A Multi-dimensional Supervisory Support Model for Enhancing Postgraduate Success in South Africa and Zambia

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ABSTRACT

Postgraduate completion rates in South Africa and Zambia remain critically low, posing a significant threat to the development of knowledge economies. Although many factors contribute to student attrition, the quality of academic supervision has been identified as a pivotal determinant of student success. This study addresses this challenge by proposing a holistic, evidence-based framework for improving supervisory practices. Drawing on a mixed-methods study that integrated quantitative data from 342 postgraduate students and qualitative insights from 12 in-depth interviews across both nations, this study first diagnoses the systemic weaknesses in the current supervisory landscape. Key findings revealed that inconsistent feedback, overwhelming supervisor workloads, and a lack of structured institutional support were the primary drivers of delays and dropouts. In response, the researcher introduced Multi-dimensional Supervisory Support Model, a comprehensive framework built on four interconnected pillars: Institutional Scaffolding, Supervisor Professionalisation, Student-Centred Support, and Continuous Quality Enhancement. The model provides a practical roadmap for higher-education institutions to create a nurturing, effective, and equitable supervisory ecosystem. By implementing this integrated approach, universities in South Africa, Zambia, and similar contexts can move beyond isolated interventions to foster systemic change, ultimately enhancing graduate completion rates, improving the student experience, and strengthening their contributions to national development.

Keywords: Postgraduate Supervision, Graduate Completion Rates, Higher Education, South Africa, Zambia, Supervisory Support Model.

INTRODUCTION

A nation's capacity to innovate, compete globally, and address complex societal challenges is intrinsically linked to the strength of its higher education sector. At the apex of this system lies postgraduate education, the engine room for producing the next generation of researchers, expert professionals and academic leaders. However, in many parts of sub-Saharan Africa, these engines underperform. In South Africa and Zambia, persistently low postgraduate completion rates represent a critical leakage in the human capital pipeline, undermining national development goals and squandering both public and individual investments in higher education (Cloete et al., 2015; Council on Higher Education [CHE], 2022).

Recent statistics paint a stark picture of these challenges. In South Africa, only 24% of master's students graduate within the regulation two-year period, and while this figure improves to 67% over six years, high attrition remains a persistent concern (CHE, 2022). The doctoral situation is similarly troubling, with only 14.5% of enrolled students graduating in a given year. When disaggregated by gender, the data reveal that male doctoral students have a slightly higher graduation rate (15.1%) than their female counterparts (13.7%), pointing to additional equity concerns that must be addressed. The data for this analysis were drawn from a comprehensive 2025 study on supervision quality across South Africa and Zambia. The situation in Zambia is

even more acute, with doctoral graduation rates standing at a startlingly low 3.4% in 2022 (Higher Education Authority Zambia [HEA], 2022), reflecting systemic constraints that include a limited number of postgraduate programmes and high levels of faculty job dissatisfaction. For master's programmes in Zambia, the graduation rate of 17.9% is less than half that of South Africa, with female students showing marginally better performance (18.2%) than their male counterparts (17.7%). These low throughput rates mean that crucial sectors such as healthcare, engineering, education, and public administration are deprived of highly skilled workers. Moreover, the academic system struggles to reproduce the next generation of scholars and supervisors, creating a vicious cycle that threatens the long-term sustainability of higher education in both nations.

For clarity, this article distinguishes four related measures: completion rate is the proportion of enrolled postgraduate students who complete their programme within the specified period; annual graduation rate is the proportion graduating in a given year; attrition refers to withdrawal or discontinuation without completion; and time-to-completion is the elapsed period from enrolment to award. The study's survey outcomes concern individual completion status and time-to-completion, whereas the national figures are annual or period-specific graduation statistics reported by the relevant higher-education authorities.

A growing body of research identifies the quality of supervision as the important correlate of a postgraduate student's journey (Cekiso et al., 2024; Madikizela, 2017; Van Rensburg et al., 2016). Effective supervision, characterised by regular engagement, constructive feedback, and robust mentorship, is consistently linked to timely completion and student satisfaction. Conversely, experiences of neglect, inconsistent guidance, and poor communication are primary contributors to student demotivation and withdrawal (Ngulube and Ukwoma, 2019). As one South African student lamented after months of silence from their supervisor, "I am at the verge of withdrawing as student support is not there… the postgraduate office keeps telling me to be patient and its really getting to me" (Participant 5, South Africa). This relationship should not be interpreted as exclusive causation; funding, employment, research infrastructure, institutional regulations, personal circumstances, and socioeconomic conditions may also affect postgraduate outcomes.

While the problem is well documented, the scholarly positioning of existing studies often focuses on isolated variables such as student funding or supervisor-student relationships. A significant research gap exists in the absence of integrated, multi-dimensional supervisory models specifically tailored for the sub-Saharan African context**.** Most current interventions are fragmented and fail to address the systemic interplay between institutional policy, supervisor professionalisation, and student-centred support. This study contends that sustainable improvement requires a holistic and integrated approach. Drawing on rich empirical data from a comprehensive mixed-methods study conducted in South Africa and Zambia, this study has a dual purpose. First, it synthesises quantitative and qualitative evidence to diagnose the interconnected failures within the current supervisory ecosystem. Second, it moves from diagnosis to prescription by proposing a "multi-dimensional supervisory support model" designed to guide universities in building a robust, nurturing, and effective supervisory environment. By presenting this evidence-based model, this study aims to provide policymakers, university leaders, and academic staff in South Africa, Zambia, and beyond with a coherent strategy to enhance supervision quality and, in doing so, unlock the full potential of their postgraduate programmes.

LITERATURE REVIEW

The challenges of postgraduate supervision are not unique to South Africa and Zambia; they are the subject of extensive global discourse. However, effective solutions must be built on a clear understanding of both universal principles and local contextual realities. This review grounds the proposed supervisory support model by synthesising key theoretical frameworks, established international best practices and findings from the Southern African region.

Theoretical Foundations of Supportive Supervision

Effective supervision is, fundamentally, a pedagogical practice. Transformative Learning Theory, as conceptualised by Mezirow (1991), posits that significant learning in adulthood involves a shift in one's frame

of reference through critical reflection. Applied to supervision, this suggests that a supervisor's role extends beyond mere technical guidance to fostering an environment in which students can critically examine their assumptions, navigate uncertainty, and experience personal and intellectual growth. This is complemented by Social Constructivist Theory (Vygotsky, 1978), which emphasises that knowledge is co-constructed through social interaction. A constructivist supervisory relationship is therefore not a hierarchical transmission of information but a collaborative dialogue in which meaning is negotiated and the student is an active participant in their learning journey.

