

A critique of supervisory practices of doctoral student research in emerging higher education context, Botswana

Abstract

The science community in Botswana holds a broad consensus that not enough quality PhDs are being produced to meet the needs of societal developments in the country. There appears to be a connection between the level of knowledge advancement of a nation and its economic wealth. The role of supervision in the quest for a leap towards quality and quantity knowledge output therefore, cannot be overemphasised. This paper provides a critique of supervisory practices of doctoral student research in emerging higher education context of Botswana. The study adopted a desk top research methodology which focused on a scoping view of studies related to the phenomenon of study. The areas interrogated included the initial stage of student recruitment and selection, allocation of supervisors, proposal development, and management environment for research, implementation of the proposal, and document compilation for examination.

Keywords: Doctoral student, Emerging higher education context, Supervision, Supervisory practices, Research capacity.

1. Introduction

The infusion of the research component in academia has arguably opened endless avenues for the development of intellectual growth of individuals and the advancement of societies. In addition to cognitive development of students, the choice to pursue doctoral studies has increasingly been associated with external gain such as employment, promotion, better jobs, increased salary and being marketable (Pheko & Molefe, 2016). On a social level, most governments, including those in Africa, have previously been committed to invest in education because it was glorified to foster literacy, numeracy, reading and writing, as well as achieving community development through proffering understanding, social harmony, cohesion and civic education (International Council on Education for Teaching, 2019). In Botswana, the Education and Training Sector Strategic Plan (ETSSP 2015 - 2020) (strategic priority 3), strives for the provision of a quality education system that can equip learners with the highest form of knowledge and skills to prepare them for the envisaged knowledge-driven economy. Similarly, Botswana's National Development Plan (NDP11) (2017-2023) states that education and training are prerequisite for a productive and competitive workforce through initiatives like research, innovation, capacity building, work place and lifelong learning as part of human resource development. This implied that huge chunks of national budgets were channelled to schools for a functional end. However, the gigantic leap in the value of higher education, particularly in research, has recently triggered a shift in practice. There is currently a surge of focus on doctoral research, as a panacea to social problems and economic stagnation or an inverse development of nations (Nkhoma, 2023). Despite the quest to train more postgraduate, and particularly PhD graduates, the Human Resource

National Development Council (2021) shows that, the total proportion share of post graduates was only 3 percent in 2020, with Doctor of Philosophy accounting for a significantly lower share of 0.2 percent of the total group of graduates in the year. This feat can only be realised through quality of research outputs. The role of supervisors, has therefore been put on the spotlight, wherein the call to recast their supervision practices to enhance the quality of outcomes continue to grow much louder (Adrian et al., 2023)

2. **Methodology**

The study adopted a desk top research methodology which focused on a scoping view of studies related to the phenomenon under study. This is a method used understand existing knowledge and research focusing on specific field knowledge or topic. () observes that desktop research is a process where individuals study available documents on a specific topic in order to collect information. This research methodology is primary used to identify relevant sources of data, assess data quality and to establish gaps where further research can be instituted. It can also be conducted to help in the location of research questions and associated research study (). This study was based on the range of sources that were recommended for use during the CREST online course on the supervision of doctoral students at African universities. The review mainly focused on the issues surrounding the supervision of such students to ensure an increased rate of completion and better research outcomes.

3. **Recruitment and placement of students**

Institutions of higher education normally advertise their postdoctoral programmes to attract potential students. The adverts can be done through different media outlets such as newspapers, the radio, institutional websites, fliers and facilitation of walk-ins. Some institutions become known to flight adverts at particular times while others have irregular moments of advertising, depending on their ability to recruit in a given year. The choice to recruit may be dependent on the rate at which students that are on-course progress to complete their studies. The slower the rate of student successful completion may create blotted numbers of students who are enrolled, and so necessitating a halt in new enrolments. The degree of internationalisation of programmes at institutions can also be a critical factor in shaping the recruitment and selection process (Department of Higher Education and Training, 2019). This can happen in two ways. The broader the marketing of courses to reach international scales might imply an increase in potential takers, and therefore posts being filled at a faster rate. Again, the eternal student source has implications of ensuring that a certain ration of local to international students is considered in the recruitment agenda. This picture is, however different for emerging higher education institutions in Africa. The universities are generally at the genesis stage with organisational, administrative and technological abilities that are unmatched with those of long established institutions. These universities tend to struggle to become visible and attractive to potential students, and as such, they find it difficult to market further and generate a significant pool of students fast.

