduate nursing curricula, utilising the Healey and Jenkins research–teaching nexus as a guiding framework. A qualitative case study was undertaken at a public university's nursing department in South Africa. Twelve lecturers and supervisors involved in teaching or assessing research modules were purposively selected from local and international higher education nursing institutions. Data collection involved semi-structured interviews and document reviews, followed by thematic analysis. Six themes emerged, reflecting lecturers' challenges, including limited timeframes, inadequate student engagement, deficiencies in research conceptualisation, excessive workload demands, and institutional resource limitations. Evidence based guidelines were developed and aligned with the four quadrants of the Healey and Jenkins framework (research-tutored, research-based, research-led, and research-oriented), offering actionable recommendations for advancing research pedagogy. The findings highlight the potential of embedding inquiry-based, ethically grounded, and scaffolded approaches across all undergraduate levels to bolster research competence, critical thinking, and preparedness for postgraduate study. Adoption of these guidelines can support lecturer development, curriculum enhancement, and departmental quality assurance in nursing education programmes.

Keywords: *research pedagogy, inquiry-based learning, lecturer development, curriculum enhancement*

Article History:

Received: January 7, 2026

Revised: February 24, 2026

Accepted: August 20, 2026

Published online: August 27, 2026

Suggested Citation:

Padayachee, P. & Alabi, O.J. (2026). Aligning undergraduate nursing research with the Healey and Jenkins teaching–research nexus: Evidence-informed guidelines for lecturers. *International Journal of Educational Management and Development Studies*, 7(3), 80-105. <https://doi.org/10.53378/ijemds.353379>

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1. Introduction

The quality of undergraduate (UG) research knowledge, skill acquisition, and methodological experience significantly influences retention and timely completion in postgraduate (PG) research studies (Yidana, 2025; Daniel, 2022; Amani et al., 2022; Guo et al., 2021). However, evidence indicates that students do not uniformly develop these competencies during their undergraduate education (Vieno et al., 2022; Turner et al., 2018; Howell, 2021; Altakhaineh et al., 2025). The misalignment between UG and PG nursing research is partly a consequence of extensive pedagogical reforms, where frequent changes to curricula, assessment systems, and teaching approaches may inadvertently disrupt students' research learning and compromise the development of essential research skills (Haleem & Asghar, 2023; Zhang, 2023; Karimi Mirzanezam et al., 2024; Luzipo et al., 2026).

Examining research pedagogies and teaching experiences through the perspectives of research lecturers and supervisors provides a valuable lens for interrogating this issue. Guo et al. (2021) emphasise that high-quality postgraduate research depends on a coherent understanding of the entire research process, from identifying a research problem and formulating research questions to recognising empirical gaps and selecting appropriate research designs and tools for credible analysis. Access to meaningful teaching and learning opportunities in research inquiry has been shown to improve research quality. This supports Hassaniyan (2024) and Wallace et al. (2018) that strong foundational training is crucial for effective engagement in research. Hence, there is a strong need to critically evaluate undergraduate research pedagogy as a strategic intervention to strengthen postgraduate research competence, progression, and completion in nursing education.

This study therefore examines the disconnect between undergraduate nursing research pedagogy and postgraduate research competencies within a context undergoing rapid curriculum review in South Africa. While the literature identifies a gap in postgraduate research readiness (i.e. Gonzales et al., 2026; Baidoo & Tetteh, 2024), it emphasises that this challenge often originates from undergraduate pedagogical approaches rather than postgraduate education alone (i.e. Bowyer & Akpinar, 2024; Pourhejazy & Isaksen, 2024). Accordingly, the study focuses on undergraduate nursing research teaching within a restructured programme to explore how contemporary pedagogical methods address these gaps. In this context, undergraduate research pedagogy is positioned as a critical intervention

point for enhancing postgraduate research capacity, improving retention, and supporting timely programme completion.

This study sought to establish evidence-informed guidelines aimed at improving teaching and supervision in UG nursing research modules, with a focus on strengthening students' research learning and facilitating a seamless transition to PG education. The objectives were to: identify adult learning principles integrated into UG research instruction; investigate lecturers' and supervisors' perspectives on current pedagogical and supervisory approaches; assess UG students' acquisition and application of research knowledge; and develop actionable guidelines to enhance research engagement across the UG–PG continuum.

2. Literature Review

2.1. Conceptualising the Teaching Nexus in Undergraduate Nursing

The integration of undergraduate research into nursing curricula is widely recognised as a strategy for strengthening evidence-based practice (EBP) competence and professional identity (Song et al., 2021; Pereira et al., 2025; Du et al., 2023; Hung et al., 2019). The Healey and Jenkins research–teaching nexus, initially proposed by Healey (2005), provides a useful framework for understanding how research can be embedded as content, process, and pedagogy within undergraduate nursing education. However, empirical studies in nursing education reveal persistent gaps between these aspirational models and actual practice, particularly in resource-limited and clinically intensive programmes (Mckinley et al., 2020; Ugwu et al., 2023; Wang et al., 2025).

