

PhD Studentship and Research Supervisors during the COVID-19 Pandemic at a Premier University in Uganda

ENOCH KIMANJE¹, OLIVE LUNYOLO²

¹Makerere University

Email: kimanjeenoch@yahoo.com

²National Council for Higher Education

Email: Olunyolo@unche.or.ug

Orchid: <https://orcid.org/0000-0001-9519-697>

(Accepted: 07 December 2022 / Published: 20 December 2022)

<https://doi.org/10.58653/nche.v10i1.11>

Abstract

Keeping in close touch with a research supervisor is often vital for any university student. Unfortunately, this is hardly possible during the period of a pandemic. In this study, we explored the supervisory challenges that the doctoral students and their research supervisors at a school in a premier university in Uganda experienced and the coping strategies they utilised during the COVID-19 pandemic. We were provoked to undertake the study due to the persistent undocumented complaints from graduate students about their inability to get in touch with their research supervisors because of the closure of the university that was brought about by the pandemic. Taking the interpretive approach, we used a phenomenological research design and collected data by interviewing PhD students and their research supervisors, whom we purposively selected. We analysed the data using the thematic content analysis technique that we based on the factors influencing doctoral research supervision, namely student factors, supervisor factors and institutional factors. Our study findings revealed key research supervisory challenges. At the students' level, we found loneliness, ICT challenges, unexpected study costs and family disturbances. While at the supervisor's level, we found inadequate supervisor support and ineffective communication. Yet at the institutional level, we noted unclear institutional research policies and ineffective communication. We therefore concluded that several supervisory challenges negatively affected the students' doctoral studies during the pandemic. However, there were varied but unclear strategies participants utilised to address these challenges. Hence, we recommend to university leaders to formulate clear institutional graduate training strategies for mitigating disruptions occasioned by any future pandemic.

Keywords: *PhD research supervision; COVID-19 pandemic; Research supervision challenges; Coping strategies; Premier university*

Introduction

Globally, it is believed that higher education (HE) is the engine of national development, specifically through doctoral research, which contributes significantly to knowledge and innovations (Costa, 2019). Indeed, several countries have embedded the issue of doctoral training in their national development plans. Locally, the Uganda Vision 2040, basing on the National Development Plans (1, 2 and 3), stresses the key role that higher education institutions (HEIs), mainly universities, should play in their societal transformation by producing research that generates new knowledge (Government of Uganda, 2013). Hence, doctoral research is a key contributor to this transformation. In fact, for doctoral students to successfully contribute to such transformation their research supervision is paramount (Masek & Alias, 2020). Helfer and Drew (2013) posit that where supervision is of poor quality, a student may have delayed completion and low-quality research outputs, and some may even withdraw their candidature. An effective and quality doctoral research supervision process is, therefore, called for to enhance high levels of doctoral students' successful completion. Unfortunately, the COVID-19 pandemic outbreak created a gap between doctoral students and their supervisors. Indeed, due to COVID-19, the way students were educated changed around the globe within a short span of time (Chung, Subramaniam & Dass, 2020). The education system worldwide witnessed the near-total closure of education institutions. Such closures halted teaching and research functions and the premier university was not exceptional and, undeniably, educational institutions switched over to remote learning (Daniel, 2020; Liguori & Winkler, 2020; Zraick & Garcia, 2020). In an attempt to adhere to the standard operating procedures (SOPs), doctoral supervisors and their supervisees could hardly physically meet. Notwithstanding the usage of ICT, in most universities, its use in the research supervision process was (and is) still limited due to the challenges of connectivity and internet failure, among others (Onyema et al., 2020; Ujang, 2021; UNESCO, 2020; World Bank, 2020). Such online learning and supervision left a void in the doctoral student and supervisor relationships, probably creating varied intricacies in the doctoral research supervisory process. So, we wondered how doctoral students and their supervisors in the premier university were sailing through that period of lockdown with their research, thus the genesis of our study.

Based on the models of the "Supervision Triangle" by Almusaed and Almssad (2020) and "Students Supervision" by Masek and Alias (2020), in our study, we came up with a conceptual framework comprising three factors that influence doctoral research supervision, namely: 1) student factors; 2) supervisor factors; and 3) institutional factors. Regarding student factors, we focused on the student's personal characteristics. For supervisor factors, our focus was on supervisor qualities. Finally, for institutional factors, we concentrated on doctoral research policies or regulations (at school and university levels – infrastructure, resources, and research environment). We, therefore, examined the challenges in doctoral research supervision in a school at a premier university in Uganda during the COVID-19 pandemic focusing on the student, supervisor, and institutional levels.

