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Postgraduate Supervision at Kenya's Public Universities: The Tough Reality

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Abstract

This paper uses the auto-ethnographic approach to explore, analyze and reflect on the core issues that impact most on the effectiveness of supervision at public universities in Kenya. It draws on the authors own experiences at supervising and being supervised at public universities in Kenya over the past decade, as well as on observation and narrated experiences of colleagues and students at these same institutions. These shared experiences are reviewed against documented literature on the subject of postgraduate supervision to identify the points of convergence, and to subsequently derive practical recommendations on measures that would lead to more effective postgraduate supervision in the country. A key finding was the fact that the challenges and issues facing postgraduate supervision at Kenya's public universities resonate very closely with the documented experiences of postgraduate supervision in other higher education institution, particularly in the African country settings. It follows that the suggested mitigation factors are in fact applicable to many of the other public universities in sub–Saharan Africa.

Keywords: Postgraduate Supervision, Kenya Public Universities, Supervision Challenges, Research Capacity and Quality

Background

Research and expert analysis have time and again established that investment in higher education has the capacity to contribute enormously to a country's growth and development. This is because it is through well trained graduates and subject matter experts that the country is able to provide the critical mass of human resource necessary to conduct research, innovation, policy planning and implementation, which ultimately lead to higher economic productivity. Yet available evidence shows that countries in sub–Saharan Africa, Kenya included, lag behind both in terms of monetary investment in higher education, as well as in the actual enrolment ratios in tertiary education. Additionally the demand for human resource trained at tertiary and higher still far outweighs the supply (Darvas, Shang Gao, & Bilal, 2017).

Unflattering statistics from UNESCO Institute of Statistics (UIS) 2018 data show that the gross tertiary education enrollment ratio (GER) in Sub Saharan Africa was a

meager 9.4%, compared to a global average of 38% (Gangwar & Bassett, 2020). A well-trained workforce is directly linked to the production of the research and technological innovation necessary to inform policy and implementation for economic productivity and development. Consequently there is pressing need for countries in sub Saharan Africa to invest more in higher education that has the capacity to contribute the countries' growth and development, and be able to thrive in a world that is increasingly founded on knowledge economy (Darvas et al., 2017; Oketch, McCowan, & Schendel, 2014; Teferra, 2014).

It must be acknowledged that Kenya has given prominence to the need for quality postgraduate education as evidenced through the emphasis placed on training and research in the country's development blueprint, the vision 2030 (GoK, 2007). This is further actualized through the existence of various bodies supporting postgraduate research in the country, with two prominent ones being the Commission for University Education (CUE) whose functions include to 'promote quality research and innovation'(CUE, 2022) and the National Council of Science, Technology and Innovations (NACOSTI) which, among other functions, is expected to accredit research institutes and approve all Scientific research in Kenya (NACOSTI, 2022). The demand for postgraduate education in the country both at Masters and PhD level continues to grow not only to supply the highly skilled workforce required by various institutions in the country, but also to fill the many vacancies for lecturers with doctorate degrees at both public and private universities (Matheka, Jansen, & Adriaan Hofman, 2020).

It is also worth noting that the number of public universities in Kenya has grown exponentially from four in 1987 to 31 in 2021. Additionally, in its 2022 Medium-Term Expenditure Framework (MTEF) report for the Education Sector, Kenya reported that enrolment of students pursuing university education in its universities rose by one per cent from 542,005 in 2018/19 to 547,133 in 2019/20 (Republic of Kenya, n.d.). While this is very commendable, it also means that the demand for lecturers trained at masters and PhD levels, capable of teaching and supervising research by the enrolled students, has also grown exponentially. Yet at the same time the UNESCO statistics show that the country's 2019 GER for tertiary education remained low at 10%. In the recent years the country also had to contend with budget cuts to the education sector, partly attributed to Covid19 disruptions to the economy, but also due to various unsustainable structural and management practices in its public universities (Darvas et al., 2017; Mohamedbhai, 2014; Wangenge-Ouma & Nafukho, 2011)

