

Title:

Institutional factors that influence engagement in research supervision at an African university

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Abstract

The research supervision capacity in African universities is underdeveloped due to various challenges such as poor research infrastructure, limited Information and Communication Technologies (ICTs), absence of clear leadership mandate and support, as well as a shortage of faculty engaged in academic research stemming from heavy teaching responsibilities, insufficient financial backing, shortage of postgraduate supervisors, and a high staff-to-student ratio. This study examines the factors influencing engagement in research supervision of academics at a university in Africa. Drawing from research reports, policy papers, and data sourced from the Department of Higher Education and Training (DHET), this paper delves into the state of academic research supervision in Africa. The author contends that in order for Africa to attain global recognition and competitiveness, higher education institutions must cultivate robust research agendas that will enhance their readiness to advance the research supervision process.

Keywords

Postgraduate research supervision, African universities, academic research, research challenges.

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Introduction

Universities across the globe embrace threefold classical mission statements of a university, namely the development of knowledge (research and innovation), the transfer of knowledge (teaching and learning), and the application of knowledge (community engagement) (CHE, 2020). This statement therefore implies that university faculty members are expected to fulfil the primary roles of teachers, researchers, and service-oriented professionals. In Africa, universities are persistently addressing significant issues related to student accessibility, governance, management practices, academic program quality and relevance, and particularly financial constraints, which hinder their ability to endorse academic research and actively participate in research supervision. The progression of academic staff to a professorship at this public university, where there is a small cohort of the professoriate at Faculty A, comprising 9 associate professors and 5 full professors out of 98 academics and 36 with Doctorate, has been stalled by the shrinking numbers in the professoriate (in the ranks of both full professor and associate professor) DHET (2021), shortage of postgraduate supervision, high staff-to-student ratio and increased workloads.

Literature Review

Universities emphasise the significance of scholars engaging in research and publishing research results. Engagement in research and innovation is recognised as an effective means to increase a university's research profile, global rankings and internationalisation. The primary foundation for elevating the reputation and influence of universities on a global scale, particularly in Africa, is attributed to consistent and coherent research productivity (Chipeta & Nyambe, 2012; Masaiti & Mwale, 2017). According to Abe and Mugobo (2021), research output, notably research publications (such as articles, books, conference papers, and postgraduate theses), is considered the epitome of academic value, significance, and progression within a university, as these outputs influence funding (Musiige & Maassen, 2015), university rankings, industrial growth, policymaking, thus fostering national and global progress. Research output achieved through postgraduate supervision pertains to the number of published articles in internationally refereed journals, books and conference proceedings, the usual channels for the dissemination of research and development research activities among researchers (Ogbogu, 2009).

Professors attain their position through sustained demonstration of excellence within a specific academic field spanning numerous years (McCracken-Flesher, 2010; Zulu, 2021). Within the realm of higher education establishments, Professors fulfil a dual role, primarily aimed at advancing and enhancing the reputations and standing of these institutions (Evans, 2015), and secondly, at providing guidance in academic matters. Professors also play a crucial role in moulding and nurturing the upcoming cohort of academics, offering support in career progression, mentorship, and advisory functions. This interpretation implies that professorship is essential in higher education institutions and therefore presenting the challenges that postgraduate supervisors who are in the majority of the supervision process encounter is crucial in understanding why there is a scarcity of postgraduate supervision for future generations of researchers, scholars for knowledge creation, development, innovation, and dissemination.

Conceptual framework

The interaction between a student and their supervisor encompasses several phases primarily outlined in Figure 1 below. These stages include selecting a research topic, planning the research, identifying and obtaining necessary resources, project management, actively engaging in the research, conducting a literature review, analyzing and interpreting data, thesis writing, defending it, and potentially seeking publication (Piccinin, 2000).

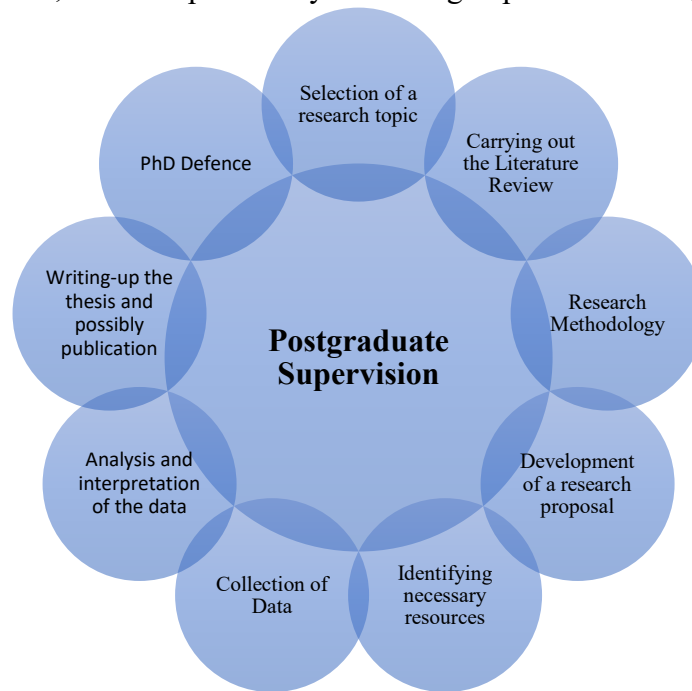


Figure 1: (Source: Author's compilation)