Conceptually, we focused on three key concepts, namely doctoral research supervision, the COVID-19 pandemic, and challenges. First, doctoral research supervision is made of two terms (i.e. doctoral research and supervision). Doctoral research (or PhD research) is that research which generates new knowledge and transforms the student into a professional researcher and strengthens institutional research capacity (Kemoli & Ogara, 2015). While supervision is a focused interaction or relationship between the supervisor and the student to achieve intended objectives (Zaheer & Munir, 2020). Research supervision, according to Lee (2008), is a facilitative process that involves providing educational tasks such as mentoring, coaching, and supporting a student to participate and

develop academically. This facilitative process is performed by a supervisor through the provision of intellectual expertise and counseling. Based on Lee's definition, in this study, we looked at doctoral research supervision as a facilitative process where doctoral students are mentored, coached and supported to develop into researchers who can generate knowledge that contributes to institutional research capacity and to the scholarly community. Second, COVID-19 is an infectious disease caused by a coronavirus known as the severe acute respiratory syndrome coronavirus-2 that was identified in Wuhan City, China in December 2019 (WHO, 2020). However, for our study, we focused on the COVID-19 pandemic era, referring to the period universities in Uganda were locked down (in 2020 and 2021) due to COVID-19 and other alternative means of learning at a distance, such as online (virtual) learning, were adopted to minimise the rate of infection. Third, by challenges, we mean complexities in doctoral research supervision. We assumed that students are faced with a diversity of intricacies in their doctoral journey; thus, we focused mainly on the challenges doctoral students faced in the research supervision process during the lockdown period due to the COVID-19 pandemic in Uganda in 2020 and 2021.

Contextually, we conducted this study in a school at a premier university in Uganda. Our choice of university was premised on two main factors. First, in our preliminary studies, we discovered undocumented but persistent complaints from a section of doctoral supervisors together with their supervisees at the school about the effectiveness of conducting the research process in the new normal caused by the COVID-19 pandemic. This made us wonder what could cause them not to effectively conduct the research function during this era of technology. Second, it was easier for us to gain access to and gather data during the study.

■ Problem statement

Ideally, doctoral research involves interactions between a supervisor and supervisee during which each contributes towards the completion of a research project for a PhD award. Unfortunately, the COVID-19 pandemic and the resultant lockdowns that led to the closure of all educational institutions in 2020 and 2021 could not allow such physical or virtual interactions to occur easily. Indeed, the pandemic affected almost all academic units, including academic activities due to the lockdown. Our preliminary investigation at the premier university indicated that the research supervision process was one of the activities most affected by the COVID-19 pandemic. Much as the scenario was undocumented, it made us worried about the students' successful completion of their PhD studies. If the supervisory interaction is hindered by the COVID-19 pandemic and the related SOPs, then the students' successful completion of their studies would be affected. This would result in wastage of resources in terms of funds, time and eventual stress, thus negatively affecting the university and knowledge production and dissemination. Therefore, we explored the challenges of doctoral research supervision during the COVID-19 pandemic era (2020-2021) at the premier university in order to come up with the appropriate coping strategies that could help students successfully complete their PhD studies.

■ Purpose of the study

We generally explored the challenges of doctoral research supervision and the coping strategies adopted by students and supervisors to successfully complete their PhDs in a school at a premier university in Uganda during the COVID-19 pandemic.

■ Objectives of the study

We specifically:

1. Examined the challenges of PhD research supervision at the student's level in a school at a premier university in the era of the COVID-19 pandemic.
2. Examined the challenges of doctoral research supervision at the supervisor's level in a school at a premier university in the era of the COVID-19 pandemic
3. Examined the challenges of doctoral research supervision at the institutional level in a school at a premier university in the era of the COVID-19 pandemic
4. Analysed the coping strategies for the challenges of doctoral research supervision in a school at a premier university in the era of the COVID-19 pandemic.

■ Review of related literature

Scholars (e.g. Dhawan, 2020; Rapanta, Botturi, Goodyear, Guàrdia, & Koole, 2020), who investigated the intricacies of research supervision during the COVID-19 pandemic generally reported the challenge of a drastic shift from conventional face-to-face to online learning and remote university study courses via Zoom, Microsoft Teams, and Skype, among others. Their reports implied a change in content delivery, the tools or technology used, and a change in the learning environments, all of which challenged the teaching-learning process, not even sparing doctoral research supervision. However, in our study, we reviewed literature under three objectives focusing on three levels, namely students, supervisors, and institutional challenges in doctoral research supervision during the COVID-19 pandemic. We also reviewed the literature on coping strategies for the challenges in the doctoral research supervision process.

Students' challenges

The COVID-19 pandemic has posed several challenges to the progress of graduate students' research. In this regard, Kemoli and Ogara (2015) argue that in the normal face-to-face approach to student learning, the students are encouraged by their supervisors to attend research workshops and they are also guided to use computer programmes to facilitate their doctoral studies. However, during the lockdown and the related SOPs, it was reported that the interaction between students and their supervisors was hampered. Scholars (e.g. Dhawan, 2020; Zaheer & Munir, 2020) report that when students lack face-to-face interaction with their supervisors and resort to online learning, the interaction between them (student and supervisor) is hampered, and consequently students lose the personal touch. Equally, Zaheer and Munir (2020) report that student-supervisor interactions are hindered because some online applications do not have free access. Yet, according to Kumar, Kumar and Taylor (2020), embarking on a supervisory relationship in a virtual environment requires building trust and having personal connections, which are difficult in the absence of physical interactions. Kumar et al. (2020) add that lack of physical interactions renders students ignorant of the current academic trends and their academic writing ability is negatively affected.