These ideas are operationalised in models such as Burnett's (1999) Apprentice Master Model, which frames the supervisor as a guide who inducts a student into the practices of a discipline, and Bernard's Discrimination Model (Bernard & Goodyear, 2014), which calls for an adaptive approach where supervisors fluidly adopt the roles of teacher, counsellor, and consultant based on the student's evolving needs. Together, these theories establish that high-quality supervision must be relational, developmental, and adaptive, a philosophy that underpins the student-centred pillars of the model proposed in this article.

International Best Practices in Supervisory Support

Globally, leading higher education systems have recognised that effective supervision cannot be left to the discretion of individual academics alone. Instead, it must be supported by robust institutional ecosystems. A review of the best international practices revealed a consensus on several key interventions.

First, a structured institutional framework is paramount. This includes establishing dedicated graduate schools or postgraduate offices responsible for policy implementation, quality assurance, and providing a central point of contact for students (McCallin & Nayar, 2012). Clear, codified policies on supervisory roles, responsibilities, workload models, and expected timelines for feedback create transparency and manage expectations for both students and staff (Taylor, 2019).

Second, the professionalisation of supervision through mandatory training and continuous development is standard practice in many countries (Lee, 2012). These programmes equip supervisors with pedagogical skills, cultural competence, and strategies for effective mentorship. Recognising and rewarding supervisory excellence through formal awards or as a criterion for promotion further signals its institutional importance (Mainhard et al., 2009).

Third, fostering peer- and cohort-based support is increasingly seen as a vital supplement to the traditional one-on-one supervisory model. Writing circles, peer-mentoring programs, and cohort-based supervision models have been shown to reduce the isolation often experienced by postgraduate students, build a sense of community, and accelerate progress (Bitzer, 2007).

Remote Supervision and Digital Mentorship

Effective digital mentorship involves more than just using video conferencing; it requires structured online mentoring practices that support academic writing and emotional resilience (Becker, 2025). Mwansa (2026) argues for reimagining supervision in the digital age by addressing the "contradictions between tools and outcomes," where digital infrastructure often lags behind pedagogical needs in sub-Saharan Africa. Furthermore, Chauke (2025) emphasises that digital engagement must be culturally competent, respecting the diverse backgrounds of students who may face varying levels of digital literacy and access. Oladimeji (2026) further suggests that mentorship-infused models are essential for African higher education to ensure that remote supervision does not lead to student isolation, but rather fosters a sense of belonging through virtual communities of practice.

The landscape of postgraduate supervision has undergone a radical transformation since the COVID-19 pandemic, necessitating a shift towards remote supervision and digital mentorship. Recent scholarship highlights that digital transformation in South African and Zambian universities has fast-tracked the adoption of virtual engagement tools, yet this shift has introduced new complexities (Redda, 2025). Opesemowo (2025) explores lecturers' experiences in remote supervision, noting that while technology bridges geographical gaps,

it requires supervisors to function as "digital mentors" who can maintain relational depth without physical proximity.

The Supervisory Landscape in Southern Africa

While these international best practices provide a valuable blueprint, their implementation in Southern Africa is hampered by a unique set of challenges. Research from the region consistently highlights several recurring themes that the proposed model aims to address.

Overburdened Supervisors: The most pervasive issue is the immense pressure on the academic staff. High student-to-supervisor ratios, coupled with heavy teaching and administrative loads, severely limit the time and energy that supervisors can dedicate to each student (Cloete et al., 2015; Ngulube & Ukwoma, 2019). As one Zambian participant noted, “My supervisor one day indicated that he has over 20 students at PhD and masters level and this made me wonder on the quality of supervision” (Participant 6, Zambia). This reality directly undermines the possibility of providing regular, in-depth feedback that is critical for student progress.

Institutional Deficits: Many universities in the region lack the robust institutional frameworks seen elsewhere. The thesis data revealed that most institutions surveyed did not have dedicated postgraduate support offices, leaving students to navigate complex administrative and academic hurdles independently. This is compounded by a lack of clear, harmonised policies, leading to what is often described as a “postcode lottery” in supervision quality, where a student’s experience is highly dependent on their department or individual supervisor (CHE, 2022).

Resource Constraints: Financial instability is a major factor contributing to attrition. Many postgraduate students in South Africa and Zambia are self-funded and must balance their studies with full-time employment, making them particularly vulnerable to time delays. Furthermore, limited institutional resources for research, such as access to databases, funding for fieldwork, and writing support services, place additional burdens on both students and supervisors (Kyaruzi et al., 2019).

The Need for Culturally Responsive Supervision: An additional dimension that emerges from regional literature is the importance of cultural sensitivity in supervision. Southern African higher-education systems serve diverse student populations with varied linguistic, ethnic, and socioeconomic backgrounds. Research has shown that supervisory relationships can be strained when supervisors fail to recognise or accommodate these differences, particularly in contexts where power dynamics are already imbalanced. Students from historically marginalised communities may face additional barriers, including impostor syndrome, language difficulties (when research must be conducted in a second or third language), and a lack of role models within the academy. Therefore, a culturally responsive supervisory model must include training that equips supervisors to navigate these complexities with empathy and awareness, ensuring that the supervisory space is inclusive and affirming for all students.

In conclusion, the literature confirms that while the principles of good supervision are universal, their application in South Africa and Zambia requires a model explicitly designed to address the region’s specific constraints. The multi-dimensional supervisory support model is therefore not an abstract ideal, but a contextually grounded framework aimed at building institutional resilience, professionalising supervisory practice, providing holistic support to students in a resource-constrained environment, and embedding cultural responsiveness into every layer of the supervisory ecosystem.

METHODOLOGY

This article is built upon the empirical findings of a comprehensive study that assessed the impact of supervision quality on graduate completion rates in South Africa and Zambia. To ensure a holistic and nuanced understanding of the issue, the original study employed a pragmatic mixed-methods research design, integrating quantitative and qualitative data to capture both the statistical trends and the lived experiences that define the supervisory landscape (Creswell & Plano Clark, 2018).

Sampling Strategy

The quantitative strand used stratified sampling across country and institutional type, with electronic recruitment within the identified strata. The survey was administered to postgraduate students across 47 public and private higher-education institutions in South Africa and Zambia and yielded 342 respondents. The sample comprised 217 master's students and 125 doctoral students; 200 respondents (58%) were female, and the largest age group was 31–38 years (n = 136), followed by 24–30 years (n = 95) and 39–45 years (n = 76). The ten institutions with the largest respondent counts are reported in Table 1. For the qualitative component, 12 postgraduate students with 6 from South Africa and 6 from Zambia were selected purposively to capture contrasting supervisory experiences and variation across disciplines and institutional contexts.