Recent multicentre and structural equation modelling studies indicate that undergraduate nursing students generally display positive attitudes toward research and EBP (Hobenu et al., 2025; Almarwani, 2025). Despite this, their knowledge and confidence in applying these concepts remain inconsistent. Alruwaili et al. (2025) highlight a significant knowledge–practice gap: although students recognise the value of EBP, opportunities to engage meaningfully with research processes are often marginal rather than integral to their education. Similarly, Almarwani (2025) confirms that research competence is strongly influenced by curricular exposure, mentorship, and institutional research culture. Healey and Jenkins (2009) argue that students should progressively move from research-led exposure toward research-based and research-oriented learning.

2.2. The Persistence of the Knowledge–Practice Gap in Undergraduate Nursing Research Education

From a pedagogical perspective, traditional didactic methods continue to dominate the teaching of research methods (Hassaniyan, 2024; Kniffert et al., 2025; Vieira et al., 2026; Berikkhanova et al., 2026; Aguilar-Moya et al., 2025; Kilburn et al., 2014; Challa et al., 2021), often limiting student engagement (Yue, 2024; Thomas et al., 2025; Martin-Alguacil et al., 2024; Mishra et al., 2023; Asif et al., 2021). Mbuthia et al. (2024) report that African undergraduate nursing students frequently perceive research as abstract and overly assessment-driven. This perception is echoed by Silva et al. (2021) and Davidson and Palermo (2015), who argue that fragmented knowledge management systems weaken the connection between theory, research, and practice. These raise concerns about curricula that prioritise staff research outputs over fostering student-led inquiry. Such concerns align with Healey and Jenkins (2009) advocacy for inquiry-based curricular designs that encourage active knowledge construction and meaningful engagement with research processes.

2.3. Pedagogical and Digital Challenges in Operationalising Inquiry-Based Learning

Digital and contextual factors further complicate the alignment of teaching practices with the Healey and Jenkins nexus (McKinley et al., 2020; Hassaniyan, 2024; Gros et al., 2020). For instance, Goodwin et al. (2022) observe that although online learning environments can enhance flexibility and access, they may reduce dialogic interaction and inquiry-based engagement if not carefully designed. In this context, effective academic leadership becomes essential, particularly during and after the disruptions caused by the COVID-19 pandemic. Strong institutional leadership can promote social cohesion and learning continuity (Naidoo et al., 2021; Karim, 2026; Vanlommel et al., 2025; White et al., 2025; Plaku & Leka, 2025; Saad, 2026), thereby creating conditions that support the integration of undergraduate research as a collective and sustained educational practice rather than an isolated activity.

2.4. Mentorship, Institutional Capacity, and the Sustainability of Research-Based Learning

Mentorship represents a critical enabling factor in the development of research-based learning (Nabi et al., 2025; Bobb et al., 2024; Houghton et al., 2026; Brown et al., 2009; Moon et al., 2025; Nuis et al., 2023). Long et al. (2019) show that structured undergraduate research mentoring enhances students' confidence, critical thinking, and scholarly identity, outcomes

that align with the upper quadrant of the Healey and Jenkins research–teaching nexus. However, Padayachee et al. (2022) caution that, in the absence of clear pedagogical frameworks and adequate staff development, such initiatives may lead to uneven implementation and increased staff workload. Yidana (2025) further emphasises that early undergraduate research experiences shape the quality of subsequent research engagement, underscoring the long-term impact of curricular design decisions on postgraduate research competence and development.