Pyhalto, Vekkaila and Keskinen (2012) attest that face-to-face teaching-learning provides an opportunity for regular supervision and active student involvement. In fact, Pyhalto et al. claim that doctoral student involvement in their research project(s) is vital to the successful completion of their studies. Such involvement helps them to learn and endure problems they may encounter during their respective doctoral journeys. However, other scholars (e.g. Kumar et al., 2020; Pyhalto et al., 2012; Zaheer & Munir, 2020) stress that those students who have online lessons are not actively involved because they are lonely and are often distracted by their families. Indeed, Kumar et al. (2020) affirm

that such students have feelings of being isolated and they are often hesitant to initiate contact with their supervisor; thus, they lack a sense of connection with the supervisor when working on their research at a distance. They also lack peer support and a scholarly environment for collaboration to enhance their writing skills; hence, they cannot write regularly, causing dissatisfaction even on the part of their supervisors.

Askew, Dixon, McCormick, Callaghan, Ying Wang and Shulruf (2016) argue that students' skills and ability to handle their doctoral work are important to the supervisor, as this reduces the latter's heavy workload. However, other scholars (e.g. Dhawan, 2020; Kumar et al., 2020; Pyhalto et al., 2012; Zaheer & Munir, 2020) report that some students do not have the abilities and confidence to learn online, which leads to dissatisfaction and confusion. Besides, they report that students' characteristics (e.g. inadequate motivation, self-regulative skills, persistence, etc.) hamper their own study during distance learning. Zaheer and Munir (2020) particularly report that some students have low self-efficacy and during distance learning, many rarely write or publish research papers. Besides, Kumar et al. (2020) report that some students do not know how to effectively manage and communicate online. Additionally, Kumar et al. claim that even if supervisors go ahead to give feedback, it is difficult for students to understand the written feedback without (supervisors') clarification.

Similarly, other researchers (e.g. Dhawan, 2020; Irene, Bal1, Kiran, Zixin, & Kae, 2020; Nash, 2021; Pyhalto et al., 2012) reveal that students express problems related to balancing doctoral studies, personal lives, and other professional duties when studying at a distance, which creates a lot of stress among them. In fact, Nash (2021) emphasises that graduate students are reluctant to direct their learning themselves because they suffer from anxiety and depression resulting from stress due to the COVID-19 pandemic. Likewise, Dhawan (2020) reports that students' learning efficacy due to the COVID-19 pandemic is depicted in their behaviours in terms of distractions, frustration, anxiety and confusion. Several scholars (e.g. Dhawan, 2020; Kumar et al., 2020; Zaheer & Munir, 2020) report that e-learning has certain challenges that pose technical difficulties for students, hence slowing down the teaching-learning process. These challenges include internet accessibility and speed and irregular power supply, coupled with students' capabilities to use information technology (IT). The challenges sometimes do not allow students to use IT effectively. Besides, Kumar et al. (2020) clarify that IT has a challenge of time and location flexibility. Once lessons have been programmed, it is not possible to readjust in case a student encounters difficulty and misses out on learning.

Supervisors' challenges

Regarding complexities relating to supervisors, Askew et al. (2016) assert that supervisory relationships chiefly contribute to the success of the PhD journey. The quality and frequency of student-faculty interaction, especially the supervisory relationship, is identified as the central regulator of PhD student engagement. However, other scholars (e.g. Zaheer & Munir, 2020) report that distance supervision in virtual communities pose a challenge to the occurrence of effective academic collaborations. Specifically, Askew et al. (2016) report a destructive atmosphere that includes competition, conflicts and inadequate supervision, among others. Further, Askew et al. stress that there is no constructive supervisory relationship where supervisors give support and feedback to their supervisees. They also report that interaction with other researchers and supervisors, as well as a supportive atmosphere in one's own research community also has limitations. They emphasise that the distance learning approach where student-teacher interaction lacks face-to-face interaction and involves the physical absence of the supervisors hinders relationship-building. The virtual

approach increases the responsibility of the supervisors in building an interactive system where students feel confident and supported during their research work.