Table 1. Universities represented in the study (top 10 by respondent count)

University	Frequency	Percent
Africa Research University	39	11.4
University of South Africa	23	6.73
University of Zambia	19	5.56
University of Pretoria	16	4.68
University of Lusaka	15	4.39
Texila American University	13	3.8
Unicaf University	13	3.8
University of Limpopo	11	3.22
University of Cape Town	10	2.92
Mancosa	9	2.63
All other Universities	174	50.87

Note. The survey included 342 respondents from 47 universities in South Africa and Zambia. Table 1 reports the ten institutions with the largest respondent counts in the thesis dataset; percentages are based on n = 342.

The quantitative component involved administering a structured electronic questionnaire to postgraduate students across the 47 institutions. The questionnaire used closed-ended and Likert-scale items to measure meeting frequency, feedback timeliness and quality, supervisor accessibility, supervisor–student rapport, perceived supportiveness, motivation to complete, demographic characteristics, programme level, and completion status. A pilot administration with 30 participants was used to check item clarity and internal consistency before the main survey. Descriptive frequencies and percentages summarised the sample and response patterns; correlation analysis, chi-squared tests, one-way ANOVA, and regression analysis were used to examine associations between supervisory practices, institutional support, and completion-related outcomes in STATA.

Reliability, Validity, and Ethical Considerations

To ensure reliability and validity, the survey instrument was pilot-tested with a small group of postgraduate students to refine the questions for clarity and relevance. Data triangulation comparing quantitative trends with qualitative narratives further strengthened the study's credibility. Ethical considerations were strictly adhered to; institutional ethical approval was obtained prior to data collection. All participants provided informed consent, and their anonymity was maintained through the use of pseudonyms (e.g., Participant 1, South

Africa). Data were stored securely to ensure confidentiality.

The qualitative component added depth to the quantitative results through semi-structured, in-depth interviews with 12 postgraduate students (6 from South Africa and 6 from Zambia). Interviews were conducted remotely by videoconference and followed a flexible protocol covering supervisory relationships, feedback, institutional support, and academic and personal challenges; follow-up questions were used to clarify emerging issues. The interview data were transcribed and analysed thematically following Braun and Clarke's (2006) approach. Initial codes were reviewed iteratively and consolidated into themes, while a reflexive record and analytic audit trail were maintained to make the researcher's interpretive role visible. Credibility was supported by comparing the qualitative themes with the quantitative patterns and by preserving participant anonymity through pseudonyms. This triangulation provided the empirical basis for developing the supervisory support model.

FINDINGS: GAPS IN THE CURRENT SUPERVISORY LANDSCAPE

The imperative for a new supervisory support model is rooted in the significant and systemic deficiencies identified in the higher education systems of South Africa and Zambia. The data reveal a landscape where well-intentioned students and supervisors often fail due to a lack of structured support, overwhelming workloads, and inconsistent practices. This section synthesises the key quantitative and qualitative findings that illuminate the depth of the crisis.

The Quantitative Evidence: A Story of Attrition and Inconsistency

The statistical data reveal the stark reality of low completion rates and a strong, measurable link between supervision quality and student success. The correlation between the perceived quality of supervision and the likelihood of timely completion was moderate and highly significant ($r = 0.49$, $p < 0.01$). This indicates that as the supervision quality increases, so does the probability of a student graduating.

Figure 2 below indicates the dramatic difference in postgraduate completion rates based on the quality of supervision received by the students. Chi-squared analysis demonstrated an unequivocal relationship between supervisory experience and student outcomes. Students who reported receiving poor supervision achieved a completion rate of merely 5.7%, accompanied by indicators of dissatisfaction and frustration. In contrast, those who experienced fair supervision showed improvement, with a completion rate of 22.4%, although this remained substantially below optimal levels. The impact becomes markedly more pronounced for students receiving good supervision, who achieved a completion rate of 44.3%, nearly eight times higher than those with poor supervision. Remarkably, students who benefited from excellent supervision had a completion rate of 68.9%, demonstrating that high-quality mentorship can enable more than two-thirds of postgraduate candidates to successfully complete their studies. The statistical significance of this finding ($p < 0.0001$) confirms that high-quality supervision is not merely beneficial but is a critical determinant of postgraduate success.



Figure 2: Postgraduate Completion Rates by Supervision Quality

Further regression analysis showed that supervision quality, supervisor accessibility, and institutional support collectively explained 39% of the variance in student completion status, underscoring multi-faceted nature of the challenge. This finding emphasises that while supervision quality is paramount, it operates within a broader ecosystem of support mechanisms that must function cohesively to maximise student success.

Figure 3 illustrates the profound impact of regular supervisory engagement on completion rates, revealing a clear dose-response relationship between meeting frequency and student success. Students who met with their supervisors less than once a month achieved a completion rate of only 19.7%, reflecting the detrimental effects of sporadic contact and inadequate guidance. When meeting frequency increased to monthly, completion rates improved to 28.3%, demonstrating that even modest increases in engagement yield measurable benefits. The positive correlation became more pronounced with fortnightly meetings, which corresponded to a completion rate of 39.5%, double that of students with infrequent contact. Most significantly, students who engaged in weekly meetings with their supervisors achieved a completion rate of 50.0%, meaning that half of all students with this level of regular engagement successfully completed their courses. The upward trajectory depicted in the figure, supported by ANOVA ($F(3,338) = 8.45$, $p < 0.001$), provides compelling evidence that consistent, predictable supervisory contact is not a luxury but a fundamental requirement for postgraduate success. This finding underscores that prolonged silence and irregular communication patterns directly contribute to student demotivation, loss of momentum, and ultimately, withdrawal from programmes.