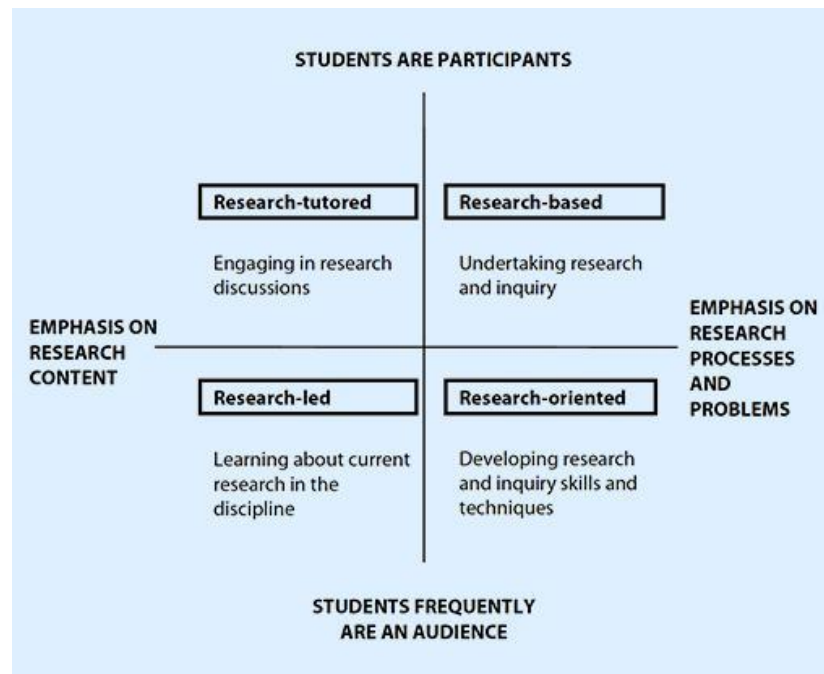
2.5. Theoretical Framework

The Healey and Jenkins research–teaching nexus (Healey, 2005) provides a useful framework for positioning undergraduate nursing students not merely as recipients of research knowledge but as active participants. It outlines the research–teaching relationship, which focuses on research knowledge acquisition and competence. According to Naidoo et al. (2021), pedagogical practices should strengthen students' engagement with research and develop them as producers rather than merely consumers of knowledge.

Figure 1 shows the framework's four complementary approaches: research-led, research-oriented, research-tutored, and research-based teaching.

Figure 1

The research-teaching nexus



Source: Healey & Jenkins (2009)

Research-led. Learning about nursing research. In this approach, students primarily function as an audience for research knowledge, with emphasis placed on the content and products of research.

Research-oriented. Learning how nursing research is conducted. This corresponds closely with the teaching of research methodology and research literacy.

Research-tutored. Learning through engagement with nursing research. The emphasis remains substantially on research content, but students actively engage with that content through reading, writing, critique, discussion, and scholarly dialogue.

Research-based. Learning by undertaking nursing research. Students become participants in research and inquiry, with emphasis on research processes and problems.

Table 1

Research questions aligned to the theoretical framework

Precepts of Healey and Jenkins Framework	Research questions aligned to the proposed theoretical framework
Research-tutored	What are the different strategies that can be employed to ensure enhanced teaching and learning of research methodology to UG students?
Research-based	How does the current research pedagogical practices encourage research outputs and publication writing amongst UG students?
Research-led	How does the current pedagogical UG research teaching and practice methodologies sufficiently transition the UG student for higher level PG studies?
Research-oriented	How does the current research pedagogical practices sufficiently ensure adequate research knowledge capacity for self-directed research appraisal and inquiry of the graduate nurse for post graduate studies in nursing?

The Healey and Jenkins research-teaching nexus served as the guiding theoretical framework for this study, which informed the development of the research questions. Each research question was mapped to one dimension of the framework: research-tutored examined strategies for developing students' understanding of research; research-based explored learning through active research engagement; research-led evaluated the extent to which teaching practices prepared undergraduate students for postgraduate research; and research-oriented assessed how pedagogical practices developed students' capacity for independent inquiry and lifelong research competence. During data analysis, participants' responses were interpreted in relation to these four dimensions to determine how current pedagogical practices support the development of research competencies among undergraduate nursing students.

3. Research Methodology

3.1. Research Design and Context

A qualitative case study approach was adopted to investigate pedagogical strategies within the nursing department of a single university over one academic year. The study focused on undergraduate research teaching and supervision and was guided by the Healey and Jenkins research–teaching nexus as the conceptual framework. The research was conducted within a four-year Bachelor of Nursing programme.

The UG research module, offered in Year 3, runs for 12 weeks and is followed by a year-long supervised research project integrated with coursework and clinical placements. Teaching methods are varied and include the use of Moodle, Microsoft Teams, and face-to-face sessions. Assessment consists of a research proposal, a mini-dissertation, and an oral presentation. The development of feasible and scaffolded guidelines in this study was informed by the contextual challenges of compressed academic schedules and the dual demands of academic and clinical commitments.

3.2. Participants and Sampling

Purposive maximum-variation sampling was employed to identify academic staff involved in teaching, coordinating, or supervising the UG research module. Inclusion criteria required participants to be actively involved in the module and to have at least one year of prior experience in research teaching or supervision. Administrative staff were excluded from the sample.

Of the fifteen staff members invited to participate, twelve agreed ($n = 12$). This sample size aligns with a purposive maximum-variation sampling strategy. Participants represented a heterogeneous group of academics involved in the teaching, supervision, and coordination of undergraduate nursing students. They included academics of different ranks, disciplinary research backgrounds, and levels of supervision experience. This approach enabled the capture of a broad spectrum of pedagogical and supervisory perspectives within the UG research module. Recruitment ceased once data saturation was reached.