The selection of students is guided by the policies and regulations of the different universities. The applications are normally received and collected prior to selection. The selection is usually done by a constituted and mandated body, which may be a Faculty body, Department of research, School Research committee or the school of Graduate Studies Research, as the case may be. This selection is based on some criteria. In most cases, the availability of a research capacity, in the form of professors and doctoral supervisors influences the selection process. The work load of available manpower, subject expertise, and available facilities and resources play a part in decisions relating to student selection. The critical mass, with regard to supervisor knowledge and skills rates very high in student research supervision. This is especially apparent because students expect to be nurtured or mentored by individuals that have experienced the journey and have immense conceptual and methodological understanding. Supervisors must be well-placed to assist students to transit through various conceptual thresholds. It should not be a case of a blind man leading another blind man, but a contractual approach where discursive interaction between supervisors and students propels intellectual power of research students. Gatfield (2005) describes the contractual approach as one that exhibits high structure and high support. Operations within this supervision model requires supervisors to employ preferred operating styles in the context that involves research students that are highly motivated to take well-thought out progress directions. Grant and Manathungs (2011), however challenge the stance of presenting supervisors as possessing a monopoly of valued knowledge. They view supervisors' lack of expertise as offering opportunities rather than threats. In this case, supervisors can use pedagogies that create opportunities for students to bring in and blend their existing knowledge in the discipline with that of their supervisors to produce highly original scholarship. This is basically the philosophy which states that teachers can teach what they do not know.

The selection of doctoral students for research may not need to be the preserve of administrators at the institution. The placement of this task outside the cohort of those who actually supervise students may run the risk of causing a mismatch between the needs of students and competencies of supervisors. Mismatched skills and needs tend to create supervisory complexities and confusion (Addae&Kwapong, 2023). This state of affairs may result in faulty student guidance because of inadequate supervisor subject knowledge and subsequent diminished student trust of the supervisor. The selection and allocation of students to supervisors should ideally involve the participation of lectures as supervisors. There has to be a schedule in which potential supervisors declare the number of students on course, their status and prospects to complete their research. It is pertinent that this process also makes an account of students at other levels such as Masters and undergraduate. The needs and current workload of supervisors have to be moderated as some supervisors have a tendency to continuously want to receive new students for supervision without prioritizing their ability to successfully complete their programmes. This may emanate from professional pressures to be eligible for higher ratings in regard to research output and promotions. This picture may be different when it comes to emerging higher education institutions in Botswana. The context has very few professors, who in most cases are allocated non-teaching portfolios. This presents a shift in the nature of supervision. It is normal to find supervisors with doctoral qualifications presiding over the research conduct of a doctoral student,

but main supervisors or promoters are assigned co-supervisors to mediate the research journey (Polkinghorne, Taylor, Knight & Stewart, 2023). The limited number of professors make it difficult to allocate students to supervisors with specialty in a given niche areas. This may further impact of proposal development process.

4. Proposal development

The development of a research proposal can arguably be considered as the initial step in the research journey. The research proposal is the road map or conceptual map of what the researcher intends to do and achieve in the research effort. It can also be regarded as a conceptual model and a snippet of the presenting problem, concepts, theories, design, methodologies and context within which the research is anchored. The proposal or concept paper is used in most universities as the basis upon which decisions are made regarding the allocation of research students to supervisors (Addae&kwapong, 2023). In some institutions, students are required to develop a proposal prior to submission of an application for admission. This may be assessed collectively with certificates of previous qualifications. These ascertain eligibility to register either for a horizontal or vertical progression programme. The ability of students to develop initial proposals, of whatever quality, assist to judge the readiness of the student to pursue a study (Mydin, et al., 2021). It shows the degree of understanding with regard to intensity and breadth of knowledge and theories in the field. While it is becoming an increasing tendency for prospective students to find their own supervisors prior to application for admission, this may not favour social justice concerns of students that seek to enrol first time at an institution. It is clear logic that the students may not have the knowledge of supervisors at the institution, and worse still to prophesy on a particular individual with matching subject content and methodological fit in this area. This strategy, I believe, encourages in-breeding or the philosophy of ‘growing own timber’. It favours the educational advancement of students with a previous history of being taught or supervised by would be doctoral research supervisor. This study argues that the pursuance of doctoral studies based on a history of previous interaction with the supervisor is segregatory and fails to meet the needs of potential students in emerging higher education contexts. This does not relate only to Botswana, as the context of focus, but to the entire African educational landscape. In some such institutions, there may be no known supervisors with a record of elongated stay or programmes with a steady progression from undergraduate to doctoral level (Ydhag, 2019), which may allow the selection process to tap into the previous record of student performance.