The Kenya CUE has made great efforts to provide guidance for postgraduate training and supervision in the country (Mukhwana, Oure, Too, & Some, 2016); however it is not always successful in enforcing its many rules and regulations, probably due to the fact that these are not accompanied by monetary and other provisions requisite for their implementation. For instance, its demand that all lecturers, be PhD holders by 2018

could not be enforced. Similarly its requirement that a lecturer should only supervise a maximum of 3 PhD and 5 Masters students at a go has proved impossible to enforce (Commission for University Education, 2014). It is no wonder that some have termed the CUE as perhaps too prescriptive, not leaving much room for Universities' creativity in implementing postgraduate training and supervision at their institutions (Sioux McKenna, 2022). Notwithstanding the high demand for postgraduate training, public universities also have to contend with a lean workforce and many infrastructural, technological and economic difficulties. It is against this backdrop that an inadequate pool of lecturers finds itself supervising postgraduate students at public universities while also carrying a full teaching workload, and is miraculously expected to conduct research, write research proposals, and undertake any other administrative responsibilities assigned by the universities.

The Approach

This article used the auto-ethnographic approach to explore, analyze and reflect on the core issues that impact on the effectiveness of postgraduate supervision at public universities in Kenya. It draws on the author's own experiences at supervising and being supervised at public universities in Kenya, as well as observation and narrated experiences of colleagues and students at these same institutions. It is also informed by the author's participation at the 2022 Strengthening Postgraduate Supervision (SPS) course. SPS is a Dutch government sponsored course that aims to support novice and even experienced supervisors to enhance their skills in the complex and demanding role of postgraduate supervision through focused, collaborative discourse and self-reflection on this topic ("CPC Supervision Development Course," 2022). Finally, these shared experiences are reviewed against documented literature on this subject to meet the following objectives:

i. Reflect on the key supervisor and supervisee factors that plague postgraduate supervision at public universities in Kenya
ii. Undertake critical literature review to identify the points of convergence and expound on what research says about these impending factors
iii. Make recommendations on what might be a better approach to dealing with the identified issues for more effective postgraduate supervision.

It is expected that the learning that has emerged from these reflections and analysis will inspire the rejection of negative postgraduate supervision practices and adoption of more positive practices. Effective postgraduate supervision will lead to achievement of higher rates of graduating successful, confident and competent postgraduate students who are ready and capable of participating in the country's economic growth and development.

Findings

As a preamble, it is worth noting that the author made the decision to join academia as a university lecturer after having had opportunity to serve for more than a decade in other economic sectors in Kenya, including in the NGO and corporate worlds. That decision was informed by the urge to 'give back to the society' considering that for the most part students at the public universities are usually from relatively modest economic backgrounds compared to their private university counterparts. The author was determined to share her wealth of knowledge and experience through training, mentorship and supervision of these students, and was at the time not bothered by the fact that this decision also came along with a significant pay cut. Being a PhD holder, the author was almost immediately assigned postgraduate supervision duties, in addition to teaching and other responsibilities, and soon came face to face with the tough reality that postgraduate supervisors and their students at Kenya's public universities have to contend with. This article reflects on this reality and weighs this against what the existing literature on postgraduate supervision discusses on related issues.

The Supervision Models

Quite a number of postgraduate supervision models are described in literature ranging from solo supervision, co-supervision, panel supervision and project supervision, among others (Taylor, Kiley, & Humphrey, 2019). The easiest model to implement would probably be the solo supervision, but it is evident that in most cases this model, also dubbed as master-apprentice model, is riddled with many challenges for the supervisees. These challenges stem from the fact that the supervisees tend to assume that their solo supervisor, usually a senior lecturer or professor, is the custodian of all knowledge and wisdom. Subsequently the supervisees become over-reliant on their solo supervisors to guide each and every aspect of their research without making an effort to develop their own research muscle through peer collaboration and interaction with other experts. Only at the tail end of their research, when they present their work for evaluation and receive critique and criticisms, do they dejectedly realize that their hero-worship was based on a fallacy (Harrison & Grant, 2015).