3.3. Data Collection and Analysis

Data were collected through semi-structured interviews conducted via Microsoft Teams, Zoom, or in person. The interviews explored teaching approaches in research

education, supervision and assessment practices, student readiness for research, and suggestions for improvement. Each interview lasted between 30 and 45 minutes and was audio-recorded with participants' consent. Recordings were transcribed verbatim and cross-checked with field notes to ensure accuracy.

Data triangulation was achieved through the analysis of module outlines, study guides, assessment rubrics, and relevant policy documents. Reflexive memos were also maintained throughout the data collection process to enhance methodological rigour.

Thematic analysis followed Creswell and Creswell's (2018) six-phase framework. Interview transcripts were subjected to iterative coding, with codes organised into categories and subsequently developed into themes. Two researchers independently coded a sample of transcripts to develop a shared codebook before applying it to the full dataset. Documentary data were analysed using the same analytical framework. The final themes were aligned with the Healey and Jenkins research-teaching nexus, which also informed the evidence-based guidelines proposed in the study.

3.4. Trustworthiness, Reflexivity, and Ethics

Ethical approval was obtained from the Durban University of Technology Institutional Research Ethics Committee (Ref: IREC 192/21). All participants provided written informed consent, and their data were anonymised and securely stored in accordance with institutional guidelines.

To ensure trustworthiness, the study incorporated member checking, peer debriefing, and data triangulation. Dependability and confirmability were strengthened through comprehensive audit trails and reflexive documentation, while detailed contextual descriptions enhanced the transferability of the findings.

The first author, an academic within the department, implemented reflexive practices and engaged in peer review to address potential insider bias. As a departmental staff member, the first author had familiarity with the context, which facilitated access and rapport with participants. However, this proximity also required deliberate strategies to mitigate bias and privileged insider assumptions. These strategies included sustained reflexive practice through the maintenance of reflexive memos, peer debriefing with co-researchers outside the immediate department, and member checking with participants.

4. Results

Theme 1: Contemporary Pedagogical Practices of UG Nursing Programmes

Approaches to teaching undergraduate nursing research were characterised by considerable diversity, with a notable emphasis on experiential, case-based methods rather than traditional didactic lectures. Pedagogical strategies were predominantly influenced by educators' individual teaching philosophies and the institutional contexts in which they operated. This reflects a lack of uniformity in research education. While lectures were employed to introduce core concepts and terminology, they were widely regarded as inadequate for fostering the development of research competence. Instead, experiential, practice-oriented approaches (such as case-based and problem-based learning) were consistently identified as more effective in enhancing student engagement, deepening conceptual understanding, and cultivating research literacy by enabling active participation in real or simulated research scenarios.

Blended or mixed methods of facilitating and teaching research. Lecturers endorsed blended or mixed teaching approaches. They view research as a practical and skills-oriented field that cannot be taught solely through didactic methods. While lectures were acknowledged as essential for laying the groundwork of theoretical knowledge, it was emphasised that learning becomes truly meaningful only when theory is combined with application, critical reflection, and engagement with real-world contexts. Case-based and problem-based learning emerged as key strategies. One lecturer pointed out:

Predominantly it's more hands on and practice based as in looking at the foundations and concepts and also looking at the application where you can take the concepts learnt and the terminology and the skills are the most important ones but with COVID, we've been doing things online.... So blended learning is predominantly what happened.... Your dominant learning is skills. (Participant 11)

Face-to-face engagement was highlighted as a crucial element in fostering effective research learning. It plays a pivotal role in facilitating interaction, building networks, and enabling the exchange of experiential knowledge. Lecturers in this study note that they intentionally embed research teaching with real-world examples. This is to enhance relevance to the learning process. One participant recounted:

... I asked students to come up with a problem from everyday situations... once they identify their problems it was easy to apply the research process...it is never straight forward lecture method... certain concepts must be lectured but it must also be relatable when they are able to draw from their bedside problems... more case and problem-based teaching and learning. (Participant 1)

This approach appeared to clarify research processes and facilitate conceptual understanding. Likewise, Participant 7 stressed that facilitation should steer clear of abstract discussions and instead focus on experiential learning by ensuring that “... *the facilitation should not be made to feel like it’s an abstract ... they should be able to understand it as they do it...*”. Blended approaches were widely regarded as pedagogically sound and adaptable to specific contexts by the participants. They offer a means to merge theoretical foundations with practical, hands-on learning experiences.

