

Research Article

UNIFIED GROWTH: EMPOWERING UNIVERSITY STUDENTS THROUGH SUPERVISION, COLLABORATION AND MENTORSHIP

*Elizabeth Owino¹ and Dick Donald Lwala²

1. Directorate of Quality Assurance, University of Kigali, Rwanda.
2. Department of Early Childhood Studies, School of Education, Mt. Kenya University.

.....
Received: 31st March 2024 **Accepted:** 16th April 2024 **Published:** 11th September 2024
.....

ABSTRACT

Thesis supervision is one of the critical responsibilities of a supervisor. A graduate student's supervisor can be compared to a family doctor. Even though the doctor may have many patients, striving to know the needs of each patient is vital in meeting their needs. Likewise, being knowledgeable and competent, a graduate supervisor is expected to know each graduate student's immediate needs. This qualitative case study explored the role of supervision, mentorship, and collaboration strategies in the scholarly and professional development of graduate students. The target population was graduate students who had completed their coursework and were involved in research for the partial fulfillment requirements of their graduate degrees. Purposive sampling focused on the communication platform used by the 272 graduate students and faculty. Data was analyzed using thematic content analysis. The study findings indicated that both faculty and graduate students have embraced online supervision. Further, through e-mentorship graduate students receive guidance, support, and encouragement that is critical in graduate studies. Additionally, online collaboration among the students and between the students and the supervisors offers valuable insights into research development, self-development, networking, and career planning. The findings of the study will influence higher education institutions' graduate supervision policies and practices. The findings contribute to research on eLearning and specifically on the integration of e-supervision in graduate studies.

Keywords: Collaboration, Graduate Students, Mentorship, Supervision

INTRODUCTION:-

'The doctoral study is not so much for those with high intellectual quotient (IQ), but for those with emotional quotient' (EQ). These were my supervisor's words to me as I graduated with a Ph.D. in 2018. As I listened to him, I quickly reflected on the number of colleagues who had registered for the graduate course but had not made much progress. They were initially upbeat about completing their studies in record time as per the university policies on graduate studies (Moi University, 2019). Indeed, as observed by scholars, EQ is the single most significant predictor of performance and the most vital driver of personal excellence (Halimi et al., 2021). With IQ, people can think and reason logically, but with EQ, they can manage stress and emotions and, therefore, excel in their overall lives (Bradberry & Unlike, n.d.; Mishra & Pimpri, 2022). The moment we began working on our proposals as graduate students, out of the total of 18, the number of those who were ready for proposal presentation grew smaller by the day. By the time of graduation, seven years down the line, less than a third of the total number of students had completed their studies from that cohort. To date, it is not clear how many more have graduated.

Over the years, globally, graduate education has continued to expand. In Africa, Mohamed Bhai (2018) gives three reasons for this rapid expansion: the realization of the significance of higher education for Africa's development, the increase in tertiary student enrolment in Sub-Saharan Africa to more than 12 million, and the need to improve the quality of higher education. With this expansion, there have been evolutions of new disciplines and specializations (Sharmini et al., 2015). In response, different types of graduate programs are today being offered: Thesis-based, publication-based, practice-based, professional, and the new route PhD conceptualized to respond to learning experiences for international students. The new route PhD has been found to provide training and professional development opportunities with substantial formative assessment aligned with the coursework. Considering the evolution of graduate studies, it was imperative to evaluate the supervision, collaboration, and mentorship strategies.

STATEMENT OF THE PROBLEM: -

Although the number of students enrolled in graduate programs the world over continues to increase, the completion rates have not increased exponentially. According to Waswa, Abenga, and Indede (2020), the Kenyan government set a benchmark of 20% completion rate for every cohort admitted at the graduate level. However, the Commission of University Education (2018), observes that graduate completion rates have been low in both private and public institutions. In 2017, for example, Master's degree awards accounted for 10% while PhD and PGD accounted for a paltry 1% of graduates. The COVID-19 pandemic further complicated matters as institutions were closed for many months adversely affecting the graduate students. Institutions began looking for innovative ways to catalyze student's completion rates. Social media which was initially meant for social interaction became a significant channel of not only communication but also for supervision, collaboration, and mentorship (Dong et al., 2021). This resulted in the adoption of innovative strategies including the use of WhatsApp to reach out to students for supervision, collaboration, and mentorship. This study sought to examine the strategies that graduate supervisors in Moi University, School of Education use to supervise, collaborate with, and mentor students.