Similarly, Zaheer and Munir (2020) report that PhD research challenges students not only when it involves the conventional approach but is even more challenging when it is done online. Equally, Kemoli and Ogara (2015) argue that a supervisor plays a key role in the supervision process (e.g. mentoring and counselling of the student), which is essential for good PhD research. However, Rapanta et al. (2020) claim that during the COVID-19 emergency situation, teachers are suddenly tasked to change over to online teaching using tools that the majority are not so familiar with. In this regard, Dhawan (2020) observes a challenge for teachers to adapt to online approaches in terms of content to be covered, methodologies, and time for engaging students. Askew et al. (2016) also state that supervisors are overwhelmed with heavy and inequitable workloads due to diverse student needs. Askew et al. further note that the workload is unevenly distributed since it does not take into account the number of students per supervisor.

Dhawan (2020) claims that, just like students, not all teachers have access to all digital devices and the internet, and that the cost of buying those gadgets makes some fail to get in touch with their students. Further, Askew et al. (2016) report that supervisors are challenged by internet accessibility, and some supervisors, according to Nash's (2021) observation, do not have the ability to use digital devices, which further limits their capacity to communicate with their supervisees.

Askew et al. (2016) report that research supervisors are constrained by time. Supervisors argue that some students either live in remote areas or have their own issues, which makes their research journey very difficult. According to Askew et al., supervisors and students clash over time as they have different programmes which do not allow effective research discussion, hence delaying the students' research progress. Askew et al. (2016) reveal irregular contact between supervisors and their students. They clarify that students involved in distance learning do not often show up in class as they normally do under the conventional approach, which makes them complacent, inactive, and lose contact with their supervisors. Such irregular contact results in dissatisfaction on the part of supervisors to the extent that they (supervisors) forget what they had suggested; thus, a need to start from scratch.

Other researchers (e.g. Askew et al., 2016; Zaheer & Munir, 2020) reveal that students engaged in distance learning are diverse with varied expectations regarding their work and supervisors, which is sometimes problematic. They argue that though diversity is good, it is overwhelming and requires different levels of mentoring on the part of supervisors. Some students expect supervisors to do their work and need frequent supervision, which is impossible, as compared to others who are self-directed and, as such, need less supervision. Further, Askew et al. (2016) reveal that distance teaching poses challenges to instructors since some of their students have no access to the resources, which increases the chances of deception by the students in their work. They argue that being at a distance is sometimes tricky for a teacher to establish the authenticity of the work submitted by the students to determine whether it was truly done by them.

Institutional challenges

Kumar et al. (2020) note that supervisory meetings (e.g. doctoral committee meetings) help teachers to discuss drafts of their students' dissertations. Such meetings help students to do academic work that they cannot do independently. The interaction with their supervisors and knowledgeable peers slowly trains them and develops their research and writing skills. Student preparation in research

methodology studies is only one component of the full, complementary set of technical and critical abilities that are demanded. Such preparation requires students to be directed to university facilities and be offered online support.

Askew et al. (2016) report that the main prerequisites for doctoral training emphasised by supervisors and supervisees are structures and resources such as access to proper research facilities and finances. Dhawan (2020) reports challenges related to designing and developing e-technologies (i.e. e-learning programmes, e-resources and e-content delivery). These technologies require a lot of time and funds, regular maintenance, training of human resources and development of online content.

The preceding literature we reviewed related to the challenges of doctoral research supervision revealed several gaps left by other researchers. For example, scholars (e.g. Dhawan, 2020; Nash, 2020) relied on secondary data to come up with their report with no empirical validation. Askew et al. (2016) only focused on supervisors as a factor, leaving out other factors which impact on doctoral research supervision. Other researchers (e.g. Rapanta et al. (2020) never pointed out gaps that their studies were filling to clearly understand their contribution to the body of knowledge. Several authors never based their research on theoretical frameworks and most of their studies lacked strong theoretical rigour. We thus attempted to fill these gaps by exploring multidimensional levels (students, supervisors and institution) of intricacies in the PhD research supervision process.

Coping strategies

Besides studying the complexities of PhD research supervision, some scholars examined the coping mechanisms for these complexities to capture an understanding of how to successfully complete the doctoral journey during the pandemic. Indeed, Borgeson, Sotak, Kraft, Bagunu, Biorserud and Lange (2021) studied the challenges in PhD education due to COVID-19 using a cross-sectional survey of Swedish biomedical sciences graduates. They collected data through the use of questionnaires from biomedical administrators and medical PhD students at eight major universities in Sweden. Their findings indicate that it is important to have more frequent supervision and a diverse array of meeting platforms to provide the best possible supervision for PhD students during the pandemic. Besides, it is important for the students to feel that they have their supervisor's emotional support. In fact, Gray and Costa (2020) instead suggest the need to employ several ways of communicating, specifically increasing the use of online platforms to enhance students' research. Besides, Hossain, Ying and Saha (2020) report that the pandemic resulted in a reduced frequency of physical in-person meetings and an increase in virtual supervision via alternative platforms (e.g. email or telephone).

Similarly, Kumar et al. (2020) report public conferences as a coping strategy that gives access to IT support for students in their guide to online supervision for graduate education in the UK. They show how the library personnel and distance education support staff provide a virtual campus environment for distance education students. Based on that environment, they report that institutions had developed online discussions to provide information and support for postgraduate research students.