Luckily for those at the Kenyan public universities the model of supervision that has been prescribed by CUE is co-supervision. Co-supervision is a collaborative effort that entails two lecturers working together to supervise one student. Theoretically this model of supervision has a whole range of advantages including the fact that it encourages a collaborative approach to supervision; ensures that the student benefits from access to the knowledge of two supervisors, usually with expertise from different disciplines; and additionally this model ensures that the burden of supervision is shared and thus does not fall on just one already overburdened lecturer (Grossman & Crowther,

2015).

The stated advantages of co-supervision are however only realized in the ideal situation whereby supervisors work in harmonious collaboration, with a responsive and eager to learn supervisee. Sadly, all too often this ideal situation does not unfold in our public universities. Just what ails co-supervision at our public universities despite the best intentions by CUE in recommending this model, and by the universities in ensuring its implementation as outlined in their own guidelines and regulations? In the unfolding sections the author elaborates on a few of the factors she observed and learnt to be the key deterrents of harmonious co-supervision at Kenyan public universities.

Supervision Skills are Not Inborn!

Probably as a result of their thin staffing levels, Kenya's public universities seem to overlook the fact that one does not automatically acquire postgraduate supervision skills as soon as they are awarded a doctorate degree. The need for novice lecturers to go through intentional and well-designed supervision training as well as handholding by their more experienced colleagues has been well documented (Bitzer & Albertyn, 2011; Jude et al., 2022; Lee, 2007; Manderson et al., 2017). This process is necessary in order to instill the skills and confidence that novice supervisors require to adequately and competently guide their students through the postgraduate research process. Sadly, this training rarely happens. Few lecturers experience the privilege of participating in supervision capacity building events such as the CPC course or the CARTA program. During the 2022 CPC course the author was enlightened to learn that postgraduate supervision is not supposed to be a haphazard activity where one gropes in the dark without any guidance. That indeed there is a wide range of carefully selected resources available to guide the research and supervision process, all geared toward equipping novice supervisors with superior research and supervision skills, including the guidance on how to put into practice the concepts of giving formative feedback and facilitating the development of research self-efficacy among supervisees (Overall, Deane, & Peterson, 2011). Unfortunately, many of colleagues in Kenya's public universities may never have an opportunity to participate in similar trainings unless deliberate effort is made to change this reality.

Co-supervisors: Not a Match Made in Heaven!

Many public university regulations require one of the supervisors in the co-supervision arrangement to be a faculty member at the supervisee's university, however the second supervisor can come from the industry or from any another university so long as their CVs are approved by the appropriate university boards. This means that having a non-university-based co-supervisor is fairly common, particularly for severely

understaffed departments. In other cases, the co-supervisor may be from another department or school within the same university. Ideally this situation should be laudable since it brings together experts from different disciplines to work together in the co-supervision journey, however where there is disharmony the situation plays out quite differently and the advantages of co-supervision vanish behind the challenges (Watts, 2010). First the two supervisors are not introduced, and they may never get to meet during the supervision journey. While each receives a supervisor appointment letter generally explaining what is expected of them, some supervisors are happy to ride along with no intention on providing any guidance to the student. It is not clear why they do not decline the appointment in the first instance. So, this situation eventually unfolds as a solo supervision arrangement with all its limitations. Sometimes even a co-supervisor from the same university is so busy chasing grants and other extra-curricular activities that they seem to regard the supervisees as a nuisance. At the tail end the second supervisor is happy to append their signature to the student thesis knowing very well that their contribution, if any, was minimal. Perhaps this unhappy reality would be alleviated if there was better quality control of the supervision process, if the student progress reporting was actually enforced, and with each supervisor outlining the support provided to the supervisee at each stage (Kimani, 2014; Manderson et al., 2017).