Online methods of facilitation and teaching research. The rapid transition to online teaching during the COVID-19 pandemic significantly disrupted group-based undergraduate nursing research education, particularly in areas such as collaboration and accountability. Participants noted that virtual settings diminished group cohesion, informal peer support, and shared responsibility. As Participant 1 stated, online teaching impacted “*the group work and collaboration of learning research...the ability to identify with each other as part of the group dynamics.*”

Decreased engagement and uncertainty regarding students' active participation further hindered the research process, even when structured online methods, such as breakout groups, were employed. However, participants highlighted that these challenges were not exclusively the result of student behaviours. Staff digital proficiency also played a critical role, as some educators struggled with the effective use of online tools. Consequently, the study notes that the success of online research facilitation is less about the medium itself and more about the intentional design of pedagogy, effective communication, and the digital competence of educators.

Policies and guidelines for teaching research in undergraduate nursing. Participants highlighted significant variations in the policies and guidelines regulating undergraduate nursing research teaching. While some institutions offered structured module descriptors or

study guides, others lacked formal documentation, leaving responsibility for pedagogical decisions largely in the hands of individual lecturers (Zakari et al., 2014). Even when module descriptors were available, their focus was predominantly on timeframes and intended learning outcomes. This was done with minimal attention given to instructional strategies or supervision frameworks. One participant remarked:

... to be honest there are no policies or guidelines ...it was just something stipulated down that research project must be done within this period and completed in this time but there is nothing specific like a guideline that will assist me in supervision or teaching as to how must I go about it. (Participant 3).

Participant 6 noted that even when study guides were available, their pedagogical utility was limited: “... *Yes, there are study guides and the students have an idea of what to expect when they come to class... but not really a guide as to how best to teach it... different methods are used.*” The absence of a clear pedagogical direction shifts the onus of interpreting the curriculum onto individual educators, leading to inconsistencies in teaching approaches and potentially compromising the uniformity and quality of undergraduate nursing research education.

Theme 2: Research Knowledge Acquisition and Capacity Building of the UG Nursing Students

Participants acknowledged that students were introduced to foundational research concepts; however, the assessment strategies employed were widely regarded as inadequate for fostering conceptual integration or sustained retention. The reliance on quizzes and short tests, which primarily emphasised recall rather than critical engagement or application, was identified as a key limitation. Structural and temporal constraints within the curriculum further exacerbated these challenges. The research theory module, typically delivered over a six-month period alongside other modules, was perceived as insufficient for developing a comprehensive understanding of research principles. As Participant 4 remarked, “*the time frames are unrealistic ... they have to write an exam and pass theory after just six months, and then do the project for a year while doing other modules.*” This compressed structure prioritised curricular progression at the expense of meaningful research capacity development.

The integration of online learning and assessment platforms introduced additional challenges. Despite being formally aligned with module descriptors and learning outcomes, participants noted that technological readiness issues often undermined the effectiveness of these tools. As Participant 6 reflected, *"with online assessment it is difficult as both battle with tools,"* suggesting that digital constraints may further hinder opportunities for reinforcing and consolidating research knowledge. The findings reveal that research knowledge acquisition and capacity building among undergraduate nursing students are constrained by assessment strategies shaped by limited time, delivery mode, and curricular design. Without a strong alignment between pedagogy, assessment, and practical application, deep and transferable research competence remains restricted. This raises significant concerns about students' preparedness for independent research engagements.

Research methodology dynamics in UG Nursing students. Group work presents a unique set of challenges. While collaborative learning is often seen as a valuable pedagogical approach, participants highlighted that unequal engagement and the overbearing presence of more assertive students can obscure the conceptual gaps of their less confident peers. As Participant 11 noted, *"It is far better when you have contact in group work form rather than online as group work is contribution by all which is not always easy as some miss the concepts by those that are more active and dominant."* The observation indicates that group work, when not adequately supported by scaffolding and individual accountability, may obscure rather than address learning deficits. Guided reading was identified as one approach to fostering conceptual understanding; however, its impact was found to be inconsistent:

I give an article and ask them questions on the article to help them grasp the terms in research and some grasp it and others don't see in group work... when you ask them to do a critical evaluative analysis of the article they cannot... it would be easier if there would be a module just dedicated to research methodology so that when they come to Masters they don't struggle. (Participant 7)

This observation illustrates the disconnect between a superficial understanding of research terminology and the deep, critical engagement required for meaningful academic inquiry. It highlights the pressing need for a more structured and focused approach to methodological training at the undergraduate level. As another participant pointed out, the cognitive demands on undergraduate students in this regard are significant:

...even as seasoned researchers some of us have problems with getting research going so yes its absolutely unrealistic to take students who have no concept of research and expect them to understand research ... they battle amidst all the other learning that they have. (Participant 8)

The narratives demonstrate that a lack of robust conceptual foundations, compounded by an overloaded curriculum, significantly hampers the development of meaningful research capabilities among undergraduate nursing students. These foundational issues at the undergraduate level have profound implications for how research is taught and supported. This affects both student readiness and the demands placed on lecturers as students transition into postgraduate programmes.