Literature review is one area that requires the expertise of supervisors to support, monitor and usher the activities of students. Students have to establish the right posture in the selection and use of literature that is relevant for their study. According to Lee (2008), literature review is a process of searching and reading information produced by previous authors, scholars and academics and researchers in one’s field of study. The students have to be familiar with such literature to properly anchor their studies. This allows the students to acquaint themselves with major concepts, methodologies and perspectives in the subject area. They are also kept focused

and aware of major arguments and complexities which continue to create new horizons for discussion and debate. The students are able to connect to a multitude of narratives in academia, which is vital in establishing gaps in knowledge. Higher education does not value regurgitation and reproduction of available knowledge, but demands that the students should create, re-create and apply novel knowledge in unique ways to solve problems (Ashwin, 2023). It is particularly in this regard that effective supervision becomes apparent. Supervisors need to induct and orient students towards responsible use of extant literature. Students should know that information has to be used critically. It should be questioned and subjected to academic processes of analysis and synthesis. Supervisors may need to play a position of gate keeping in regard to wise use of available resources. They may need, from onset, to advise students to identify literature that is relevant to their studies. This can be done through use of appropriate sources of credible data such as google scholar and Pro Quest eBook. The review of literature should coincide with the aims and objectives of the study. It has to be systematic also in addressing those set objectives. The students can be advised to divide the literature review into small and discrete segments bearing a critique of issues and opportunities created to reflect student voice.

The development of research purpose is pivotal in the research process (de Klerk et al., 2023). Students should be clear about the purpose of the study. They need to be certain as to the agenda of the research journey. This must spring out from their inner sense of practice, and must not come from the supervisor. What the supervisor can do is to sharpen student focus. The interactive formulations between supervisors and students should facilitate decisions regarding the intended outcomes for engaging in research. Doctoral students should possess a capacity to formulate smart objectives which can be achieved in the context of available time, and resources. In pursuance of this end, supervisors have to constantly conscientise students about the standards and guidelines available in the department or school pertaining the conduct of research. The research rubrics are central because they inform the forms of assessments to be implemented in the course of study. The experiences of supervisors are essential in this area. This is especially so at the beginning of the research process. The early stage researchers will naturally be grappling with a number of milestones in research, and maneuvering those at take-off points may birth facilitative attitudes in students (Zhanaev&Tkachenko, 2021). The needed assistance of supervisors at this initial stage, may be elusive at emerging higher education institutions in African. This might emanate from the scarcity of highly qualified and experienced professors, who may shun such settings, in preference of established universities with resources and prestige.

The theoretical framing of a study is imperative within the doctoral research engagement. Theoretical framework denotes a set of theories, and concepts, and the way in which these are connected to underpin a research endeavour (Salawu, Bolatitio, & Masibo, 2023). The theoretical framework can be considered as the Spirit that gives life and character to research. It forms a golden string that ties the various parts of a study to yield coherence and logic. The theory chosen for a study must be relevant, suitable and existent within the field of scholarship. A problem in management sciences, for example, would naturally attract a theory within that academic environment to facilitate the realisation of credible outcomes. While this may be

logical, it is not always true. In this world of multidisciplinary paradigms, it may be worthwhile to adopt choices from other knowledge domains for the purpose of achieving what works in practice. Students may settle for more than a single theory to sufficiently anchor a study. In this case, supervisor skills are called to action in order to help students discuss the theories, integrate them and succinctly apply them in the process.