Supervisees' Socio-economic Realities

Many of the students that enroll in the postgraduate programs at the Kenya public universities are already full-time employees in some other organizations, meaning that juggling time for their studies and for employment responsibilities is a delicate balancing act. Others in addition are in a marriage situation with numerous family responsibilities. Their reason for enrolling in the postgraduate courses is mostly in an effort to enhance their employability skills with the hope of finally clinching that elusive promotion or a better job opportunity. Except for the lucky few who get sponsorship or a scholarship grant, many of these students struggle to pay their university fees in the midst of those other responsibilities. It is a sad reality that the female student in a marriage situation faces double the challenges as the cultural norms place a higher burden of family responsibilities upon the female gender (Jackson, 1999; Lewis & Lockheed, 2008). This unfavorable socio-economic situation for most supervisees often has a negative impact on their progression through the postgraduate training, and especially in undertaking their research work.

Assuming they do not drop out due to fees arrears and domestic pressures, the students may somehow make it through the course work without too much undue delays. The problem emerges when it gets to the time of writing their research proposals where some supervisees' progress stalls as they send substandard work for review by their

supervisors. At times they become altogether non-responsive to the feedback provided by the supervisors. The situation is further exacerbated by the fact that many of these students have not really grasped the basics on conducting research, and often do not seem to have the time or drive to do a thorough literature review on their chosen topics. This is a crucial time during which frustrations will be experienced on the part of both the supervisor and supervisees, and sometime the supervisee may blame the supervisor for 'hindering' their progress. Such situations call for supervisors to be humane, to show real empathy as they try to engage the student in identifying and addressing the root problems (Bacwayo, Nampala, & Oteyo, 2017; Khene, 2014). Given that they will also be supervising several other postgraduate students, there will be a limit as to just how far supervisors can go in following up individual 'problematic' supervisees.

Unequal Power Relations

Linked to the socio-economic status of the supervisees is one issue that is very rarely talked about but is very real in the public universities. This issue is unequal power relations particularly between the supervisor and supervisee, made worse by situations which cause the supervisee to be financially dependent on their supervisors (Bacwayo et al., 2017). It is not unusual to witness cases where a university don writes a convincing proposal and is awarded a grant that includes supporting training at postgraduate level – and of course they appoint themselves as primary supervisors for the students admitted under the program. This ideally is quite commendable considering the financial hardships faced by many students in this setting. The problem however comes when the grant holder exhibits some narcissistic tendencies. They handle the grant as if it was a personal possession and keep its terms secretive to the extent that only they and their trusted program managers even know what the students sponsored under the grant are entitled to, particularly in terms of stipends and other allowances. They then proceed to treat the postgraduate students admitted through their program with utmost disdain, reminding them at every turn that if it was not for them, they would not be pursuing their courses and demanding unquestioning submission. Never mind that the students admitted under such programs are adults with various other responsibilities in the society.

This has sometimes led to a situation where students under such an arrangement make little progress particularly when it comes to their thesis research work which calls for close collaboration with their supervisors. The supervisees feel oppressed, yet they are unable to drop out of the program because of the contractual terms they signed under the grant. They eventually expend many years to complete what may end up as sub-standard thesis work, if at all they do complete. Such situations could be alleviated if institutions awarding grants to faculty also took time to get regular feedback from all the named beneficiaries of such grants. However this is not the only source of negative

power differentials between supervisor and supervisee; ultimately the solution can only be found if all parties adopted the humanizing pedagogy in the supervision process (Tsotesi & Omodan, 2020).

The Postgraduate Research Quality: Does it matter?