Nash (2021) investigated mentorship and supervision undertaken during COVID-19 to reduce graduate student anxiety and depression based on the work of the health narratives research group in the Faculty of Medicine, University of Toronto. He reveals that there were measures in place to put more resources at the disposal of graduate students to address the challenge of students faced with anxiety and depression. However, Nash reports that even with more resources made available, mental health issues had been rising at an alarming rate.

It is worth noting that most literature related to the complexities of doctoral research supervision during COVID-19 rarely highlights the strategies available to aid effective PhD supervision! Thus, the need to examine key coping mechanisms for PhD students' research supervision process aimed at their successful completion of their studies. Other authors, such as Borgeson et al. (2021), reveal that strategies have limitations; thus, their findings cannot be generalised because the doctoral programmes in Sweden may differ from those in other countries. In fact, the Swedish PhD studies are free of charge, and students are entitled to generous parental leave and childcare facilities, rendering students less vulnerable compared to students in other countries. Sweden also had very few COVID-19 lockdown regulations and restrictions, which is unique worldwide, and set it from even other Scandinavian countries.

Methodology

We employed an interpretative approach and used the phenomenological research design because we aimed to understand the participants' perceptions and lived experiences of the challenges of the PhD research supervisory process and the coping strategies in a school at a premier university in Uganda. We selected nine study participants using purposive sampling and we collected data from them using mobile android phone audio-recorded interviews. The participants included PhD supervisors and their students who were either at their proposal or report writing stages. Among the supervisors, we interviewed two male lead-research supervisors since the school lacked females. The students at the proposal level were four (two male and two female). The rest (two male and one female) whom we obtained from a male-dominated population were writing their final reports. For ethical purposes, we kept the participants and the university anonymous and assigned each a pseudonym, thus Isaac and Stephen for supervisors; Bosco, Diana, Lukia and Tom for students at the proposal level; and Emma, Fred and Sarah for those at the report writing stage; and premier for the university. After data collection, we transcribed, coded and analysed the data with the use of the thematic content analysis technique. We then reported the study findings by use of a narrative style of thick descriptions.

Study Findings and Discussion

Profile of the study participants

We grouped the PhD student study participants into two groups based on their sex (female and male) and stage of research (proposal and report writing stage), with the expectation that they might perceive the challenges of the supervisory process due to the pandemic differently. However, the responses, irrespective of the respondents' sex as well as the stage of research they were at, were similar. This finding agrees with that of Borgeson et al. (2021), who reported similarities in perceptions between the groups of educational stages of PhD students regarding the pandemic-related restrictions.

Empirical findings

Several study participants reported numerous supervisory challenges they faced during the COVID-19 pandemic. We categorised the key challenges according to the study objectives, namely challenges at 1) student, 2) supervisor and 3) institutional levels. The details of the findings are provided below:

Challenges at student level

A critical analysis of the challenges at this level revealed four core themes, namely: (i) loneliness; (ii) ICT challenges; (iii) unexpected study costs; and (iv) family disturbances.

Loneliness. Some participants reported loneliness as their challenge. For instance, Diana, a student at proposal writing stage reported, "...I could not do all by myself. The pandemic and the SOPs cut down the physical sharing with my PhD peers... I needed especially academic support.... I lost my academic writing skills that I had acquired..." Bosco, Diana's counterpart, similarly reported, "The lockdown disrupted my academic environment. I worked alone and no one could guide me..." Besides, Sarah at report writing stage, reported, "...I experienced loneliness even when I tried to endure ..." Isaac, one of the supervisors stated, "I could no longer meet my students. They were on their own and we were each struggling for life..." These responses meant that the PhD students, irrespective of their stage of research, desired to physically interact with their peers and supervisors to iron out their individual academic challenges during the pandemic. This finding agrees with the observations of Kumar et al. (2020), who reported that students were isolated and lacked a sense of connection with the supervisor when they worked on their research at a distance. Kumar et al. reiterated that students who are thus isolated lack peer support and a scholarly environment for collaboration to enhance their writing skills. However, this finding contradicts those of Ujang (2021), who reports that learners and lecturers communicated via the internet regularly even under the threat of the COVID-19 pandemic. The situation at the premier university could be that internet costs in Uganda still remain high. During COVID-19 staff and students were preoccupied with eking out a living since they were not working due to the lockdown in addition to the poor connectivity, other factors notwithstanding.