The strength of a research study arguably resides in the methodological narrative. The choice of a methodology is important as it gives sign posts or signals in the research journey. It is important at this point to mention that methodological concerns emanate from research paradigms. Paradigms are sets of philosophical beliefs and attitudes that guide research practice. They provide lens through which the world can be perceived. The choices are usually among positivism, constructivism and pragmatism. Positivism views reality as objective, and residing in the environment outside of the knower. Rehman and Alharthi (2016) describe constructivism as a philosophy that views reality as subjective and located within the researched. The epistemological position of constructivists is that there is no absolute knowledge because it is constructed through human interactions in the environment comprising particular settings. However, pragmatism provides for a complementary mix of qualitative and quantitative approaches to produce functional outcomes in society. The role of supervisors as wise guides, therefore entails helping doctoral students to make appropriate decisions for successful completion of research projects.

The doctoral students should be able to demonstrate alignment in methodological consideration involving paradigms, approaches, designs and data analysis. The research work should be able to determine the right approach from conceived paradigms (Kivunja& Ahmad, 2017). It should be clear and justifiable why choices are made among qualitative, quantitative and mixed methods. Students have to be aware of the subsequent decisions after opting to adopt a certain kind of approach. They also need to understand that using a mixed methods approach does not uncritically imply employing a loose mixture of qualitative and quantitative components in a study. In this case, they have to understand that this approach has particularly unique designs that have to be mastered and applied in guiding the stages in the data collection and analysis. In fact, students must constantly be reminded by supervisors to delineate research designs that are linked to specific approaches. This knowledge is handy to avoid confusing the relationship between approaches and designs. The fallacy that doctoral students are aware of the expected linkage between and among various parts of a research should be guarded against in an endeavour to stage convincing and credible research. Fulgence (2019) warns that supervisor skills and competencies should be continuously built and developed to match the increasingly complex demand of postgraduate supervision. The supervisors are accorded a crucial role to usher students into the entire process of academic socialization of students. They are literally entrusted with overseeing the whole research project for the collective benefit of students, the universities and the global community (Reguero, Carvajal, García, & Valverde, 2017).

Adherence to ethical principles in the conduct of doctoral research is key. This requires postgraduate research students to familiarize with principles guarding authentic practices in the quest to improve circumstances, the world over. To ensure that students are enmeshed in the space and attitude for ground breaking discoveries, supervisors have to provide the right understanding and confidence in scientific research. They best serve in the portfolio through introducing and exposing students to institutional guidelines and procedures for research (Botha & Muller, 2016). The Salzburg II (2010) principle also highlight the ethical issues that particularly apply when conducting research with human beings. The challenge however, is brought about by institutional variations relating to the conduct of research (Lyambabaje, 2018). To subvert this challenge, supervisors should ensure that students adhere, first and foremost to institutional priorities prior to compliance with universal frameworks. These should then guide other activities such as data collection, data analysis and the reporting of findings.

5. Environment for research management

Research in higher education logically requires an enabling environment. This environment should allow supervisors to conduct their expected roles of nurturing a well-groomed graduate that is firmly anchored in the field of scholarship. The supervisors need to be availed space to guide students, but students should also be given latitude to engage and participate actively in the learning process. Waghid (2007) contends that post graduate student supervision should cultivate a culture of authentic learning which is opposed to an advocacy of consumer or market-driven logic. The supervision effort needs to allow students to dialogue with supervisors, to couch their stories, conduct independent rigorous analysis, and construct and disclose unheard meanings and expectations. This attitude can be turned into reality when a culture of mutual friendship and trust is forged between students and supervisors. The students need to feel secure in the presence of supervisors.