There is pressure on the supervisor and there is pressure on the supervisee to get their research done and dusted in the least possible time! Pressure on the supervisor because they are also chasing that elusive promotion, and the more completed theses they can claim to have supervised the stronger their case for promotion. Pressure also because the government policies call for highly trained human resources to support research and development, which has in part led to the proliferation of public and private universities in the country, all of which need staffing with PhD holders (Kaburu & Embeywa, 2014; S. McKenna, 2021). At the same times public universities are facing another harsh reality of an internal economic crisis, with dwindling student numbers, and inadequate financial support from the government. The rallying call for these universities then becomes that students who have paid their dues should graduate at the soonest and new fee-paying students brought on board – after all universities do need to make ends meet. For the students the pressure comes from the fact that they need to meet their objective of joining the postgraduate course in the first place, plus the added pressure due to the fact that university regulations prescribe time limits within which they should be done with their studies. One of the key indicators generally agreed on as a measure of postgraduate training quality is the number of publications produced by each of the supervisees as they develop their theses, as well as the quality of the thesis itself (Kilonzo & Magak, 2013; Wilmot & Lotz-Sisitka, 2015) . Given all the pressure they are faced with, one wonders whether the public universities do not eventually make some undocumented compromises to overlook thesis quality and some other research short comings, particularly for their over-stayed students. After all it would paint a negative picture and discourage enrollment of new students if the university has a reputation of delaying the study completion for their students. On this question of quality the jury is still out and only an in-depth study on the issue can provide conclusive answers.

Library: The Missing Link!

The public universities in Kenya have relatively well-resourced libraries, and they even boast of subscribing to a variety of journal and other online resources. It would however be interesting to see statistics of actual use of these resources by the students enrolled in these universities! The fact is that many students only have one encounter with the library staff, and that happens very briefly immediately upon their admission during the orientation week. It is the author's humble opinion that the university as a

whole and public university librarians specifically could be more proactive in providing requisite support services to ensure that the library resources they manage actually do benefit the intended university community, including the postgraduate students, rather than lying idle and under-utilized particularly for research (Kilonzo, 2022). These universities need to take into account the fact that many of those joining the postgraduate programs, especially at master's level, have not been involved in research before and need to acquire even the basic skills of undertaking a literature search, which will only be possible through well planned and thorough library induction program and related tutorials. This would spare the supervisor the added task of even having to introduce the basics of research, including basics of how to access the appropriate literature, to the supervisees (Adeyemi & Oluwabiyi, 2013). Unfortunately, the reality is that sometimes students end up not even being issued with library cards during their entire time at the universities and the bureaucracy is such that without those cards the students are not allowed to borrow the resources at the university libraries. Moreover, many university library websites are poorly managed and not user friendly. In the course of writing this article the author chanced to visit some other universities' library websites and was awed by the extent they have gone to make their library sites attractive and to advertise their resources to the different categories of their intended users (lectures, students, researchers) ("ISS Library," 2022; "VU University Library," 2022). How encouraging it would be for Kenya's public universities to borrow a leaf from such examples especially in this new era of blended learning!

Conclusion and Recommendation

There is no doubt that Kenya recognizes the need for highly trained and skilled workforce to spur its research, innovation and development efforts; and this has led to demand for higher output of graduates at masters and PhD levels. Public universities in the country do their best to produce high quality postgraduates to meet the rising demand, but they are faced with numerous challenges including the fact that they are poorly financed, with inadequate number of faculty members who are PhD holders, having lost a number to their better endowed private counterparts. Novice supervisors in this setting face the harsh reality of being thrown into the deep end of supervision with no guidance or training, thus having to rely on their own experiences of being supervised however inadequate it may have been. Theoretically the universities adopt the laudable co-supervision model, but in reality, there are a lot of disengaged supervisors leading to de facto situations of solo supervision. Power imbalances between supervisor and supervisees often play out to the disadvantage of supervisees who are primarily of poor socio-economic background, with many family responsibilities. Many supervisees join the post-graduate programs with no research background, it does not help that the

libraries are mostly passive and fail to play their supportive role of introducing learners to the basics of exploring existing knowledge.

Against this reality, there is need for the higher education sector to recognize and face these challenges head on rather than sweeping them under the carpet. The impact of some of the challenges identified can be somewhat reduced by organizing regular intra-university research seminars where supervisees can learn from others who are more advanced in their research, as well as from the collective feedback of the faculty members – however in some circumstances this is hardly adequate. Another approach is really to capacity build the supervisor particularly to impart them with empathy and the soft skills requisite to handle the unique challenges of effective supervision in low resource setting. The author's own participation at the CPC training was a great eye opener and revealed that there is a method to the 'madness' of research and postgraduate supervision. This course and others like the CARTA program offer the impetus needed to delve into self-reflection on what postgraduate supervisors do right and what they could improve on in their own approach to supervising postgraduate students. Despite the many challenges experienced in public university related to personal circumstances, economic, cultural and power imbalances, training the supervisor to adopt the right attitude and approach would go a long way in empowering the supervisee as they undertake their research. Each supervisor needs to learn the important role played by formative feedback, so that when reviewing supervisee's work they do not mistake the forest for the trees – meaning to focus on the content first before scrutinizing the grammar and the word flow.