Information and Communications Technology (ICT). Several participants identified the challenges related to the use of ICT. For instance, Bosco reported that he had a challenge of accessing some documents unless he was at the university. Fred, who was at the report writing stage, particularly pointed out, "... I am not so conversant with modern technology such as Zoom.... I experience poor internet connectivity..." Similarly, Tom, at the proposal writing stage, reported that "...unlike at the university, internet connectivity was very poor and power supply was irregular..." Isaac reported that "ICT challenges such as internet connectivity locally affect every person whether student or us supervisors." Another supervisor (Stephen) reported, "...I had my lockdown at my country home where there was no electricity and my solar energy could not provide power needed for charging my gadgets for internet... I ended up getting lost altogether during the lockdown... how about students?" These responses meant that supervisees did not only have inadequate knowledge of the use of ICT but also experienced unreliable internet connectivity and power disturbances while doing their work. These findings concur with those of earlier scholars (e.g. Dhawan, 2020; Kumar et al., 2020; Zaheer & Munir, 2020), who report that e-learning posed technical difficulties such as internet accessibility and speed and irregular power supply, coupled with students' capabilities to use information technology.

Unexpected research costs. Several participants concurred that their studies became unpredictably costly during the lockdown. For instance, Tom reported that "...the study became costly in terms of data, transport, printing and meeting with doctoral peers..." Relatedly, Emma, at report writing stage, reported that "...there was no transport to reach my study respondents. When they released [lifted] the lockdown, transport fares were increased, making data collection costly." Similarly, Sarah narrated, "I was challenged financially... I could not afford data and other financial requirements

[transport, stationary, photocopying and printing] ...” These responses depicted that the unexpected study costs were a hindrance to students’ research progress since most of them were not working yet they were self-sponsored. This finding almost tallies with that of Dhawan (2020), who reports challenges related to the costs of devices and equipment in the use of e-learning programmes.

Family interruptions. An average number of participants, especially married students irrespective of their sex, reported the challenge of family troubles. Precisely, Sarah stated, “... I am married and I have a family... Motherhood and parenting issues alongside my PhD research were difficult. During the lockdown, I had to study from my home. I changed schedules to read at night because my young children could not make me settle for my studies at home.... While at home I had to share my laptop, mobile phone and reading space with my children because at the same time they were also studying online [via Zoom]. Everything was messed up...” Besides, Tom observed that “... being a family man [father and husband], my children were also locked down and they were studying online.... We competed for computer, mobile handset and data, among others.” Likewise, Bosco revealed, “... I had distractors at home. I could not dedicate time to serious academic work.” One supervisor (Stephen) stated, “I deal with mature students with so many family disruptions, who are always on and off even in the normal face-to-face meetings. They were disturbed a lot when they remained at home. Equally, I turned the lockdown into an opportunity to freely interact with my family members as a new normal...” Impliedly, these responses indicate the difficulties students with families faced in scheduling time for their research work. For students and their supervisors alike, staying at home led to other family concerns, such as caring for family members and stress, among others. Besides, the responses meant that the students possibly desired to study in a decluttered, plain and professional environment, yet their respective homes lacked such an environment. These findings concur with those of other scholars (e.g. Dhawan, 2020; Nash, 2021; Pyhalto et al. (2012), who reveal that students expressed problems related to balancing doctoral studies and personal lives when studying at a distance, which created a lot of stress among them. Particularly Dhawan (2020) reports that students’ learning due to the COVID-19 pandemic was depicted in students’ behaviour in terms of distractions, frustration, anxiety and confusion. Borgeson et al. (2021), too, highlight the specific challenge of childcare attested by several students with home-caretaking responsibilities during the pandemic.

Challenges at supervisors' level

At the supervisors’ level, the study participants focused mainly on inadequate supervisors’ support and their ineffective communication as the key challenges.

Inadequate supervisors’ support. In this regard, Tom observed that “...my interaction with the supervisors had gaps Even when we met physically, we could not take a long time. Inability to meet my supervisor physically almost killed (sic) my academic writing skills that were growing and lengthened the journey [research process] ...” Besides, Bosco reported that “... my second supervisor was over-expectant, at times asking for too much. So, I could write and respond hurriedly; as such he remained unsatisfied.” Likewise, Lukia at proposal writing stage, stated that

...my supervisor dragged me and I could not push him. There was no physical presence [in-person meetings] to check on [make arrangements to meet] him. Online supervision made it difficult for my supervisor to explain to me some concepts to understand better... At the beginning of the lockdown [March 2020], he [supervisor] became so busy and was not interested in my research. So, I became stuck...

Similarly, Sarah observed that "...my supervisors used the pandemic to do their other businesses at the expense of supervising us [the PhD students]. When they tried to send short messages [SMS], they did it too late and we missed lots of things such as public defence. This made us worried..." Isaac reported that "supervisory challenges are so real. Where do you expect me to meet my students during the lockdown? That means my students have to struggle on their own." These voices meant that the supervisees experienced unmet support needs (advice, guidance, and care) from the supervisors during the lockdown that negatively impacted their studies. Indeed, there was a general perception among this category of participants that the pandemic brought to light issues at the supervisors' level that might otherwise have gone unnoticed at the school we studied. These findings are in line with the claims of other authors (e.g. Zaheer & Munir, 2020), who reported that distance supervision challenges effective collaboration between students and hinders relationship-building. However, the finding disagrees with the claims of Borgeson et al. (2021), who reported that many students received support from their mentors during the pandemic, with ample opportunities to connect through online meetings, text messages or email. We attribute the disagreement between the other authors to the fact that their studies were conducted in a totally different economic context.