OBJECTIVES:-***General Objective***

This study sought to examine the strategies employed by Moi University School of Education in the supervision, collaboration, and mentorship of graduate students.

Specific Objectives

The study had two objectives:

- i. To examine the supervision strategies used by Moi University School of Education in supporting graduate students.
- ii. To determine the collaboration and mentorship strategies used by Moi University School of Education in supporting graduate students.

LITERATURE REVIEW

Despite the expansion in graduate studies, the process of graduate education has been described as 'fraught and difficult for students' (Barnacle, 2005, p.186). Graduate students require close supervision and support in their research endeavors. Lack of effective support results in students seeking unethical assistance from essay mills, a phenomenon dubbed as 'contract cheating' (Medway et al., 2018). In recent times, in Kenya, several unscrupulous businesses have sprung up to exploit the need to 'do the writing' for students at a fee to make their lives less fraught and difficult. Additionally, the emergence of Artificial Intelligence (AI) has added to the complication of graduate students having original and authentic research. In search of elusive faculty support to complete their studies within the stipulated time, many students have ended up being conned with plagiarized content, and others are punished for academic misconduct and collusion. The organization of this section is based on the two objectives that guided the study: To examine the supervision strategies used by Moi University School of Education in supporting graduate students, and to determine the collaboration and mentorship strategies that supervisors and students in Moi University School of Education adopted.

Supervision Strategies Used by Graduate Faculty in Supporting Graduate Students

Research has indicated that most graduate students face a period of 'liminality,' during which they are characterized by feelings of loneliness, confusion, being overwhelmed, feelings of disorientation, or even occasionally feeling lost in the process (Keefer, 2015). Therefore, one of the primary roles of the graduate supervisor is to support students to become experts in their disciplines. This can be achieved by modeling the right competencies, mentoring students, and helping them become members of communities of practice, not only within the discipline but also at the interdisciplinary level. Engagement with graduate students in scholarly communities enables the supervisors and the students to share knowledge, valuable experiences, skills, and attitudes necessary for advancement in research and scholarship in both formal and informal ways.

There are different strategies for ensuring that graduate students benefit from supervision, collaboration, and mentorship. Traditionally, apprenticeship was used to help students learn from their mentors (Wikeley & Muschamp, 2004). With the uptake of e-learning, mentorship strategies have evolved to incorporate the use of technology, resulting in strategies such as e-mentoring. According to Argente-Linares et al.(2016) and Rowland (2012) e-mentoring, also referred to as tele-mentoring, virtual mentoring, or online mentoring, has been defined "as the

process in which electronic media are used as the main channel of communication between the mentor and mentee" (p. 401).

There are several benefits of e-mentoring. The first benefit is that it is an economical option for higher educational institutions (Ercan et al., 2021). Secondly, it creates access to opportunities through relationships that are not restricted to a geographical location, and thirdly, it helps in the development of skills such as patience, creativity, and adaptability to work (Mahayosnand & Bermejo, 2022). Fourthly, e-mentoring gives exposure to different cultures and perspectives on various research-related issues. Additionally, it also creates a large pool of mentors from different disciplines and expertise. Unlike traditional mentorship, e-mentorship allows for immediate and timely feedback. It also provides a record of information, discussions, progress, and resources that can be accessed later.

Nonetheless, e-mentoring has its attendant challenges. Mahayosnand and Bermejo (2022), communication difficulties, unreliable and unavailable technology, and language barriers are some of the challenges associated with e-mentoring. Some students have also been found to be reluctant to embrace any unstructured academic activity and, therefore, may not commit to e-mentoring. Despite these challenges, e-mentoring remains one of the most commonly used strategies in graduate education (Byrnes et al., 2019). Mentors and mentees interact through emails and video calls and also collaborate on messaging applications such as WhatsApp. In Moi University School of Education, the use of WhatsApp (forum) as a means of communication amongst the graduate students, faculty, and administration has had a substantial positive impact on the graduate students' academic journey.