The supervisors have a duty to guide the progress of students in the research exercise. They should provide sufficient “structural and conclusive guidelines” regarding to what students should do to complete standard dissertations (Dimitrova, 2016). This includes setting appropriate time frames for achieving milestones in the research journey. It should be ensured that students’ progress moves at the right speed. It must not be either too slow or too fast, but must allow concept mastery to occur. The students have to grasp both conceptual knowledge and methodological competencies in the process. In reality, it is possible that supervisors can slow down student progress in research. This can happen when supervisors offer scant feedback to students or lack the zeal to boost student moral by not giving rigorous and systematic feedback (Bøgelund, 2015). While it is prudent for supervisors to give students research structure at the onset of study, this approach may also work to derail innovativeness. The predetermined guidelines may impair unexpected breakthroughs and curtail inventiveness. The student is not allowed to explore alternative possibilities, even those which may initially have been harbored in the proposal development. A pre-conceived structure may also derails communicative interaction. Supervisors and students have to engage in discussions where meanings are

constructed through dialogue and argumentation. The implication for this, is that students should be provided with structure in research, but it must not be used to block creativity and the breaking of new grounds.

The supervisory environment needs to take cognisance of cultural dynamics which ensure between and among supervisors and research students. Culture has multiple connotations inclusive of ethnicity, discipline, industry, workplace and profession (Grant & Manathunga, 2011). This implies the way of life or how things are done in a given context. In research therefore, the induction or socialization of students into the field of scholarship should adhere to knowledge and theoretical underpinnings in the area. It captures the defining thinking and practices that are inherent in a field. It is in this regard, that Manathunga (2009) refers to supervision as a pedagogy in which our classed, raced and gendered bodies are present. Supervisors tend to engage in a long research journey to usher, would-be supervisors into the realm of scholarship. They engage different management and interpersonal skills to move students from apprentice to master levels.

In some quarters, supervisors are perceived as distant masters with an aim for quality outcomes (Bastalich, 2017). This assertion, however cannot be considered in its absolute sense. The generation of novel outcomes in doctoral research is premised on an individual development capacity involving the expert leader and a novice researcher. Doctoral students proceed by way of reflection and being agentic in the quest to address nagging social problems or expanding the frontiers of knowledge in defined fields. The primary goal in the research process may be to develop capacity for future innovation. It is in this realm that the research capacity of supervisors also become handy. The supervisors should be able to utilise their research capacity to mold likeminded future researchers that have the capacity to drive forward a culture of invention and regeneration of knowledge (Gurr 2010). To achieve this end, students do not focus on formal training or development aspects of supervisors, but informal learning that ensues in the process. What matters is that the two parties are able to strike a relationship based on choice, research focus, and interpersonal compatibility. There is need also that appropriate practice tools and communication skills be provided to ensure project supervision success (Bastalich, 2017) Supervisors need to establish a delicate balance in maneuvering through the task of project supervision. There are times where they have to achieve both control and non-intervention in delivering support to doctoral students. The process also allows students to oscillate along a supervision continuum between the dependence and independence points. The students must be allowed to transition from a state of relative dependency to one of competent autonomy over a period of research engagement (Fulgence, 2019). The consistent factor in supervision is that supervisors must strive to offer adequate and timely help to students without appearing to interfere in the students' accumulation of experience and gaining of the art of research. The responsibility of students in the research needs to be communicated right at the onset of the relationship (Lindsay, 2014). It is at this point that adherence to the terms of the constitution of a memorandum of understanding (MOU) need to be emphasised. The roles and responsibilities of each party in the contract have to be honored for the success of the research project. This enables

the presence of the supervisors to be felt for the needed support and to prevent the students from breeding feelings of isolation (Boehe, 2016). This stance or attitude is detrimental to research excellence as the students easily grapple with challenges of hitting researcher liminality. To mitigate obstacles of researcher isolation, supervisors and the responsible research office at the university, should organize workshops, seminars and training sessions where students can attend and acquire information pertaining to concepts that may be puzzling or hindering efforts to complete their research endeavours. They can initiate or encourage students to establish platforms for collaboration and networking (Lee, 2018). They can form chat rooms where they contribute synchronistically, sharing areas of complexity and perplexity in their research pathways. Google teams can be used to present confounding areas and to seek explanations and clarifications from colleagues and faculty members (The European University Association, 2016). However, this possibility may be far-fetched in the context of emerging African higher education contexts, where equipment, facilities and support services may be inadequate. Such universities tend to be preoccupied with boosting student enrolment for financial expediency instead of investing on resources to leverage the quality of educational outcomes and outputs. My current university has no specialised laboratory for postgraduate students and does not provide students with computers and internet data to aid learning. Students do manage to acquire personal computers, but some are not compliant with modern technological innovations and services. This painted picture significantly impedes the anticipated conduct of research.