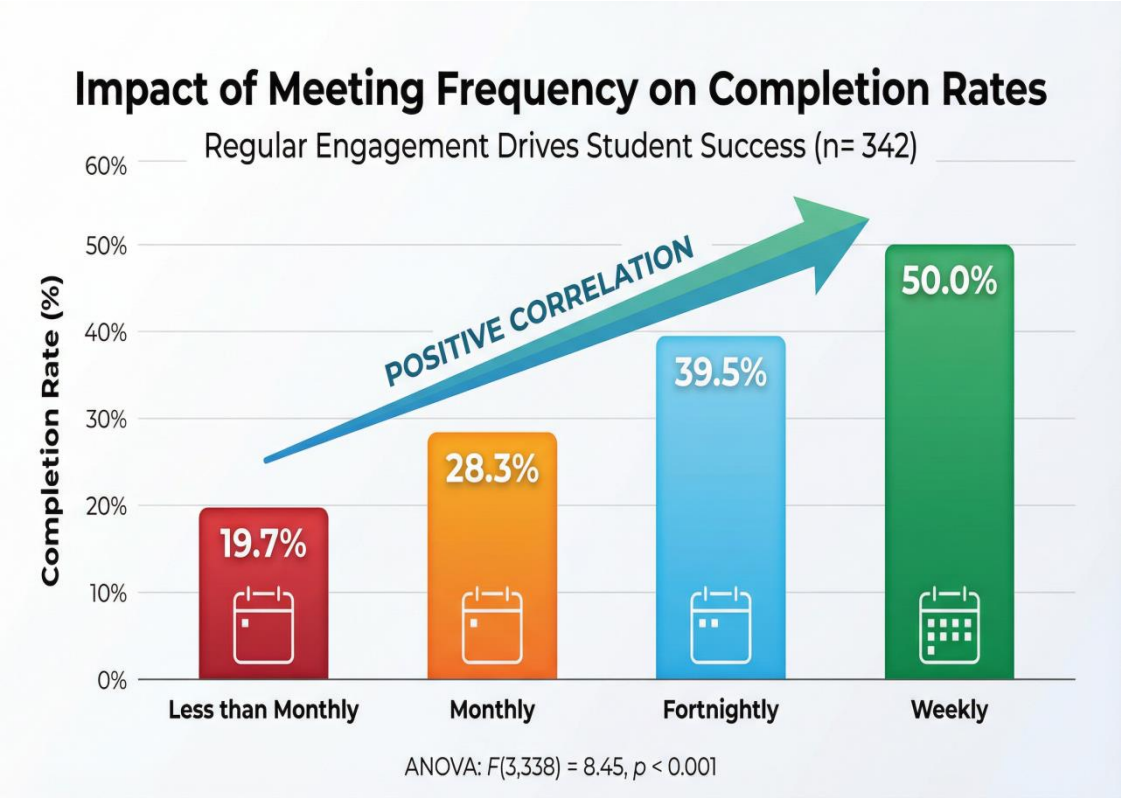


Figure 3: Impact of Meeting Frequency on Completion Rates

Figure 4 presents a comparative analysis of postgraduate graduation rates between South Africa and Zambia for 2022, disaggregated by programme level and gender. The data reveal significant disparities between the two countries and across different demographic groups. At the master's level, South Africa demonstrates relatively consistent graduation rates across gender categories: 24.1% for male students, 23.9% for female students, and an overall rate of 24.0%. Zambia's master's graduation rates, while lower, show a similar pattern, with 17.7% for male students, 18.2% for female students, and an overall rate of 17.9%. Notably, female students in Zambia slightly outperform their male counterparts at the master's level, suggesting some degree of gender parity in completion at this stage. However, the picture becomes considerably more concerning at the doctoral level, where both countries exhibit substantially lower graduation rates, with Zambia facing a particularly acute crisis in this regard. In South Africa, doctoral graduation rates are 15.1% for male students

and 13.7% for female students, yielding an overall rate of 14.5%. The gender gap at this level, with male students outperforming females by 1.4 percentage points, indicates additional equity concerns that must be addressed. The situation in Zambia is markedly more severe, with doctoral graduation rates of 3.2% for male students, 3.6% for female students, and an overall rate of just 3.4%, which is less than one-quarter of South Africa's already low doctoral completion rate. This stark disparity reflects systemic constraints in Zambia, including a limited number of postgraduate programmes, resource scarcity, and inadequate supervisory capacity, all of which combine to create an environment in which doctoral success is the exception rather than the norm.

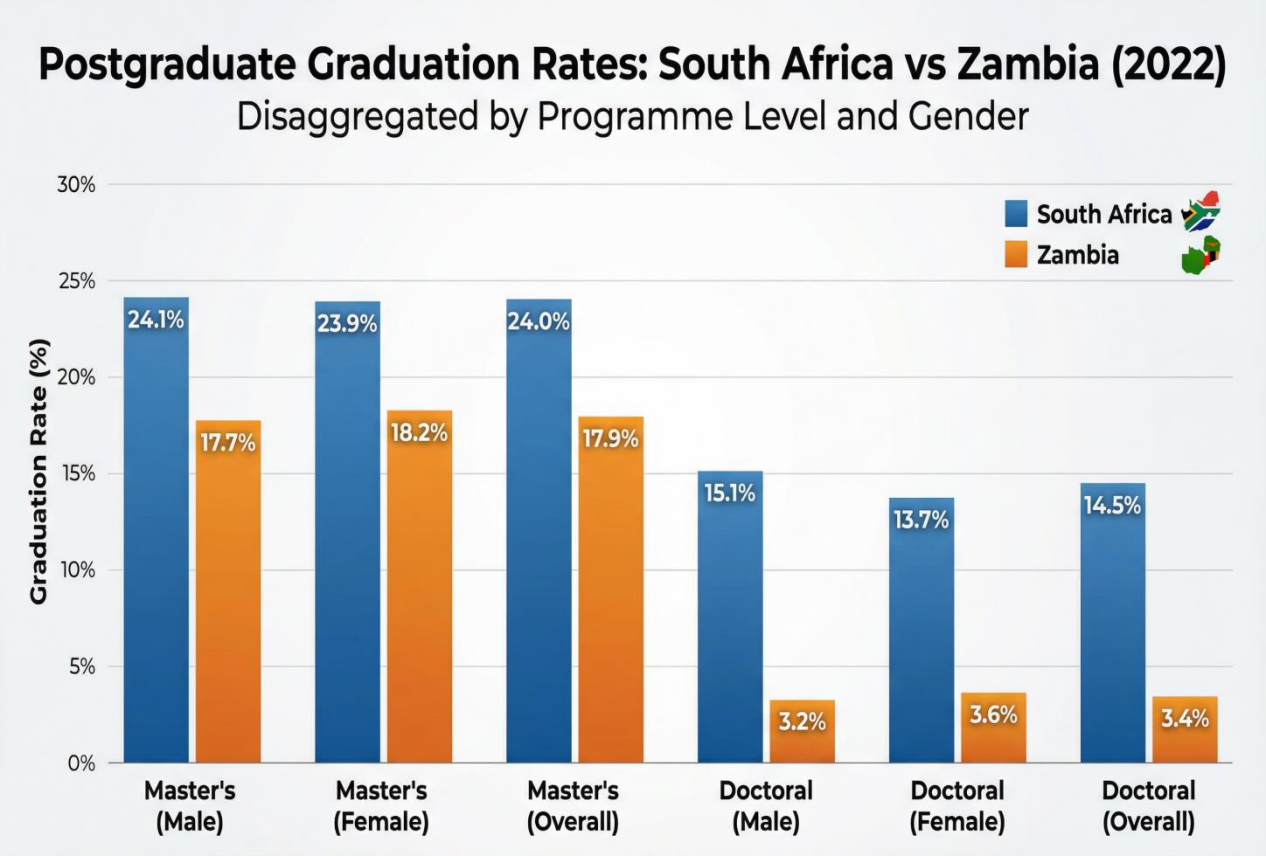


Figure 4: Postgraduate Graduation Rates: South Africa vs Zambia (2022)

Figure 5 identifies and ranks the key barriers to postgraduate completion as reported by the 342 students surveyed across South Africa and Zambia. The horizontal bar chart reveals that supervisor workload and limited availability emerged as the most frequently cited barriers, reported by 39% of students. This finding aligns with qualitative data indicating that overburdened supervisors managing over 20 students simultaneously are unable to provide the regular, in-depth feedback and mentorship that students require. The second most prevalent barrier is financial constraints, cited by 34% of respondents, reflecting the reality that many postgraduate students in the region are self-funded and must balance their studies with full-time employment, making them particularly vulnerable to delays and dropouts. Work-life balance challenges were reported by 31% of students, underscoring the complex demands faced by adult learners who juggle academic responsibilities with family, employment, and other social obligations.