Collaboration and Mentorship Strategies Supervisors Use to Support Graduate Students

Within the graduate education program, collaboration is equally important. Collaboration has been found to: bring students together, bring faculty and students together; help graduate students achieve conceptual depth; enhance peer interaction by the more capable peers; help novices become more established practitioners; and transform graduate students as they also transform their group members; create powerful meanings as human beings connect (Lave & Wenger, 1991; McKenna, 2017). Through collaboration graduate students can weave through complex concepts, often referred to as threshold concepts. Once a threshold concept is understood, it significantly changes the way one interacts with a subject of discipline and leads to commendable transformation (Meyer & Land, 2006).

Collaboration can also be facilitated using different virtual tools. Globally, tools such as Google Docs, teleconferencing, and discussion forums on e-learning platforms facilitate e-learning. The combination of technology and pedagogy has translated into more innovative ways of undertaking participatory supervision. Besides, the adoption of a Virtual Learning Environment (VLE) has facilitated transnational collaboration between students, their peers, and supervisors. Such learning environments provide the learners and supervisors with platforms for co-constructing knowledge, access to course materials, and access to discussion boards where individuals can raise questions and get prompt feedback from their peers and teachers.

Like with e-mentoring, there are many challenges associated with virtual collaboration. Meluso et al. (2020) mention the following as some of the challenges that a supervisor must consider: empathy; trust; time balance and intentional communication. A supervisor must be empathetic by trying to understand the experiences of the students consciously. Students

could be struggling with a lack of internet bundles, faulty gadgets, and unreliable networks, making them unable to collaborate. Remaining professional by setting online boundaries while still being firm and polite is essential for both the graduate supervisor and the students (Schulze et al., 2017).

With trust, group performance is enhanced (Gibbs et al., 2017; Liao, 2017). When graduate students collaborate effectively and honestly, they are likely to develop confidence individually and collectively, attributes that help them achieve their academic goals (Malhotra et al., 2007; Marlow et al., 2017) (Malhotra et al., 2007; Marlow et al., 2017). To help graduate students build trust in immediate feedback is important (Krumm & Schulze, 2017). Balancing time effectively is another important strategy in online collaboration. Graduate supervisors must strive to moderate conversations and communication on collaborative platforms so that students remain focused and intentional with the course. Additionally, clearly defining roles, responsibilities, and tasks would help eliminate imminent confusion (Gilson et al., 2015; Malhotra et al., 2007).

The role of intentional communication between the graduate supervisor and the students must be emphasized. Intentional communication could be in the form of giving feedback, providing or sharing information, and making announcements between students and supervisors (Ciampa & Wolfe, 2023). Such collaboration efforts reflect the social learning theory that views learning as a result of the interaction of social and cognitive factors. The theory is vital in understanding the nature and role of peer feedback, particularly in graduate scholarly writing (Vasileva & Balyasnikova, 2019). According to Vygotsky's zones of proximal development (ZPD), learning is facilitated when an individual engages in problem-solving through mentorship and collaboration with or under the guidance of a more capable person, such as a supervisor or a more knowledgeable peer.

Theoretical Framework

This study was guided by Lev Vygotsky's social-cultural theory of cognitive development which explores the influences of the environment on individual development. One of the key constructs of the theory is the concept of Zones of Proximal Development (ZPD). ZPD is the 'distance between the actual developmental level (of the learner) as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978, p.86). The theory relates to the current study as it highlights the importance of a more knowledgeable person in the supervision, collaboration, and mentorship of graduate students in research.

The theory is important because it appreciates the fact that although graduate students have a wide range of abilities they may not be able to fully exploit these abilities without the guidance of supervisors who are specialists in the field of research. Virtual mentorship allows for flexible learning opportunities as well as flexible mentorship. Through such a relationship, both the faculty and the mentees utilize technological knowledge and skills through social sharing. Mentoring and encouragement from faculty also enhance student experiences and may be an opportunity for further meaningful relationships between the students and faculty (Aucoin & Wright, 2021).