Theme 3: Foundational Research Deficits and Their Impacts on Postgraduate Nursing Education

Participant 3 noted the difference between UG and PG students, stating that while PG students may be more mature and compliant, this does not necessarily equate to conceptual mastery: “*...there is a difference as the post grad student will go do what you ask as compared....as they as more adult in to undergrad... with a good grasp of knowledge of research...*” Another participant explicitly linked PG difficulties to shortcomings in the teaching and execution of UG research projects:

Well... I found that most PG students struggle and most of that comes from the way the UG research was taught and the way it was executed as a project... you find that during the missed opportunity of learning in the undergrad... eh... I don't want to use the word “bad” but they tend to struggle a lot because they have to go back and learn the elementary of research again to embark on new projects. (Participant 6)

According to these findings, PG research struggles are not the result of individual shortcomings but are structurally rooted in the way in which UG research education is conceptualised, facilitated, and assessed. Consequently, strengthening UG research teaching may be crucial to improving PG research preparation, completion rates, and overall research capacity in the nursing profession.

Theme 4: Undergraduate Research Preparedness for Postgraduate Nursing Study

Design of research module descriptor in UG Nursing programmes. Although module descriptors were extensively employed to outline outcomes, content, and duration, participants concurred that their primary function was regulatory rather than pedagogical. Research modules were frequently treated as isolated, standalone units, with limited attention to students' developmental readiness or research competence development across years of study. As Participant 11 remarked, while descriptors are regarded as the *"gold standard,"* they often neglect to account for the level of study: *"it should be taken into consideration the year of study or level of study."*

A second prominent concern was the structural division between research theory and practice. Participants noted that curriculum and timetable arrangements often separated theoretical instruction from research projects, constraining experiential learning and its contextualisation in nursing practice. As Participant 6 stated, *"theory and the project is done in isolation... and this doesn't really encourage the practical aspect of learning that comes with research teaching."* This compartmentalisation results in superficial engagement with research concepts and hinders the transfer of learning across levels.

Research readiness of nursing students for project completion. Participants consistently identified insufficient time allocation as a central barrier to UG students' research readiness. They contended that the condensed timeframe of the research module restricts students' ability to progressively understand research concepts, apply methodology, and produce work of acceptable quality. As Participant 11 noted, *"...some are a little quicker to pick up concepts and some may take a little longer ... no, it's not sufficient time to grasp research concepts."* Participants further contextualised this concern by comparing UG research timelines to postgraduate programmes, where extended durations and continuous assessment still present challenges despite greater time allocation and the maturity of learners. Within undergraduate programmes, the expectation of producing high-quality outputs within limited periods was deemed unrealistic, particularly when research theory and practical components are not integrated.

Theme 5: The Lecturer and Supervisor's Perspectives on Student Preparedness in Nursing Research Education

At both the UG and PG levels, lecturers and supervisors' perspectives provided a critical lens through which to evaluate student preparedness for nursing research. It is imperative to emphasise that these accounts illuminated not only the outcomes of student research endeavours but also the structural, pedagogical, and institutional factors that contributed to those outcomes.

The participants expressed concerns more frequently regarding inadequate student preparation, with implications for the quality, completion, and progression of research. Limited scholarly output from UG research has been a recurring problem, particularly concerning publication and continuation into advanced degrees:

No... no projects that I have supervised or taught in undergrad have been taken for publication... (Participant 3)

... no work from undergrad supervision has been taken for publication... hardly any students from undergrad progress with research to Master's studies (Participant 1)

Based on these narratives, UG research experiences may be perceived as procedural rather than transformative, causing a lack of development of a research identity or trajectory. As a significant barrier, structural disconnects between theory and practice were also identified:

There is no connection between what they have done in theory and what they about to do in a project because it is done in isolation... and students struggle and it becomes bad not only for the student but also for the supervisor.... many plagiarise as they do not know how to source material. (Participant 6)

There is evidence that this fragmentation contributes to superficial engagement, academic misconduct, and supervisory strain (Greensmith et al. 2023; Vieno et al. 2022). Further complicating these challenges were time constraints as mentioned by Participant 8: *"The design of the program has not prepared them adequately; the time frame is too short...it is a battle as they appear not to have grasped the research process."* It was argued by the participants that separating research theory from project implementation undermines the coherence and continuity of learning:

There is a bit of disconnect between the way the theory is delivered away from the project.... it should be done together.... By the time they come to the project aspect they just have no clue what they are supposed to do and how to go about it ... it would be interesting to see them working on the project while they learn theory from the word go... you see the effects in the quality of the write ups and their work when there is lack of reading culture. (Participant 6)

Furthermore, Participant 10 discussed tensions related to broader academic roles, stating that effective research education requires alignment between teaching and scholarly practice: "... *time and role expectations.... teaching is just one component of research ... we must marry teaching and scholarship which is lacking...*" As a result of these disadvantages, there is a need for curricular integration, extended timeframes, and a stronger research mentorship program in nursing education to enhance student preparedness and research capacity.