Lack of institutional support was identified by 28% of students, pointing to deficits in administrative infrastructure, grievance mechanisms, and centralised postgraduate offices that could provide a safety net when supervisory relationships falter. Delayed feedback from supervisors, reported by 26% of students, represents a critical failure point that leads to project stagnation and student demotivation. The lack of clear guidance, cited by 22% of respondents, reflects instances where students feel directionless due to ambiguous expectations or insufficient supervisory input. Finally, inadequate research skills, reported by 18% of students, highlight a preparedness gap, particularly among students entering postgraduate studies without prior research

experience. Collectively, these barriers paint a picture of a system under strain, where structural, financial, and relational challenges converge to impede students' progress and completion.

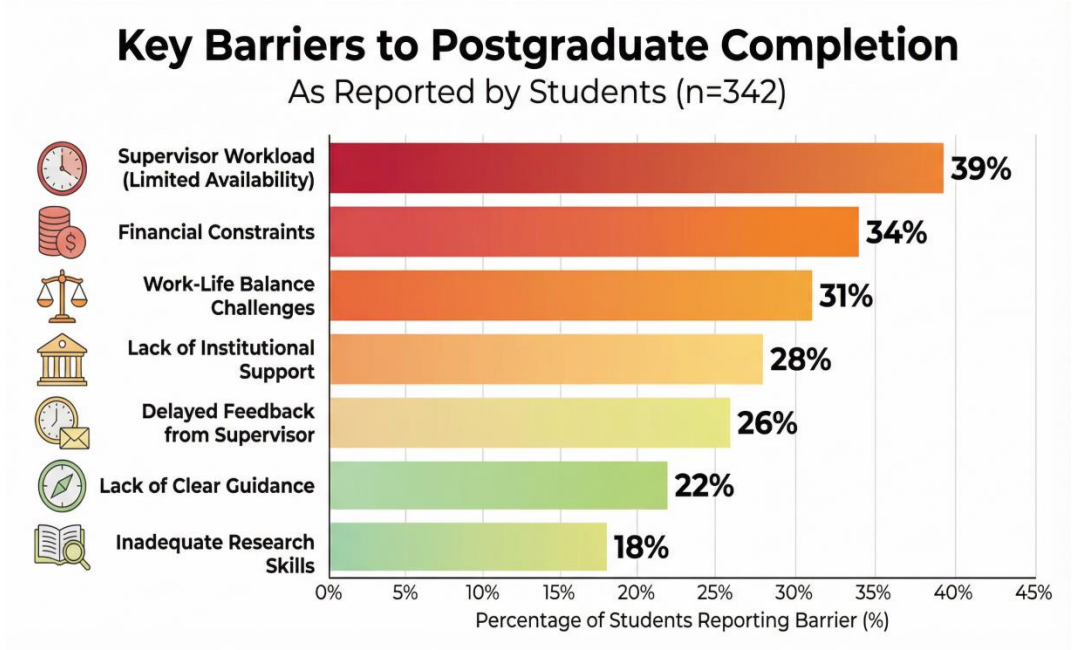


Figure 5: Key Barriers to Postgraduate Completion

In summary, the quantitative evidence presented in Figures 2–5 provides a comprehensive, data-driven diagnosis of the postgraduate completion crisis in South Africa and Zambia. The findings unequivocally demonstrate that supervision quality, meeting frequency, and institutional support are not peripheral factors but central determinants of student success. The stark disparities in completion rates between students receiving excellent versus poor supervision, the clear dose-response relationship between engagement frequency and outcomes, the troubling graduation rate gaps between the two countries, and the multiplicity of barriers reported by students all point to an urgent need for systemic reform. These quantitative insights, when combined with the qualitative voices of students presented in the following section, form the empirical foundation upon multi-dimensional supervisory support model is built.

The Qualitative Evidence: Voices from the System

If the quantitative data outline the problem, the qualitative findings give it a human voice. In-depth interviews with students from South Africa and Zambia revealed the profound personal and academic consequences of systemic gaps.

Theme 1: The Impact of Supervisory Neglect and Overload.

Students consistently described experiences of feeling abandoned, with communication channels breaking down for months. This was not always perceived as malicious but often as a direct result of supervisors being overworked.

> *"It's been 6 months, and I have been waiting for feedback, I sent emails and WhatsApp but he has been quiet and just see blue ticks that he read my messages, but he doesn't tell me what's wrong… I have complained to the university, and they said they will investigate, even now."* – **Participant 3, South Africa**

> *"When I asked my supervisor why she is not responding to me she indicated that she has more students and all require her support and I should wait for my turn, it's been three months waiting for my turn, I even think of quitting as I feel I am at the mercy of her."* – **Participant 8, South Africa**

Theme 2: Failure of Institutional Support Structures.

When supervisory relationships falter, students often find that there is no effective institutional safety net to catch them. Grievance procedures were described as opaque, ineffective, or even punitive, leaving students feeling powerless and isolated from the university.

> *"The university finally gave me a new supervisor and funny enough two months down the line she is doing worse than the old one I am even afraid to complain as I will be labelled as a troublemaker… I am at the verge of withdrawing as student support is not there, the postgraduate office keeps telling me to be patient and its really getting to me."* – **Participant 5, South Africa**

> *"The student support services is non-existent… If you take a complaint about your supervisor, he will defend him and try to convince you that you need your supervisor… As students we are on our own and at the mercy of incompetent supervisors."* – **Participant 3, Zambia**

Theme 3: The Need for Holistic, Human-Centred Mentorship. Beyond academic guidance, students expressed a deep need for psychosocial support and mentorship that recognised them as individuals with complex lives and responsibilities. The absence of this support was a significant factor in their consideration of dropping out of the program.

> *"Support comes in many forms. Psychosocial support is critical. We are adults, and in adult learning, we are burdened with social responsibility. Without this support, it becomes a challenge to even think that I will complete my studies."* – **Participant 12, Zambia**

Theme 4: Disciplinary and Institutional Variations.