The doctoral supervisors have to exhibit a multitude of attributes and qualities to succeed in the process (Katz, 2016). In addition to offering professional guidance on discipline knowledge, they have to be astute coordinators and flexible guides during and after the completion of research (Dimitrova, 2016). Most importantly, supervisors of doctoral research must be active researchers in the subject area and research methodologies in the field. Supervisors that have just been recruited into the supervision activity are referred to novice supervisors. These naturally have limited knowledge in their fields of study and theories to guide studies. This calls for them to continuously engage in research and strive to gain knowledge through the process of lifelong learning at both the personal and institutional level. They need to be deliberate in enrolling for skills improvement courses and staff development enhancement. Fulgence (2016) argue that supervisors of doctoral students must possess transferrable and soft skills to support their management efforts and to assist their students to develop stronger opportunities for employment. Above all, supervisors need to have the muscle to curve the doctorateness attitude and aptitude in students. Yazdani and Shokooh (2018) describe doctorateness as referring to the process that allows an individual to become an independent scholar through exposure to apprenticeship competencies that result in quality performance. This status makes it possible for the individual to develop original knowledge in the field and to demonstrate stewardship in the discipline.

6. Implementation of proposal

This implementation phase of the research endeavour entails putting into practice the plan or road map of successful conduct of research. The idea is that a well-curved proposal should subsequently lead to authentic research journey and quality output. An engagement with literature review, in its various facets such as depth, currency and relevance, as well as its connection with different components of research, offers prospects for sound outcomes. The students should not review literature for the sake of compliance. They should engage critically with text, take texts into systematic controversy and articulate coherent arguments to justify certain points of view (Katz, 2016). Students have to read texts carefully in order to make independent interpretive judgements. This can only be achieved when supervisors are able to induct students into systematic controversy. Students need to be able to subject texts to intensive scrutiny. They have to be inquisitive in their reading of texts and engage theoretical works of various scholars. This works to neutralize the voices of such scholars, and to create space for needed student voice.

Students have a tendency to want to produce literature with lengthy quotations from the works of previous scholars. They do this to comply with the requirements for doctoral studies, which at times, stipulates the quantity of work or number of pages to be submitted. This is normally done out of ignorance that their work should be argumentative, persuasive and reflective of their voices. In this regard, it is imperative that supervisors should constantly engage with students regarding the purpose of research and its role in society (Katz, 2016). Reviewing of the works of others should be done, among others to substantiate certain arguments or to establish the existence of gaps in knowledge. This then becomes the motive for one to conduct a study. The motive is also consistent with the main thrust of education, which is to build the research capacity of students as scientific inquirers (The European University Association, 2016)

Doctoral research is characterized as an original contribution to knowledge and reflective of enhanced intellectual output in an academic discipline (Baptista, Frick, Holley, Remmik, Tesch&Akerlind, 2015). The assessment or judgement of originality of research depends on various instruments and standards housed in respective countries' disciplinary communities (European Universities Association, 2010). The research needs to reflect original thought and work. This may show in the research design, synthesis of knowledge, implications and the manner of data presentation (Wellington, 2010). The developed unique knowledge must be of significance to theory, practice, methodology and the area of policy. This outcome is a product of a process. A flawed process cannot yield a preferred product. This means that supervisors need to do well in the supervision craft to ensure the development of an original output (Baptist, 2015). They should also assist students to arrive at novel outcomes that are applicable to certain socio-cultural context. In the humanities and social sciences, research is carried out to improve human livelihood and the generality in the community. Therefore the collective efforts of supervisors, students, administrators and other stakeholders should develop courage and confidence in

students, such that they can take risks but remain original in their research enterprise (Brown, 2010).

7. Documentation for examination

This is the stage that marks the culmination of engagement in research thesis. Nygaard and Kristin (2021) aver that putting the pieces of a research study together into a complete whole is quite demanding, this is because it should stand out as a convincing testament to confer one with a doctoral qualification. The produced study has to report the research to various communities inclusive of that of researchers, scholars, academics as well as practitioners. The final product need to be a creative compilation of the preliminary materials, contents page, developed chapters, appendices and cover page, bearing the particulars of the student. In some institutions, the proof of critical readership, technical edition, language editing and a copy of plagiarism check report should be attached to guarantee both internal and external examination.