Theme 6: Lecturers' and Supervisors' Suggestions for Improving the UG Nursing Research Module

Curriculum design and module review of the UG Nursing programme. The majority of the participants' feedback emphasises the need for a comprehensive review of the curriculum design and sequencing of research modules within UG nursing programs. According to participants, the current model (where research is often introduced late and compressed into a limited period of time) does not adequately support the development of conceptual understanding or skills. Students' limited confidence and struggles with research-related tasks were perceived as contributing factors to their difficulties in progressing to PG studies. As articulated by participant 1:

Research for the undergrad student should start from the word go.... or the beginning of the student's training.... and carry through their course so by the time they reach 4th year they are well versed with the content... time frame is too limited and content in research is too much.... and that is one of the reasons the module is often a at risk module at most institutions.

The tension between content density and time allocation indicates that cognitive overload may undermine meaningful learning. A similar point was raised by Participant 6

regarding the importance of aligning learning outcomes longitudinally, rather than isolating research as a separate requirement:

Two years is sufficient for a research project but it depends on how the learning outcomes are structured throughout the programme...the research reading and writing culture must start early in the course.... research must become a culture in learning... there must be standardisation of the teaching method in UG level... there must be a way ... a particular method to refine research skills to develop a PG life that is mostly based on research and that has been the problem seen at PG level. (Participant 6)

The concept of "research as culture" indicates a shift from procedural compliance to epistemic engagement, positioning research as integral to the development of professional identity. As Participant 10 expressed concern about the readiness of students to conduct independent research, he questioned whether UG students should be expected to undertake full research projects without an adequate conceptual background:

I would recommend that our UG students get a good grasping of research concepts ... I don't think they at the level to conduct projects... there should be a really good articulation of research at each level from early... then students at Master level would have a good grasp of underpinnings of research... and we would not have to revisit that. (Participant 10)

Similarly, Participant 8 reiterated the importance of sustained engagement rather than episodic exposure: “... if they really want good research projects they need to have research teaching spread over the four years so that the student is constantly engaged in the research process.”

These narratives emphasise the need for curriculum coherence, vertical integration of research competencies, and deliberate scaffolding to mitigate the need for later remediation at the graduate level.

Suggestions for enhanced research knowledge acquisition of the UG Nursing student. Along with curriculum restructuring, participants stressed the importance of early and intentional strategies to enhance the acquisition of research knowledge. According to one participant, collaborative approaches to teaching research theory should take into account diverse teaching strengths and learning requirements.

... since higher education emphasises research I would recommend that maybe adopt a style whereby we get people get involved in the theory aspect... so that when students have a problem understanding me... someone else may present it better... also that maybe the literature review in future should start very early in the programme. (Participant 3)

Another participant reiterated the importance of early literature engagement, linking reading habits directly to competence in research:

If they are exposed to research from the word go... it makes it easy for them to adapt and there will be less stress on the part of their supervisors a well.... If a culture of reading starts early you cannot be a good researcher if you not a good reader... there are just no short cuts to this... there should be an intro at level 1 and level 2 to research to develop a reading culture; it will go a long way in assisting them in their research projects. (Participant 6)

In addition to the pedagogy, the absence of institutional policies and standard guidelines was identified as a barrier to consistency and quality assurance. As Participant 3 noted: “... yes, had there been policies or standard guidelines it can guide us and lead us to one direction and preventing problems in teaching research.”

The concern extended to assessment practices, particularly the transparency of the evaluation process for final research projects. This gap was clearly articulated:

Students should be allowed to present their final project which is where it is scored at the level of DRC most of the time there is no standard to that so we don't even know how the eventual project is scored and if there can be a guideline and a structured way of saying how the student has been guided to get their final score it will be very nice way of ensuring best practices. (Participant 10)

To support the development of competent, confident, and research-literate nursing graduates, these suggestions highlight the need for a systemic alignment between curriculum design, pedagogical practices, and institutional governance.

5. Discussion

This study reframes undergraduate research challenges by shifting attention from pedagogical shortcomings to a lack of coherence in curriculum design. Although a wide range of teaching strategies, such as blended and online approaches, are widely adopted, their

effectiveness is reduced when they operate independently rather than within a cohesive curricular framework. Drawing on Goodwin et al. (2022) and Naidoo et al. (2021), the findings show that rapid pedagogical adaptations, particularly during periods of disruption, tend to prioritise continuity of teaching rather than integration across the curriculum. Using Healey and Jenkins research-teaching nexus as an analytical lens, the study extends existing scholarship by demonstrating that research-informed teaching alone is insufficient unless it deliberately guides students from initial exposure to research, toward active participation, and ultimately toward autonomy in research practice.