MATERIALS AND METHODS:-

The study adopted the content analysis research design based on a qualitative approach. The design was appropriate as the study sought to analyze the conversation and content shared on the WhatsApp forum on the nature of supervision, collaboration, and mentorship among graduate students and between faculty and students. The content was drawn from the official WhatsApp group that graduate students were specifically invited to join for purposes of supervision, collaboration, and mentorship with their peers and faculty. The data was then cleaned, coded, and analyzed using thematic content analysis for supervision, mentorship, and collaborative strategies. Ethical approval was sought from the Coordinator and Dean of the School of Education.

RESULTS & DISCUSSIONS:-***Supervision Strategies Used by Moi University School of Education in Supporting Graduate Students***

Before COVID-19, virtual supervision was not a common phenomenon. However, due to the long closures of institutions, there was a need to embrace e-learning to fast-track and facilitate learning. Whether physical or virtual, the success of graduate students cannot be divorced from effective supervision (Masek & Maizum, 2020). In situations where the supervision is wholly physical, students have to travel, sometimes great distances to meet with the supervisors for any form of support. Such an approach may cause delays in student progression because of conflicting schedules, leaving most students in liminality. Liminality, a period of confusion whereby graduate students are not sure of their identity can result in increased dropout rates, delayed graduation, data fabrication and data falsification, and contract cheating. In this study, some of the students confessed to being in periods of liminality. In one of the discussions between the graduate students and the faculty staff, one of the students had this to say:

Some of us are here wondering if there is a point of return, (Participant 1).

This is an expression of a student who had already lost hope and did not feel like he/she had what it takes to complete the program. The imposter syndrome is another way of experiencing liminality. It causes students to feel like they do not belong or do not have the capacity, and unless a supervisor helps them develop a new identity of themselves, they may drop out of the program. Like many other institutions offering graduate education, Moi University School of Education, Kenya, has embraced virtual mentorship and collaborations as supervision strategies. Virtual mentoring allows graduate students to connect with their teachers in new ways. The interaction that continues to take place on the WhatsApp Forum since its creation by a faculty member in early 2023 is phenomenal. It has created a shared space for all graduate students and faculty as graduate students rely on the expertise and experience of the faculty to help them graduate and advance in their careers. As with every innovation, its acceptance has been gradual but steady and meaningful. Supervisors have been able to find their long-lost students. Students who were once in liminality are slowly retracing their steps, and hope is being restored. Students have been given a place to interact amongst themselves as well as with the faculty and graduate staff in diverse ways that enhance their academic journeys.

Once created, the administrators of the school of education WhatsApp forum encouraged supervisors to send links to their students to join. The rules of engagement for the forum were

set, explained, and shared. It was apparent from the forum's description that it was meant for graduate student's research and academic support. By the end of the first day of the forum's creation, 41 graduate students and staff had joined. By 6th November 2023, the wall had 267 members from different disciplines across the school.

This is an innovation that has revived graduate studies in the school. Unlike other social walls, communication on the wall has been limited to academic information, notices, and announcements. To join the forum, graduate students had to be registered members of the School of Education, Moi University. Through the WhatsApp forum, it has been possible to confirm graduate students' progress as well as target dormant students to seek readmission. The wall has been successfully used to encourage all graduate students to complete their studies within the stipulated time.

Collaboration and Mentorship Strategies that Supervisors and Students in Moi University School of Education Adopted

As part of the collaboration, peer interaction, supervisor-student interaction, and faculty-student interactions were ongoing on the forum. Wang et al. (2023) posit that the role of peers in graduate studies cannot be downplayed. Peers support students in skill development and help them to be grounded in research. Additionally, where there are low levels of supervision, the presence of peers is compensatory. Communication between supervisors and students is also critical, whether this communication is formal or informal, and is responsible for the success or failure of a student (Ives & Rowley, 2005). Just as the manager's role is critical to the success of a business, good supervisors need to be innovative, creative problem solvers, and dependable, amongst other traits. Good supervisors assess students' needs throughout the academic journey (Vilkinas, 2002).

The data in Table 1a reflects the nature of interaction that has been on the wall since its inception on collaboration and mentorship categorized into five themes: Inquiries, clarifications, concerns, information, and the nature of responses from faculty and graduate students as a measure of student supervision.