The data also revealed significant variations in supervision quality across disciplines and institutional types. An ANOVA test confirmed statistically significant differences ($F(3,338) = 4.12$, $p = 0.007$), with students in the sciences reporting substantially more positive supervisory experiences than those in the humanities and social sciences fields. This disparity may be attributed to several factors, including more structured lab-based research environments in the sciences, clearer methodological frameworks, and better funding. Conversely, humanities and social sciences students, whose research is typically more interpretive and less formulaic, may require more nuanced, sustained intellectual engagement from their supervisors, a demand that is difficult to meet when supervisors are overburdened. Furthermore, the type of institution was important. Students at well-resourced, research-intensive universities (such as the 6.73% attending the University of South Africa) reported access to structured support systems, whereas those at smaller or under-resourced institutions described a virtual absence of supportive infrastructure.

Theme 5: The Critical Role of Communication Frequency.

The quantitative data on meeting frequency provides a clear dose-response relationship between supervisory engagement and completion. Students who met with their supervisors weekly had a 50% completion rate, compared to 19.7% for those who met less frequently than monthly. This finding underscores that regular and predictable contact is not a luxury but a fundamental requirement for successful supervision. Qualitative data reinforced this, with students describing how prolonged silence from supervisors led to a spiral of self-doubt, loss of momentum, and ultimately, consideration of withdrawal. As one Zambian student poignantly stated, *"My supervisor does not communicate unless I follow up on the work previously submitted; he has not encouraged me or said anything that will motivate me to work harder"* - **Participant 1, Zambia**.

Together, these findings paint a clear and compelling picture. Challenges in postgraduate completion are not merely the result of individual failings but are symptoms of a systemic breakdown that operates at multiple levels, from national policy and institutional infrastructure to departmental culture and individual supervisory relationships. This evidence of interconnected, multi-level failures necessitates the introduction of an equally interconnected, multi-dimensional model

The model was derived from the convergent empirical findings rather than introduced as a stand-alone prescription: the quantitative associations between supervision quality, meeting frequency, institutional support, and completion were integrated with qualitative themes concerning supervisory overload, delayed feedback, weak institutional safety nets, psychosocial needs, and disciplinary variation. These findings were then mapped onto the four pillars below, with Institutional Scaffolding addressing structural deficits, Supervisor Professionalisation addressing inconsistent practice, Student-Centred Support addressing academic and psychosocial needs, and Continuous Quality Enhancement addressing monitoring and accountability.

Multi-dimensional Supervisory Support Model

In response to the identified systemic challenges, this article proposes a Multi-dimensional Supervisory Support Model, an integrated framework designed to create a robust, responsive, and nurturing ecosystem for postgraduate education in South Africa and Zambia. The model moves away from isolated, piecemeal interventions and advocates for a holistic approach, where institutional structures, supervisor capabilities, student needs, and quality assurance mechanisms are developed in concert. It is built on four interconnected pillars that, when implemented together, create a mutually reinforcing system aimed at enhancing student success and completion rates.

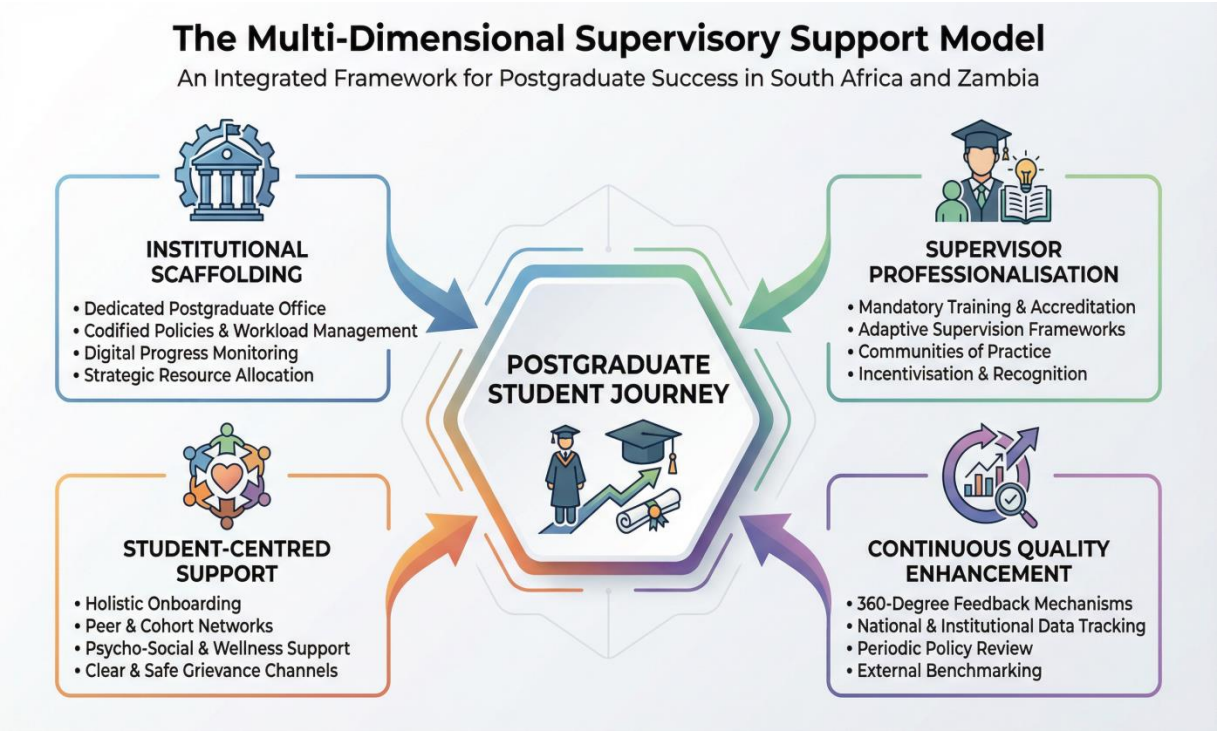


Figure 6: Multi-dimensional Supervisory Support Model

Pillar 1: Institutional Scaffolding

This foundational pillar addresses the need for a strong, consistent, and transparent institutional environment in the country. It recognises that individual supervisors and students cannot succeed if the underlying structures are weak or absent. The components of this pillar are as follows:

Dedicated Postgraduate Office: A central, well-resourced, and autonomous unit that serves as the administrative and support hub for all postgraduate issues. This office is responsible for policy implementation, student tracking, and providing the first point of contact for queries and dispute resolution, thereby relieving academic departments of significant administrative burdens.

Codified Policies and Workload Management: Development and enforcement of clear, accessible policies governing all aspects of supervision. This includes defining the roles and responsibilities of supervisors and

students, establishing fair and transparent workload models (including student-supervisor ratios), and mandating clear timelines for feedback to be provided.

Digital Progress Monitoring: Implementation of a university-wide digital platform for tracking student progress and supervisory interactions. This provides real-time data for the early identification of at-risk students and ensures accountability on both sides of the supervisory dyad.