Postgraduate supervisors must be challenged to keep growing in their own research sphere in order to keep informed of new knowledge and become recognized member of their research communities. The open source resources shared through SPS and other programs, ranging from how to write a good research proposal, how to write each section of a thesis, avoid plagiarism, choose the right publication journal, among many others are very useful to both supervisor and supervisees as they all make progress to claim their space in the scholarly community("CPC Supervision Development Course," 2022; "Enhancing Postgraduate Environments," 2022). Postgraduate supervisors willing to take time to learn effective supervision approaches will emerge better mentors, coaches and supervisors for all who fall under their supervisory wings.

Finally, it is clear that the challenges and issues facing postgraduate supervision at the Kenya public universities resonate very closely with the documented experiences of postgraduate supervision in other higher education institutions particularly in other African country settings. It is expected that the learning that has emerged from the reflections and analysis reported in this article will inspire the rejection of negative postgraduate supervision practices and adoption of more positive practices in Kenya and other similar settings. This is expected to ultimately lead to higher and timelier rates of

successfully graduating confident and competent postgraduate students capable of transitioning the country's economic development to greater success.

References

Adeyemi, B. M., & Oluwabiyi, M. (2013). Scholarly use of information for research by postgraduate students : The role of Kenneth Dike Library (KDL). *International Journal of Library and Information Science*, *5*(8).

Bacwayo, K. E., Nampala, P., & Oteyo, I. N. (2017). Challenges and opportunities associated with supervising graduate students enrolled in African universities. *International Journal of Education and Practice*, *5*(3).

Bitzer, M., & Albertyn, M. (2011). Approaches to postgraduate supervision: A planning tool to facilitate supervisory processes. *South African Journal of Higher Education*, *25*(5).

Commission for University Education. (2014). *Universities Standards and Guidelines, 2014*. Nairobi, Kenya.

CPC Supervision Development Course. (2022). Retrieved August 6, 2022, from https://postgradcollaborations.com/session/developing-student-writing/

CUE. (2022). Functions. Retrieved March 8, 2022, from https://www.cue.or.ke/index.php?option=com_content

Darvas, P., Shang Gao, Y. S., & Bilal, B. (2017). *Sharing higher education's promise beyond the Few in Sub-Saharan Africa*. *Directions in Development*. Washington, DC.

Enhancing Postgraduate Environments. (2022). Retrieved August 6, 2022, from https://postgradenvironments.com/home/all-resources/

Gangwar, M., & Bassett, R. M. (2020). *Sub-Saharan Africa: Tertiary education.* Washington, DC.

GoK. (2007). *Kenya Vision 2030: A globally competitive and prosperous Kenya*. Nairobi, Kenya.

Grossman, E., & Crowther, J. (2015). Co-supervision in postgraduate training: Ensuring the right hand knows what the left hand is doing. *South African Journal of Science*, *111*.

Harrison, S., & Grant, C. (2015). Exploring of new models of research pedagogy: time to let go of master-apprentice style supervision? *Teaching in Higher Education*, *20*(5).

ISS Library. (2022). Retrieved August 6, 2022, from https://www.iss.nl/en/library

Jackson, C. (1999). Social exclusion and gender: Does one size fit all? *The European Journal of Development Research*, *11*(1).

Jude, O., Igumbor, E., Bosire, N., Karimi, F., Katahoire, A., Allison, J., … Ajuwon, A. (2022). Effective supervision of doctoral students in public and population health in Africa: CARTA supervisors' experiences, challenges and perceived opportunities. *Global Public Health*, *17*(4).