Guidance is commonly provided concerning various aspects such as the selection of topics, choices of methodologies for research, conventions and formatting in writing, the clarity of students' research work and concepts, the thoroughness and focus of written material, and the overall progress of the student. A significant number of students fail to finish their postgraduate studies within the prescribed minimum residency period. A considerable proportion of students either extend the duration of their studies excessively or discontinue their academic pursuits. According to Lategan (2009), inadequate supervisory methods, lack of a conducive research environment, insufficient resources, financial constraints, familial issues, among others (Mohase, 2009) are some of the factors contributing to the dropout rates among postgraduate students. Nonetheless, Mouton's (2007:1088) study on the completion rates of doctoral students from enrollment suggests that the situation in this particular African nation is consistent with global patterns. These occurrences present not only significant ethical dilemmas but also ethical challenges from the perspective of research ethics (the integrity of the process), the expenditure of funding, professional ethics (underprepared supervisors and not committed students), and developmental ethics (improvement of living conditions).

Theoretical development

The paper is theoretically grounded in Bandura's (1999) social learning theory which posits that learning is influenced by the social context and operates in a reciprocal manner with the surrounding environment (Bandura, 1999). It underscores the significance of observing and imitating the behaviours, attitudes, and emotional responses of others, proposing that all

behaviours are learned through conditioning. In the context of the supervisor/supervisee relationship, the theory posits that both parties exert a substantial influence on each other. Negative experiences faced by the supervisee due to the supervisor's actions can impede the supervisee's progress (Henfield, Owens & Witherspoon, 2011 in Burt 2012). Factors such as delayed responses to the supervisee's submitted work, supervisor unavailability, lack of a positive relationship between them, and ineffective communication can result in the supervisee feeling helpless. Consequently, the supervisee's reaction may manifest as disappointment and frustration, potentially leading to attrition or even dropout. Applying the social learning theory to this paper, it is expected that the supervisor will meet the supervisee's needs in a timely and realistic manner.

The Impact of Heavy Teaching WorkLoads

The increased workloads resulting from faculty members having a double teaching schedule on a daily basis (Naicker, 2014) often lead supervisors to have limited time and energy for engaging in research activities, such as publishing articles - a crucial requirement for promotion. Additionally, involvement in student research supervision is considered to be among the most effective ways for academics to showcase their scholarly expertise to peers (Rawat & Meena, 2014), and participation in seminars and conferences is also affected. While teaching was traditionally the primary role of university faculty, research and publication have now become deeply embedded in the academic environment (Waghid, 2009: 211).

High Student-to-Staff Ratio

The high student-to-staff ratio at this university, with limited additional resources (e.g., part-time teaching staff, teaching assistants, and student assistants) to support the overwhelmed staff could yield undesirable repercussions for African knowledge production and postgraduate supervision, over time. According to Cloete, Bunting, and van Schalkwyk (2022) records of staffing at the university, there were slightly more than 98 permanently employed academic staff members, who engaged with a student population of 6 167 at the faculty level and 22 578 at the institutional level (DHET, 2021), which points to a high student-to-staff ratio. This ratio speaks to the current massification of South African higher education and the university's limited staff complement to teach the ever-growing numbers of registered students compelling academic staff to teach after hours, in addition to their content development and marking roles. These burdensome teaching requirements may be undermining research and innovation, leading to staff complacency in conducting cutting-edge research. The suggestion is that there is a requirement for additional professors, thus, knowledge regarding how academic researchers successfully overcome obstacles they face is crucial. This information can aid African higher education institutions in developing strategies to potentially lessen challenges faced by academics striving for professorship amidst an increase in student enrollment numbers.

Limited supervision expertise

The challenge posed by the enhancement of institutional capacities extends beyond mere infrastructure, facilities, and equipment. It encompasses the ability to support doctoral programs, facilitate the establishment of new programs, oversee doctoral research, and secure funding for doctoral students (Cloete, Mouton & Sheppard 2015).

Currently, only a third of the permanent academic staff in South African universities possess PhDs, making them eligible to supervise doctoral candidates. However, not all of these individuals have the necessary supervisory experience or have undergone appropriate training and mentorship for this role (ASSAf, 2010), which contributes to low participation rates at the doctoral level. Furthermore, a significant portion of the supervisory capacity resides in traditional universities. In 2007, only 12% of academics at Universities of Technologies held PhDs, in contrast to 30% at comprehensive universities and 41% at traditional universities (ASSAf, 2010).

Research method

This research extensively relied on a comprehensive review of literature and secondary sources. Utilizing secondary data, such as organizational records and historical data of organisational activities are useful for tracking the performance of such organisations (Kumar, 2014). The data utilised in this study were extracted from the African University's Research Output Report and Research Performance Analysis, which was generated by the Department of Higher Education and Training (DHET) in South Africa in September 2022. The verification of the report was ensured through validation of each research output within the faculty and utilizing Converis, a research management platform (Rambe, 2023), thus deemed an authentic evaluation as it was an evidence-based report.