8. Conclusion

The study concludes that the need for doctoral qualifications is on the rise in Africa. This may emanate from the need to emulate nations in the Western world whose development trajectories can be ascribed to improved educational systems and consequent outcomes. This springs from the general assumption that good and quality education enhances research, which is further viewed as the source of innovation and development in various areas of life such as the social, cultural, political, environmental and economic spheres. In Africa, and Botswana in particular, the government commitments to build a growing pull of highly qualified human capital are shown through the building of universities and funding of prospective candidates to pursue programmes that are on demand in the market. The dearth in accomplished supervisors of doctoral research and the challenges that impede effective supervision processes continue to slow down efforts to grow the number of quality doctoral graduates in Africa.

9. Recommendations

The study recommends that there should be a radical internationalisation project where stakeholders of doctoral research are exposed to diverse theoretical, methodological and cultural perspectives that are embedded in research thinking and practice. The contemporary thinking is that the ideological and methodological boundaries between various fields and industries should be broken to allow for complementary infusion. Interactions between supervisors and students should bring to bear a measure of some 'equal' intellectual power in the research work. There should be a balanced approach to the training of supervisors in regard to doctoral supervision and research practice. An appropriate mix of competencies on institutional expectations, administrative responsibilities and pedagogic strategies should be established to enable supervisors to understand the environment within which they operate, as well as be in tune with supervision methods that can help to effectively immerse them in quality research supervision.

Lessons on project management need to be adequately provided to doctoral students so that they apply right strategies to transition seamlessly through various phases of research project.

References

Addae, D. & Kwapong, A. T. F. (2023). PhD Students' Perceptions of Research Seminars in Doctoral Education: A Case Study. *Cogent Education*, 10(1), 1-18.

Adrian, T., Moretti, M., Carvalho, A., Chon, H. K., Seal, K., Melo, F. & Surti, J. (2023). Good supervision: lessons from the field. International Monetary Fund: Washington.

Ashwin, P. (2023). Higher education is about transformation. UAEU: University World News

Baptista, A., Frick, L., Holley, K., Remmik, M., Tesch, J. & Akerlind, G. (2015). The doctorate as an original contribution to knowledge: Considering relationships between originality, creativity, and innovation. *Frontline Learning Research*, 3(3), 55-67

Bastalich, W. (2017). Content and context in knowledge production: a critical review of doctoral supervision literature, *Studies in Higher Education*. *Studies in Higher Education*, 42(7), 1145-1157.

Boehe, D. M. (2016). Supervisory styles: A contingency framework. *Studies in Higher Education*, 41(3), 399-414. <https://doi.org/10.1080/03075079.2014.927853>

Bøgelund, P. (2015). How supervisors perceive PhD supervision – And how they practice it. *International Journal of Doctoral Studies*, 10, 39-55.

Botha, J., & Muller, N. (Eds.) (2016). Institutional research in South African higher education. Stellenbosch: SUN PRESS. <https://doi.org/10.18820/9781928357186>

Brown L. (2010). Balancing risk and innovation to improve social work practice. *British Journal of Social Work*, 40, 1211–1228

de Klerk, W., Barnard, M., de Klerk, E., du Toit, R. & Daniel-Smit, J. (2023) The Social Science Research Process: A New Model. *Open Journal of Social Sciences*, 11(1), 156-173.

Department of Higher Education and Training. (2019). Policy Framework for Internationalisation of Higher Education in South Africa. Pretoria, Department of Higher Education and Training

Dimitrova, R. (2016). Ingredients of good PhD supervision—Evidence from a student survey at Stockholm University. *Utbildning&Lärande*, 10(14), 40-52.