Kaburu, J. K., & Embeywa, E. H. (2014). An evaluation of quality of university education in Kenya during this massification era. *Mediterranean Journal of Social Sciences*, *5*(5).

Khene, C. P. (2014). Supporting a humanizing pedagogy in the supervision relationship and process: A reflection in a developing country. *International Journal of Doctoral Studies*, *9*.

Kilonzo, S. M. (2022). Reflective essay on postgraduate supervision. *Maseno University Journal*, *3*(Special Issue).

Kilonzo, S. M., & Magak, K. (2013). Publish or perish: Challenges and prospects of social science research and publishing in institutions of higher learning in Kenya. *International Journal of Sociology*, *43*(1).

Kimani, E. N. (2014). Challenges in quality control for postgraduate supervision. *International Journal of Humanities Social Sciences and Education*, *1*(9).

Lee, A. M. (2007). Developing effective supervisor concepts of research supervision. *South African Journal of Higher Education*, *21*(14).

Lewis, M., & Lockheed, M. (2008). *Social exclusion and the gender gap in education. Research Working Paper 4562*. Washington, DC.

Manderson, L., Bondjers, G., Izugbara, C., Cole, D. C., Egesah, O., Ezeh, A., & Fonn, S. (2017). Enhancing doctoral supervision practices in Africa: Reflection on the CARTA approach. *Journal of Higher Education in Africa*, *15*(2).

Matheka, H. M., Jansen, E. P. W. A., & Adriaan Hofman, W. H. (2020). PhD students' background and program characteristics as related to success in Kenyan universities. *International Journal of Doctoral Studies*, *15*, 57–71.

McKenna, S. (2021). *Supervising postgraduate scholarship in a troubled world. The global scholar: Implications for postgraduate studies and supervision.* Stellenbosch.

McKenna, Sioux. (2022). Foreword: The complex pedagogy of supervision. *Maseno University Journal*, *3*(Special Issue).

Mohamedbhai, G. (2014). Massification in higher education institutions in Africa: Causes, consequences and responses. *International Journal of African Higher Education*, *1*(1).

Mukhwana, E., Oure, S., Too, J., & Some, D. K. (2016). *State of postgraduate research training in Kenya. Commission for university education. Discussion Paper 02*. Nairobi.

NACOSTI. (2022). Mandate & Functions. Retrieved March 8, 2022, from https://www.nacosti.go.ke/mandate-functions/

Oketch, M., McCowan, T., & Schendel, R. (2014). *The impact of tertiary education on development: A rigorous literature review*.

Overall, N. C., Deane, K. L., & Peterson, E. R. (2011). Promoting doctoral students' research self-efficacy: Combining academic guidance with autonomy support. *Higher Education Research & Development*, *30*(6).

Republic of Kenya. (n.d.). *Education sector report medium term expenditure framework 2022/23 2024/25*.

Taylor, S., Kiley, M., & Humphrey, R. (2019). A handbook for doctoral supervisors. *Routledge*.

Teferra, D. (2014). Charting African Higher Education— Perspectives at a Glance. *Journal of Higher Education in Africa*, *1*(1), 9–21.

Tsotesi, C., & Omodan, B. (2020). Deconstructing power differentials in the postgraduate

supervision process: mentoring in Ubuntu praxis. *Ubuntu Journal of Conflict and Social Transformation*, *9*(1).

VU University Library. (2022). Retrieved August 6, 2022, from https://vu.nl/en/about-vu/divisions/university-library

Wangenge-Ouma, G., & Nafukho, F. M. (2011). Responses to conditions of decline: The case of Kenya's public universities. *Africa Education Review*, *8*(1).

Watts, J. H. (2010). Team supervision of the doctorate: Managing roles, relationships and contradictions. *Teaching in Higher Education, 15*(3).

Wilmot, K., & Lotz-Sisitka, H. (2015). *Supporting academic writing practices in postgraduate studies: A sourcebook of academic writing support approaches and initiatives.*