Strategic Resource Allocation: A commitment to providing adequate and targeted resources for postgraduate studies, including funding for essential research activities, access to academic databases, and university-wide support services for academic writing and research methodology.

Pillar 2: Supervisor Professionalisation

This pillar focuses on developing the capacity of academic staff to become effective mentors and guides. It reframes supervision as a specialised pedagogical skill that requires ongoing training, support, and recognition.

Mandatory Training and Accreditation: A system of compulsory, continuous professional development for all supervisors. Training should cover not only research methodology but also pedagogical techniques, cultural competence, conflict resolution, and mental health awareness, leading to formal institutional accreditation or certification.

Adaptive Supervision Frameworks: Equipping supervisors with a toolkit of supervisory styles, such as the

Discrimination Model (Bernard & Goodyear, 2014), enables them to adapt their approach to the diverse learning needs, cultural backgrounds, and personal circumstances of their students.

Communities of Practice: The establishment of formal and informal networks where supervisors can share best practices, discuss challenges, and provide peer support should be encouraged. This helps break down the isolation that supervisors themselves can experience and fosters a collective sense of responsibility for postgraduate success.

Incentivisation and Recognition: Creating tangible incentives for supervisory excellence. This includes making high-quality supervision a key criterion for promotion and tenure and establishing formal awards to recognise and celebrate outstanding mentors.

Pillar 3: Student-Centred Support

This pillar places the student at the heart of the model, providing the multi-faceted needed to navigate the complexities of postgraduate research.

Holistic Onboarding: A comprehensive induction program for new postgraduate students that goes beyond administrative registration to include intensive training in research skills, academic writing, and navigating the university's support systems.

Peer and Cohort Networks: The formal facilitation of peer support mechanisms, such as cohort-based supervision models, writing groups, and student-led workshops. These networks are crucial for reducing isolation, fostering collaboration, and providing valuable emotional and academic support.

Psycho-Social and Wellness Support: Providing accessible, confidential, and culturally sensitive counselling and wellness services to help students manage the significant stress and mental health challenges that can accompany postgraduate study.

Clear and Safe Grievance Channels: Establishing an impartial, confidential, and non-punitive process for students to raise concerns or lodge complaints regarding their supervision. This process must be managed by the central Postgraduate Office to ensure objectivity and protect students from potential reprisal.

Pillar 4: Continuous Quality Enhancement

This final pillar ensures that the entire supervisory system is dynamic, reflective, and self-improving in nature. It embeds data-driven evaluations and feedback loops at every level.

360-Degree Feedback Mechanisms: The implementation of a system for regular, anonymised feedback, where students provide input on the quality of their supervision, and supervisors provide feedback on the effectiveness of institutional support.

National and Institutional Data Tracking: Systematic collection and analysis of longitudinal data on completion rates, time-to-degree, and attrition, disaggregated by discipline, demographic factors, and institution. These data are essential for identifying systemic trends and informing evidence-based policies.

Periodic Policy Review: A commitment to regularly review and update all supervision-related policies in consultation with students, supervisors, and other stakeholders to ensure that they remain relevant and effective.

External Benchmarking: Actively comparing practices, policies, and outcomes with those of other universities, both regionally and internationally, to identify areas for improvement and learn from the best global practices.

DISCUSSION: IMPLEMENTING THE MODEL TO BRIDGE MULTI-DIMENSIONAL

Dimensional Supervisory Support Model is not a theoretical abstraction; it is a direct, evidence-based response to the specific failures identified in South Africa and Zambia's higher-education systems. Its strength lies in its integrated design, where each pillar is crafted to address a corresponding gap revealed by quantitative and qualitative data. This section discusses how the model's implementation can systematically dismantle barriers to postgraduate completion.

The model's first pillar, Institutional Scaffolding, directly confronts the widespread lack of consistent, reliable support structures. The finding that a majority of institutions lacked dedicated postgraduate offices explains the chaotic and often punitive grievance processes described by students like Participant 5 from South Africa, who felt trapped between an ineffective supervisor and unhelpful administration. A dedicated Postgraduate Office, as proposed by the model, would provide the impartial, centralised oversight needed to manage such conflicts effectively. Furthermore, the call for codified policies on workload management is a direct response to the 39% of students who identified supervisor overloading as a key barrier. By enforcing fair student-supervisor ratios, institutions can mitigate the burnout that leads to months-long feedback delays reported by students, thereby addressing a primary driver of attrition.

Supervisor Professionalisation, the second pillar, targets the inconsistency in supervisory quality, which the data revealed to be a critical determinant of success. The dramatic disparity in completion rates between students with "good" (44.3%) and "poor" (5.7%) supervision underscores that effective mentorship is a skill and not an innate talent. The model's emphasis on mandatory training and accreditation aims to standardise this skill set, moving away from the current "lottery" system. Training in adaptive supervision frameworks is crucial. It equips supervisors to better support the 10% of students who withdraw due to academic challenges, many of whom come from non-research backgrounds and require more intensive tailored guidance. This pillar transforms supervision from a private, unexamined practice into a public, professional, and accountable pedagogical function.

The third pillar, **Student-Centred Support**, addresses the holistic needs of postgraduate candidates, who, as Participant 12 from Zambia eloquently stated, are "burdened with social responsibilities." The provision of psychosocial and wellness support is a direct acknowledgement that non-academic stressors are a major contributor to attrition. Moreover, the formal facilitation of peer and cohort networks operationalises a key finding from the qualitative data: students often find invaluable support from their peers in their learning. As

Participant 1 from Zambia noted, “Support you get from a colleague is amazing, and I know that is where growth is.” By formalising these networks, institutions can build student resilience and create a sense of community, thereby mitigating the profound isolation experienced by many postgraduate researchers.

Finally, the fourth pillar, Continuous Quality Enhancement, ensures that the entire system remains dynamic and responsive. The current environment is largely static, with students like Participant 2 from South Africa being stuck at the ethical clearance stage for over 15 months, with no one held accountable. The model’s insistence on 360-degree feedback and digital progress tracking introduces accountability and data-driven oversight that are currently missing. This creates a virtuous cycle: student feedback informs supervisor training, supervisor feedback informs institutional policy, and national data tracking allows for evidence-based systemic adjustments. This pillar ensures that the model is not a one-time fix but a dynamic framework for sustained improvement.

In multi-dimensional supervisory support model works by creating a series of mutually reinforcing feedback loops. It replaces ambiguity with clarity, inconsistency with reliability, and neglect with a structured support. By addressing the root causes of student and supervisor frustration, it offers a tangible pathway for universities in South Africa and Zambia to transform their postgraduate programmes from sites of attrition into vibrant research and innovation ecosystems.