Table 1a:

Faculty Staff Engagement on the 'Bring Them All Together' Forum

| Nature of engagement | Number of times | Descriptions |
|-----------------------------|------------------------|---|
| Inquiries | 1 | Research paradigms |
| Clarification | none | |
| Concerns | none | |
| Information | 27 | Collaboration, publication, resources, thesis defense structure, research methodology, scientific writing, rules and regulations on graduate studies, how to write literature reviews, admitting faculty and students, and writing a compelling abstract. |
| Responses | 8 | Encouraging students, moderating discussions, leading forums |

Table 1b:

Graduate Students' Engagement in the 'Bring Them All Together' Forum

| Nature of engagement | Number of times | Description |
|----------------------|-----------------|---|
| Inquiries | 1 | Whereabouts of the supervisor |
| Clarification | 1 | How can one explain Standard Deviation in terms of inter-score and intra-score? |
| Concerns | 1 | <i>'Some of us are here wondering if there is a point of return.'</i> |
| Information | 4 | Writing workshops, how to start a paper by grabbing the reader's attention, |
| Responses | 30 | Emoji, appreciation <i>'Personally, I have learned a lot through this platform'</i> . |

The results of the nature of collaboration between the staff and the graduate students may appear minimal, but they are not insignificant. The fact that graduate faculty from diverse disciplines can provide mentorship and collaborate with students from disciplines different from their own is commendable. The resources shared on the wall were downloadable, and more than 100 students had free access.

According to Salzburg Principles 1, graduate education should promote innovative structures to meet the challenges of interdisciplinary training and the development of transferable skills (Pipoyan & Topchyan, 2015). This is meant to make graduates mobile to the extent that they may enjoy interdisciplinary as well as intersectional collaboration. The scholarly world expects that regardless of the form of a graduate degree, graduates from any part of the world should have specific competencies: scholarly writing, literature review, research, training, supervision, mentoring, data practices, management, analysis, and interpretation, and communicating volumes of knowledge from a range of sources (Cyranoski et al., 2011; Helsinki, 2023).

A graduate degree is, therefore, not an end in itself; instead, it is supposed to be a process (Frick, 2018). As rightly observed by Lea and Street (2006), many strategies graduate students' supervisors can use to help students acquire and develop these key competencies. They include collaboration, mentorship, writing workshops, writing groups, and the use of informal and online support. Although it is a well-known fact that graduate supervisors have many other responsibilities in their higher institutions of learning that go beyond the teaching and supervision of students, virtual spaces offer them an excellent opportunity to provide support to students at their convenience without undue pressure.

Vilkinas (2005) posits that graduate supervisors are not only supposed to monitor progress but show care and empathize with the students throughout the academic journey. They are expected to assess the student's needs and address each of the needs with 'expertise, ease and care' (Vilkinas, 2005, p. 130). The supervisor is, therefore, well placed to help students navigate the challenges that graduate studies present and have international recognition.

Mentorship can be both overt and covert; conscious or unconscious, and intentional or unintentional. Through participating in the forum, students have been able to receive mentorship in different forms. Through knowledge transfer mentoring supervisors can help graduate students hone their research and writing skills by working on research papers and publications jointly. Creativity, problem-solving, critical thinking, and collaboration are some of the important skills that students develop through close mentorship.

‘Publish or perish’ is a common slogan in academia. To navigate the challenges and stress associated with publications, fresh graduates require mentorship. By publishing their research findings with their supervisors, students begin to learn the rigors of publishing. Mentorship is critical for the effective transition of new graduates to the field of academia. The mentors guide and model best research practices and provide valuable feedback for improvement. In this study, the WhatsApp group provided a platform for mentorship not bound by geographical location, time, or discipline. There is a very thin line between mentorship and collaboration. As collaboration takes place mentorship is provided. In one post, a student asked:

‘What is self-plagiarism?’ (Participant 2)

For two days, the graduate faculty mentored the students on plagiarism, types of plagiarism, how to detect plagiarism, and how not to plagiarize. One question sparked a discussion on integrity and ethics in research that roped in so many other areas of learning reaching hundreds of students spontaneously. This is the power of virtual mentorship.