The study's central argument is that structural incoherence, rather than limitations in lecturer competence or the diversity of teaching methods, is the primary barrier to effective undergraduate research education. This interpretation aligns with Long et al. (2019), who identify persistent difficulties among students in research problem formulation, literature synthesis, and critical engagement. It also resonates with Almarwani's (2025) observation that nursing students frequently perceive research as peripheral to their professional roles. The findings further reveal that undergraduate research learning is often experienced as fragmented, assessment-driven, and lacking conceptual depth. Contributing factors include limited instructional time, disjointed sequencing of learning activities, and the absence of cumulative progression across the curriculum. Consequently, postgraduate supervisors frequently revisit foundational research principles, not because students lack prior exposure, but because undergraduate programmes fail to support a coherent progression along the research learning continuum (Silva et al., 2021).

These findings highlight the need for deliberate curriculum-level design that prioritises coherence, progression, and sustained engagement with inquiry. Mbuthia et al. (2024) emphasise the importance of longitudinal scaffolding in developing durable research competence. However, the compressed 14–16-week module structures commonly found in nursing education limit opportunities for iterative learning and reflective engagement. As a result, students' interaction with research tends to remain surface-level and assessment-focused rather than cumulative and developmental. Although the study is situated within nursing education, the findings have broader relevance for other vocational disciplines that face similar tensions between professional training and research preparation (Silva et al., 2021). Nonetheless, the scope of the study is limited to curricular structures. Future research should therefore examine how curriculum models can better support the transition from

undergraduate to postgraduate research and explore the role of pedagogical alignment in shaping students' research identity (Long et al., 2019; Silva et al., 2021).

6. Recommendations

Teaching should shift from predominantly lecture-based methods toward applied, case-based, and evidence-based practice (EBP) approaches. Core research concepts need to be embedded within authentic cases and short EBP cycles that require students to formulate research questions, critically evaluate evidence, and explain its implications for professional practice. Classroom activities should emphasise practical application, for example, critiquing sampling plans or reviewing informed consent materials, while assessments should align with clearly defined, level-appropriate research competencies. A balanced approach combining low-stakes formative tasks with authentic summative outputs should be implemented across different teaching modalities.

Students' ethical and critical engagement with information should be intentionally cultivated through structured instruction in information literacy, research ethics, and academic integrity. Scaffolded article critiques and guided appraisal exercises can support students in learning how to evaluate and apply evidence responsibly in both academic and clinical contexts.

A coherent spiral research curriculum should be implemented throughout the programme. In the early stages, the focus should be on developing information literacy, EBP understanding, and ethical reasoning. Intermediate stages should emphasise critical appraisal and research design, while later stages should involve proposal development, research implementation, and knowledge translation. Assessments should be carefully sequenced across academic years to support progressive skill development, with early academic writing support embedded to scaffold students' learning.

Authenticity in research learning should be strengthened by linking student research activities to real clinical or practice-based challenges, including opportunities for collaboration with partner organisations. Practical workshops on research question formulation, data handling, and dissemination can further reinforce this applied orientation.

Finally, a programme-level research showcase could serve as a capstone experience, enabling students to present their work, receive constructive feedback, and develop

dissemination skills. These recommendations position undergraduate research learning as an active, developmental, and ethical process that is closely connected to professional practice, consistent with Healey and Jenkins' framework.

7. Conclusion

The persistent gaps in research competence among undergraduate nursing students require a robust and strategic response. This study addresses these challenges by developing evidence-informed guidelines aimed at strengthening early and systematic research pedagogy. The findings underscore the need to embed rigorous and structured research learning within undergraduate nursing curricula to ensure the equitable and sustainable development of research capacity within the profession.

By integrating the Healey and Jenkins research–teaching nexus into curriculum design, the study proposes a coherent approach to bridging the gap between theoretical knowledge and practical application. This framework encourages the development of critical inquiry while progressively immersing students in research-oriented learning environments.

To further understand the impact of these recommendations, future research should explore both students' and lecturers' experiences in implementing these guidelines. Longitudinal empirical studies will be particularly important in evaluating their influence on research engagement and capacity development within higher education institutions. Such investigations can also provide valuable insights for refining the proposed guidelines and assessing their contribution to preparing nurses who are not only informed consumers of research but also active contributors to the generation of evidence.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was not supported by any funding.

Institutional Review Board Statement

This study was granted ethical clearance by the Durban University of Technology Institutional Research Ethics Committee (Ref: IREC 192/21).

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