Presentation of findings

To investigate the influence of institutional factors on research supervision engagement at an African university, the study utilized three sets of data: the African University's Research Performance Analysis Report, the DHET's Subsidy Report on African University's research output, and an assessment of research at this specific African university.

Research supervision

Supervising postgraduate research involves tackling new research challenges within scientific disciplines, making it an attractive prospect for postgraduate research supervisors. Additionally, postgraduate students play a crucial role in sustaining research programs by bridging key university activities. Researchers engaged in postgraduate supervision delve into various aspects including epistemological development, conceptual formulations, knowledge creation, ontological progress, enrollment trends, and completion rates. Bitzer (2007:1010) emphasizes that effective postgraduate supervision contributes significantly to institutional and broader objectives, whether viewed as supporting academic renewal or as a promotional tool for higher degrees. Providing quality supervision is imperative for guiding postgraduate students through their research journey.

Social Learning Theory

The theory of social learning (Bandura, 1999) has been recognized as pertinent in explaining the slow progression and reduced completion rates observed among postgraduate students. The negative supervisory environment, which is characterized by tense interactions between supervisors and supervisees, delayed feedback, and inadequate support and guidance, acts as a factor that causes disillusionment and dissatisfaction, thereby impeding the academic advancement of postgraduate students in higher education institutions. In line with this theory, students' academic development can be improved through sufficient support provided by

supervisors who give prompt feedback on the students' academic endeavours (Ali, Watson & Dhingra, 2016).

Promotion policy as part of organisational interventions

To be appointed as a Professor, an individual must demonstrate a consistent level of teaching excellence by showcasing their competency and experience in teaching and research within a higher education setting, along with acknowledged scholarly accomplishments. Furthermore, the individual should have gained acclaim through scholarship or innovative pursuits, exhibit proof of professional growth, and have contributed to the university community. Coffey and Nethery (2015) contend that the process of advancement is protracted, demanding, and ambiguous, highlighting discrepancies and tardiness in providing feedback to candidates. The degree of involvement in these realms will be influenced by various factors, such as the career stage of the candidate (Watermeyer, 2015) and the institutional objectives of this specific university in Africa.

The relevant promotion categories for Associate and Full Professor levels are (i) teaching experience, (ii) qualification, (iii) publication, (iv) research, innovation or creative outputs, (vi) postgraduate supervision or co-supervision, (vii) conference paper presentation, (viii) contribution to the institution and community engagement, (ix) departmental and institutional services, (x) curriculum development, assessment and feedback, (xi) institutional, faculty, departmental involvement, and (xii) other such as behavioural competencies or Higher Education postgraduate qualification. A Portfolio of Evidence should be presented containing “evidence of achievement in each of the categories.” A National Research Foundation rating is highly recommended and other funding agencies (Mouton & Blanckenberg, 2018) have set very clear targets for doctoral production for promotion to the professoriate (Mouton, 2015). On the other hand, the impending retirement swell of the professoriate and the current doctoral pipeline challenges make the supervisory injection unlikely (Mouton, Louw & Strydom 2013).

Research limitations

The main limitation of this study is its dependence on secondary data. The inclusion of primary qualitative and quantitative data gathered through methods such as surveys, interviews, and focus groups, could enhance the credibility of the results through data triangulation. Nonetheless, the statistical data related to research supervision provided by DHET and universities was deemed to be valid, reliable and sufficient, given its origin from collaborative efforts involving faculties and research departments.

Conclusion

From the observations made, regardless of the discipline, generic skills are needed to complete the research project. Students often lack a clear understanding of what a literature review entails, including what is said and not said in the literature. This results in missing critical reading ability and engagement with the literature. Moreover, many students lack knowledge of research methodology, thesis structure, scientific writing skills, and referencing techniques. The methodology used in the research does not always align with the objectives and problem statement of the study, leading to studies that are too broad or not focused enough. Due to preparedness and expectations to contribute towards the failure to complete studies

successfully, postgraduate students do not always know what postgraduate studies entail or what level of performance is expected. According to Cloete (2015), doctoral students often face challenges balancing work and study, affecting their readiness for doctoral programs. Additionally, the significance of establishing a professional relationship with supervisors and addressing key obstacles in postgraduate supervision cannot be understated.

Assistance is necessary for postgraduate students in understanding and presenting their research results. However, some supervisors may lack adequate training or willingness to enhance their knowledge in these areas, preferring to refer students to more experienced individuals. In such instances, interactive workshops involving both students and faculty become crucial. Ethical dilemmas in research go beyond integrity and plagiarism concerns and encompass the development of discipline-specific skills by all parties engaged in postgraduate supervision. Ultimately, there is a need to enhance supervisory methods to support postgraduate students and adequately prepare supervisors for their responsibilities (refer to Lategan et al., 2008).

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