CONCLUSIONS

In conclusion, this paper affirms the need for close relationships between supervisors and graduate students, especially at the point when students need supervision, collaboration, and mentorship. When this emotive relationship is nurtured positively, it often moves beyond graduation as both enter the world of a community of practice. Post-COVID-19, universities have shifted from face-to-face mentorship to technology-mediated or e-mentorship. This has resulted in the development of collaborative tools such as WhatsApp forums that allow for mutual communication between students and supervisors. At Moi University, the school of education has embraced the use of such forums as an effective means of bringing together faculty and students from different disciplines for mentorship, collaboration, and support. Already, the effect of this strategy is bearing positive results. Students who were once 'stuck' can access resources and support from their peers as well as faculty staff. By inviting all students to attend proposal presentations, oral defenses, and training opportunities, students have felt supported to learn and enhance their knowledge and skills.

RECOMMENDATIONS: -

The following recommendations can be drawn from the findings of the study:

- i. Higher education institutions need to embrace various forms of technology in the supervision of graduate students to improve completion rates.
- ii. The Commission for University Education (CUE) should develop policies that guide e-supervision in graduate studies.
- iii. There should be more evidence-based research on alternative supervision strategies for graduate students.

REFERENCES:-

1. Argente-Linares, Eva, M. Carmen Pérez-López, and Celia Ordóñez-Solana. 2016. "Practical Experience of Blended Mentoring in Higher Education." *Mentoring & Tutoring: Partnership in Learning* 24(5):399–414
2. Barnacle, R. (2005). Research education ontologies: Exploring doctoral becoming. *Higher Education Research & Development*, 24(2), 179–188.
3. Bradberry, T., & Unlike, I. Q. (n.d.). Why is EQ important?
4. Byrnes, D., Uribe-Flórez, L. J., Trespalacios, J., & Chilson, J. (2019). Doctoral e-mentoring: Current practices and effective strategies. *Online Learning Journal* 23(1), 236–248. doi:10.24059/olj.v23i1.1446
5. Ciampa, K., & Wolfe, Z. M. (2023). From isolation to collaboration: Creating an intentional community of practice within the doctoral dissertation proposal writing process. *Teaching in Higher Education*, 28(3), 487–503.
6. Ercan, E. S., Tufan, A. E., Kütük, Ö. M., & Perçinel Yazıcı, İ. (2021). E-mentoring program organized by the Turkish Association for Child and Adolescent Psychiatry during the COVID-19 pandemic. *European Child & Adolescent Psychiatry*, 30, 173–175.
7. Frick, L. (2AND r018). Supervisory models and styles. *modelos e estilos de orientação*. Course material of Module, 4.
8. Gilson, L. L., Maynard, M. T., Jones Young, N. C., Vartiainen, M., & Hakonen, M. (2015). Virtual teams research: 10 years, 10 themes, and 10 opportunities. *Journal of Management*, 41(5), 1313–1337.
9. Halimi, F., AlShammari, I., & Navarro, C. (2021). Emotional intelligence and academic achievement in higher education. *Journal of Applied Research in Higher Education*, 13(2), 485–503.
10. Ives, G., & Rowley, G. (2005). Supervisor selection or allocation and continuity of supervision: Ph. D. students' progress and outcomes. *Studies in Higher Education*, 30(5), 535–555.
11. Keefer, J. M. (2015). Experiencing doctoral liminality as a conceptual threshold and how supervisors can use it. *Innovations in Education and Teaching International*, 52(1), 17–28.
12. Krumm, S., & Schulze, J. (2017). Competencies for web-based work and virtual collaboration. In G. Hertel, D. L. Stone, R. D. Johnson, & J. Passmore (Eds.), *The Wiley Blackwell Handbook of the Psychology of the Internet at Work* (pp. 61–78). Wiley Blackwell. <https://doi.org/10.1002/9781119256151.ch4>
13. Lave, J., & Wenger, E. (1991). Learning in doing: Social, cognitive, and computational perspectives. *Situated Learning: Legitimate Peripheral Participation*, 10, 109–155.
14. Lea, M. R., & Street, B. V. (2006). The "academic literacies" model: Theory and applications. *Theory into Practice*, 45(4), 368–377.
15. Mahayosnand, P. P., & Bermejo, D. M. (2022). E-Mentoring Student Researchers through an Undergraduate Field Experience Course-Lessons Learned. *Journal of the British Association for the Study of Religion (JBASR)*, 23, 60–69.
16. Malhotra, A., Majchrzak, A., & Rosen, B. (2007). Leading virtual teams. *Academy of Management Perspectives*, 21(1), 60–70.