European Universities Association. (2010). Salzburg II Recommendations - European universities' achievements since 2005 in implementing the Salzburg Principles. Brussels: EUA

Fulgence, K. (2019). A theoretical perspective on how doctoral supervisors develop supervision skills. *International Journal of Doctoral Studies*, 14, 721-739

Gatfield, T. (2005). An Investigation into PhD Supervisory Management Styles: Development of a dynamic conceptual model and its managerial implications. *Journal of Higher Education Policy and Management*, 27(3), 311-325

Grant, B. and Manathunga, C. (2011). Supervision and cultural difference: rethinking institutional pedagogies. *Innovations in Education and Teaching International*, 48(4), 351-354

Gurr, G. M. (2010). "Negotiating the 'Rackety Bridge' —A Dynamic Model for Aligning Supervisory Style with Research Student Development." *Higher Education Research and Development*, 20: 81–92

Human Resource Development Council (2021). Tertiary Education Statistics 2020. Gaborone: Human Resource Development Council: Gaborone.

International Council on Education for Teaching, (2019). International Council on Education for Teaching: Improving educational experience and outcomes in all parts of the world. Faculty of Education: University of Johannesburg.

Katz, R. (2016). Challenges in doctoral research project management: A comparative study. *International Journal of Doctoral Studies*, 11, 105-125

Kivunja, C. & Ahmad, A. B. (2017). Understanding and Applying Research Paradigms in Educational Contexts. *International Journal of Higher Education*, <http://ijhe.sciedupress.com>

Lee, A. (2018). How can we develop supervisors for the modern doctorate? *Studies in Higher Education*, 43(5), 878-890.

Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education*, 33(3), 267-281

Lindsay, S. 2014. "What Works for Doctoral Students in Completing Their Thesis?" *Teaching in Higher Education*, doi:10.1080/13562517.2014.974025

Lyambabaje, A. (2018). Standards and guidelines for postgraduate studies in East Africa, Kampala. Inter-University Council for East Africa.

Mydin, F., Rahman, R. S. A. R. A. & Mohammad, W. M. R. A. (2021). Research collaboration: Enhancing the research skills and self-confidence of early career academics. *Asian Journal of University Education*, 17(3), 142-153

Nygaard, L. P., and Kristinm S. (2021). Strategies for Writing a Thesis by Publication in the Social

Sciences and Humanities, Taylor & Francis Group, ProQuest Ebook Central, <http://ebookcentral.proquest.com/lib/sun/detail.action?docID=6309052>. Created from sun on 2021-07-06 07:59:16.

Pheko, M. M. & Molefhe, K. (2016). Addressing employability challenges: a framework for improving the employability of graduates in Botswana. *International Journal of Adolescence and Youth*, 22(4), 455-469

Polkinghorne, M., Taylor, J., Knight, F. & Stewart, N. (2023). Doctoral supervision: A best practice review. *Encyclopedia*, 3(1), 46-59.

Reguero, M., Carvajal, J. J., García, M. E., & Valverde, M. (Eds.) (2017). Good practices in doctoral supervision: Reflections from the Tarragona Think Tank. Tarragona, Spain: Universitat Rovirai Virgili. <https://doi.org/10.17345/978848424653>

Rehmann A. A., and Alharthi, K. (2016). Introduction to research paradigms. *International Journal of Educational Investigations*, 3(8), 51-59

Salawu, R. O., Bolatitio, A. S. & Masibo, S. (2023). Theoretical and conceptual frameworks in research: Conceptual clarification. *European Chemical Bulletin*, 12(12), 2103-2117

The European University Association. (2016). Doctoral Education- Taking Salzburg forward: Implementation and New challenges. Brussels: European University Association

Nkhoma, T. (2023). University of Botswana improves its global impact. University of Botswana: Gaborone.

Wagid, Y. (2007). Reclaiming freedom and friendship through postgraduate student supervision. *Teaching in Higher Education*, 11(4), 427-439

Wellington, J. (2010). Making supervision work for you. London: Sage.

Yazdani, S., & Shokooh, F. (2018). Defining doctorateness: A concept analysis. *International Journal of Doctoral Studies*, 13, 31-48.

Ydhag, C. C. (2019). Understanding the complexity in measuring student progression in European higher education. *Hungarian Educational Research Journal*, 9(2), 213-237.

Zhanaev, A. & Tkachenko, O. (2021). Searching for identity: personal experiences and methodological reflections. University of Warsaw: Warsaw.