RECOMMENDATIONS

Trans multi-dimensional supervisory support model into practice requires concerted efforts from all stakeholders. The following recommendations provide a clear, actionable roadmap for implementing the model’s four pillars at the institutional, supervisory, and national levels.

For Higher Education Institutions

1. **Establish and Empower a Central Postgraduate Office:** Institutions must invest in creating a fully resourced and autonomous Postgraduate Office (pillar 1). This office should be the central authority for policy enforcement, student support coordination, and impartial dispute resolution, providing institutional scaffolding necessary to ensure consistency and quality across all faculties.

2. **Implement a Supervisor Professionalisation Programme:** Universities should design and mandate a formal, continuous professional development and accreditation programme for all supervisors (pillar 2). This program must cover pedagogical best practices, cultural competency, mental health first aid, and training in adaptive supervision models. Participation and certification should be linked to eligibility to supervise and career progression.

3. **Develop Robust Student Support and Grievance Mechanisms:** Institutions must formalise student support networks by facilitating cohort-based activities and peer-mentoring programmes (Pillar 3). Crucially, they must establish and publicise clear, confidential, and non-punitive grievance channels managed by the central Postgraduate Office, ensuring that students have a safe avenue for recourse when supervisory relationships break down.

4. **Invest in Digital Infrastructure for Monitoring and Feedback:** Universities should adopt a unified digital platform to monitor student progress and supervisory engagement in real time (Pillars 1 and 4). This system should be integrated with a 360-degree feedback tool that allows regular, anonymised input from both students and supervisors to drive continuous quality improvement.

For Academic Supervisors

1. **Embrace a Mentorship-Focused, Adaptive Approach:** Supervisors should consciously move beyond the role of a technical expert to that of a holistic mentor. This involves actively employing adaptive supervision techniques to tailor guidance to the individual needs of each student and co-create a clear plan with defined milestones and communication expectations from the outset (Pillar 2).

2. **Prioritise Timely and Constructive Feedback:** Recognising that delayed feedback is a primary cause of student attrition, supervisors must commit to providing prompt, regular and constructive feedback. This feedback should be a dialogue that balances critical evaluation with encouragement to foster student motivation and intellectual development.

3. **Actively Participate in Professional Development:** Supervisors have a professional responsibility to engage with the training and communities of practice offered by their institutions and at a cost of the university they are supervising at. This commitment to lifelong learning ensures that they remain current with the best practices in supervision and pedagogy, enhancing their effectiveness as mentors.

For National and Regional Bodies

1. **Develop and Enforce National Standards for Supervision:** National regulatory bodies, such as the Council on Higher Education (CHE) in South Africa and the Higher Education Authority (HEA) in Zambia, must establish and enforce a national framework for postgraduate supervision (Pillar 4). This framework should set minimum standards for supervisor qualifications, mandate maximum student-to-supervisor ratios, and require all institutions to have transparent support and grievance policies.

2. **Revise Funding Models to Incentivise Completion and Quality:** Government funding formulas should be revised to reward institutions for timely postgraduate completion and demonstrated supervisory excellence, rather than solely on enrolment numbers. This creates a powerful systemic incentive for institutions to invest in the support model's pillars.

3. **Foster Cross-Institutional and Regional Collaboration:** National and regional bodies should facilitate the creation of communities of practice that transcend institutional boundaries. These networks can pool resources, share training materials, and provide mentorship for supervisors at less-resourced institutions, helping to standardise quality and build collective capacity across the higher education ecosystem. Regional bodies, such as the Southern African Regional Universities Association (SARUA), can play a pivotal role in coordinating these efforts, organising annual conferences on supervisory best practices, and establishing a regional repository of open-access training resources.

Implementation Roadmap and Phasing

The successful adopt multi-dimensional supervisory support model requires a phased and strategic approach. Institutions and national bodies should not attempt to implement all components simultaneously, as this risks overwhelming already-stretched systems. Instead, a three-phase implementation strategy is recommended.

Phase 1 (Years 1-2): Foundation Building. The initial phase should focus on establishing core infrastructure. Institutions should prioritise the creation of a dedicated Postgraduate Office, codification of supervision policies, and rollout of mandatory supervisor training programs. National bodies should use this period to develop and disseminate a national framework for supervision standards. This phase involves laying the institutional scaffolding and building awareness.

Phase 2 (Years 3-4): Capacity Building and Integration. With the foundational structures in place, the second phase should focus on deepening the supervisor's capacity and integrating student support mechanisms. This includes scaling up training programs, establishing formal communities of practice for supervisors, and launching peer mentoring and cohort-based supervision initiatives. Digital monitoring systems should be piloted and refined during this phase, with feedback loops established to ensure that they are user-friendly and effective.

Phase 3 (Years 5+): Consolidation and Continuous Improvement.

The final phase involves embedding the model into the institutional culture and ensuring its sustainability. This involves the full-scale implementation of 360-degree feedback systems, regular policy reviews informed by longitudinal data, and the establishment of formal recognition and reward systems for supervisory excellence.

At this stage, the model should be self-sustaining, with continuous quality enhancement mechanisms ensuring ongoing adaptation and improvement.

This phased approach allows institutions to gradually build momentum, learn from early implementation challenges, and adjust strategies based on evidence. It also provides a realistic timeline that acknowledges resource constraints and change management challenges inherent in large-scale reforms.

CONCLUSION

Postgraduate attrition in South Africa and Zambia is a complex systemic issue with profound implications for national progress. This article argues that the quality and consistency of academic supervision is a major component of this challenge. Through a mixed-methods diagnosis of the supervisory landscape, we demonstrated that the struggles faced by students are not isolated incidents but symptoms of a deeper institutional malaise, characterised by a lack of structural support, overburdened staff, and inconsistent practices. The result is a significant loss of human potential that neither nation can afford to ignore.

In response, this study proposes the Multi-dimensional Supervisory Support Model, a holistic and evidence-based framework for reform. By integrating four crucial pillars: ***Institutional Scaffolding, Supervisor Professionalisation, Student-Centred Support, and Continuous Quality Enhancement***, the model provides a comprehensive roadmap for creating a supervisory ecosystem that is supportive, effective, and equitable. It moves the discourse beyond identifying problems to proposing a structured, actionable solution grounded in the specific realities of the Southern African context.

Ultimately, enhancing postgraduate completion rates is not merely an administrative goal; it is an investment in the future of the university. The successful implementation of this model requires a paradigm shift: one that reframes supervision as a core pedagogical practice, recognises supervisors as professional mentors, and places the holistic needs of students at the centre of the institutional mission. This demands a shared commitment from policymakers, university leaders, and academic staff to move beyond the status quo. By embracing this integrated approach, higher-education institutions in South Africa and Zambia can begin to mend the leaks in their postgraduate pipeline, cultivate the next generation of innovators and leaders, and fulfil their promise as engines of social and economic development.

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