17. Marlow, S. L., Lacerenza, C. N., & Salas, E. (2017). Communication in virtual teams: A conceptual framework and research agenda. *Human Resource Management Review*, 27(4), 575–589.
18. Masek, A., & Maizam, A. (2020). A Review of Effective Doctoral Supervision: What Is It and How Can We Achieve It? *Universal Journal of Educational Research* 8(6): 2493-2500. <http://www.hrpub.org> DOI: 10.13189/ujer.2020.080633
19. McKenna, S. (2017). Crossing conceptual thresholds in doctoral communities. *Innovations in Education and Teaching International*, 54(5), 458–466.
20. Medway, D., Roper, S., & Gillooly, L. (2018). Contract cheating in UK higher education: A covert investigation of essay mills. *British Educational Research Journal*, 44(3), 393–418.
21. Meluso, J., Johnson, S., & Bagrow, J. (2020). Making virtual teams work: Redesigning virtual collaboration for the future. *SocArXiv*, 1–14.
22. Meyer, J., & Land, R. (2006). Threshold concepts and troublesome knowledge. Overcoming Barriers to Student Understanding: Threshold Concepts and Troublesome Knowledge. Routledge: London.
23. Mishra, P., & Pimpri, P. (2022). Quality of life (QOL): Role of IQ, EQ, and SQ. *International Journal of Multidisciplinary Educational Research* ISSN, 2277.
24. Moi University. (2019). Rules and Regulations Governing Postgraduate Studies. Moi University. https://sgs.mu.ac.ke/images/download/rules_regulations/chapt.1_Introduction.pdf
25. Pipoyan, L., & Topchyan, R. (2015). Salzburg principles: State of arts in the Republic of Armenia. *Perspectives of Innovations, Economics and Business*, 15(4), 148–155.
26. Rowland, K. N. (2012). E-mentoring: An innovative twist to traditional mentoring. *Journal of Technology Management & Innovation*, 7(1), 228–237.
27. Schulze, J., Schultze, M., West, S. G., & Krumm, S. (2017). The knowledge, skills, abilities, and other characteristics required for face-to-face versus computer-mediated communication: Similar or distinct constructs? *Journal of Business and Psychology*, 32, 283–300.
28. Sharmini, S., Spronken-Smith, R., Golding, C., & Harland, T. (2015). Assessing the doctoral thesis when it includes published work. *Assessment & Evaluation in Higher Education*, 40(1), 89–102.
29. Vasileva, O., & Balyasnikova, N. (2019). (Re)Introducing Vygotsky’s thought: From Historical Overview to Contemporary Psychology. *Frontiers in Psychology*, 10, 1515. <https://doi.org/10.3389/fpsyg.2019.01515>
30. Vilkinas, T. (2002). The PhD process: The supervisor as manager. *Education+ Training*, 44(3), 129–137.
31. Wang, F., Zeng, L. M., Zhu, A. Y., & King, R. B. (2023). Supervisors matter, but what about peers? The distinct contributions of quality supervision and peer support to doctoral students’ research experience. *Studies in Higher Education*, 48(11), 1724-1740.
32. Wikeley, F., & Muschamp, Y. (2004). Pedagogical implications of working with doctoral students at a distance. *Distance Education*, 25(1), 125–142.
33. Waswa, F., Abenga, E., & Indede, F. (2020). Enhancing Completion Rates through Structural and Operational Changes in the Management of Postgraduate Programmes in Kenya’s Public Universities. *Multipliers of Change: Sustainable Capacity Building in*



*Higher Education Leadership and Management (Potsdamer Beiträge zur
Hochschulforschung, 5, 85-101*

DECLARATION OF CONFLICT OF INTEREST

Authors declare no conflict of interest