Ineffective communication. Several participants reported gaps created by their supervisors during their communication in the lockdown. For instance, Fred said, "...My supervisors on many occasions failed to respond to my calls..." Besides, Emma reported, "I had no in-person communication with my supervisors to boost my research abilities..." Similarly, Bosco reported, "I tried to send soft copies of my work to my supervisors but they never even opened... To make matters worse, they never even responded to the short messages [SMS] I resorted to." Equally, Lukia intimated that "...my supervisor could not respond to my call. ... I could send work but remained quiet, which affected my progress." The two supervisors hinted on limitations to discussions with their students on mobile handsets during the lockdown. For example, Stephen said, "Even if you are to allow calls from students, for how long will you talk over the phone? What happens is that, once in a while you send text messages but they are inadequate." These voices depict the supervisors' failure to give feedback to their respective students, which left them in a dilemma. This finding tallies with Askew et al.'s (2016) assertion that due to time constraints, research supervisors have irregular contacts with their students which do not allow effective research discussion, hence delaying the students' research progress.

Challenges at institutional level

At institutional level, the participants reported unclear institution research policies and poor communication as challenges.

Unclear research policy of the institution. In this regard, Tom reported that "...the sudden closure of the university presumably caused more problems of uncoordinated implementation of the supervisory policy in the new normal. The school had not embraced the new normal [using Zoom for defences] but rather still believed in the former in-person contact to handle doctoral meetings". Bosco, too, reported that "...originally, I was certain of leaving home for the university for academic needs. However, during the lockdown our school neither opened nor provided opportunities for the scholarly environment..." Similarly, Lukia reported that "...defences [viva] were cut off ..." Fred, too, reported that "... The school failed to come up with a standard mode of supervision during the crisis..." The supervisors concurred on the issue of unclear research policy. In particular, Isaac lamented: "The pandemic was in fact an uncommon scenario that was not thought about by the

university itself that left, caught us unaware. Therefore, everyone did things as he or she desired...” These responses meant that due to sudden closure of the university, the research process that had worked before the pandemic could not work in the resultant crisis (i.e. new normal) that prevailed due to the SOPs. These findings agree with Kumar et al.’s (2020) observation that the absence of supervisory meetings (e.g. doctoral committee meetings) deprives teachers of the opportunity to discuss their students’ research work and to train them to develop their research and writing skills. Similarly, Askew et al. (2016) report that the main prerequisites for doctoral training supervisors and supervisees emphasise are structures and resources such as access to proper research facilities and finances.

Poor communication. A few participants reported the challenge of poor communication within the school. For instance, Sarah observed: “...I needed more guidance from the school on different research-related issues. Our school administrators never talked to students to give them hope and courage; instead the school abandoned us [students]”. Additionally, Sarah narrated that “...school administrative secretary was not ever regular in office and ever complaining about a busy situation and made herself a ‘small god’ in the office. Even when the president released [lifted] the lockdown, offices remained closed. They could not respond to calls from students.” Similarly, Lukia reported, “The school has no clear way of addressing challenges we [students] face. In case I have an issue, I have to address it directly to the Dean of the school. We do not have functional committees to task supervisors to report their supervisees’ progress. Even the policies in place do not befit the pandemic era.” Likewise, Fred reported that, “We [students] experience a challenge of communication shutdown that keep us in a blackout.... When students call for inquiries, the secretaries do not pick. We expected communication from the school regarding conferences but in vain...” Isaac, a supervisor, noted that “...at our school, it is to whom it may concern. We hardly know what is taking place.” These responses imply that quality and frequency of communication from the school to students were compromised during the pandemic possibly because of instant double closure of the university in March 2020 and June 2021, yet changing over to online communication (new normal) was seemingly difficult. This finding is almost similar to that in Dhawan’s (2020) report that challenges related to designing and developing e-technologies are costly in terms of time and funds – that they require regular maintenance, training of human resources and development of online content.

Coping strategies

The study participants reported varying strategies to cope with the PhD research supervisory challenges during the COVID-19 pandemic that they identified. However, all the participants were either silent on or seemed to lack consistency in applying the strategies at institutional level. The key strategies included the following:

Accepting to study in isolation and rescheduling time for studies. Though this strategy featured most, it appeared to be a consolation to the students and it never helped them to progress as well as they expected. As they attempted to press to complete their studies, the students occupied themselves academically during the lockdown. Most of their voices indicated that there was no clear and consistent way they could work on their research projects. Lukia, for instance, reported, “...I settled and read widely alone...” Similarly, Bosco disclosed, “I worked alone.... I decided to go to the office since there were no interruptions. At home, I worked at night...” While Fred revealed, “I looked for data bundles and also found a place where I could write on my own since there was no initiative from our school. I worked harder to find loopholes in my work and sought assistance

from other colleagues [peers] and supervisors [academics] outside our school..." The supervisor Isaac, in particular, said that "...there was no way out, students and us supervisors had to continue struggling until when the situation went back to normal." These responses indicated two key issues, namely: 1) the students were committed and took the initiative to overcome their individual PhD research challenges with neither their supervisors' nor their school's input, and 2) the PhD supervisors abandoned their supervisees and the school administration never made any follow-up. These findings contradict Borgeson et al.'s (2021) results that supervisors provided support to their PhD supervisees and arranged opportunities to work from home and/or in a safer environment. Indeed, they established an online calendar to avoid crowds and encouraged Zoom meetings. We are, therefore, free to state that at the school that we studied, the absence of such a coping mechanism constituted a nightmare during the period of the lockdown.

Use of several ways of communication, including emails and online peer study groups. In this regard, Bosco intimated, "...I kept checking my emails to find out whether my work had been sent to the supervisor. I also kept consulting the supervisor by emailing and texting till they responded." Similarly, Lukia reported:

... We started peer mentorship in our cohort using WhatsApp and Zoom for discussions.... Each of us [students] could present work [proposal drafts] to be critiqued by peers. We ended up improving the quality of our work... However, we were limited by the failure of the peers to identify weaknesses that needed specific improvement... We also enrolled in the university PhD forum that had online research discussions.... We got links from other universities that kept us alive [active] by forwarding relevant research resources.

These responses imply that the students changed over to a 'new normal' – online peer doctoral meetings – to equip themselves with research skills. Indeed, the pandemic seemed to have changed the format of communication and the mode of supervision from in-person to online mode. These findings align with those of Kumar et al. (2020), who report online conferences and discussions as coping strategies which provide information and support for postgraduate research students. The findings also agree with Hossain, Ying and Saha's (2020) observation that the pandemic led to changes in the format of the supervision process, as meetings moved primarily online with an increase in virtual supervision via alternative platforms (e.g. email or telephone) and with the suggestions of Gray and Costa (2020), who identified the need to increase the use of online platforms. Regarding strategies, the supervisors remained silent. Their silent voice indeed meant that they were of little help to students with regard to communication coping strategies and seemingly neither the school nor the university rendered such help in the students' research supervisory endeavours. However, our study finding indicates that students experienced virtual meetings only with their peers (fellow PhD students) and none with their supervisors, or any organised by their school! Equally, the peer online meetings had limitations. Thus, there is a need for the premier university to come up with clear strategies to handle PhD supervisory issues during the pandemic, particularly during the lockdown.

Conclusion and Recommendations

As the COVID-19 pandemic swept through a school at a premier university, it created an unprecedented crisis with momentous challenges which included the following: (1) The doctoral students experienced loneliness, poor internet connectivity, unexpected costs and family interruptions. (2) The supervisors inadequately supported their students and ineffectively communicated with them. (3) The institution had communication gaps and its research policy did not benefit the research

supervisory process during the pandemic. (4) Individualised coping strategies for the challenges that could not be institutionalised. We, therefore, recommend that the school, in particular, and the premier university, in general, should: (1) Ensure digital equity where every student has access to the required online application resources they desire to use, train them in ICT use, and schedule time when they can meet with their peers and supervisors to avoid loneliness. (2) Urgently conduct refresher supervisory training to ensure that all supervisors are conversant with the new and emerging practices, such as providing online support infrastructure as well as an enhanced supportive and caring role regarding students' wellbeing during any crisis. (3) Employ alternative ways of communicating, but specifically increase the utilisation of a more robust and frequently accessible multitude of online (ICT) tools and platforms (email/messages and telephone). (4) Come up with contingency plans which are institutionalised on how to conduct online research supervision to prepare for other similar emergencies which may disrupt academic progress in future.

Suggested Areas for Further Research

First, we explored the challenges of PhD research supervision in one school and in a premier university. Thus, other voices of graduate students from this school and voices from the rest of the schools within this university and other universities need to be explored. Second, being a qualitative study, the findings cannot be generalised. Therefore, we suggest that there is a need for further studies to enhance generalisability. Third, we conducted this study in a university in a less developed country where ICT use is not much rooted in the research process; thus, our findings may be limited to similar contexts.

References

- Askew, C., Dixon, R., McCormick, R., Callaghan, K., Ying Wang, G., & Shulruf, B. (2016). Facilitators and barriers to doctoral supervision: A case study in health sciences. *Issues in Educational Research*, 26(1), 1-9. Retrieved from <http://www.iier.org.au/iier26/askew.pdf>
- Almusaed, A., & Almssad, A. (2020). The role of the supervisor on developing PhD students' skills. In R. Thripp & I. Sahin (Eds.), *Proceedings of IHSES 2020 International Conference on Humanities, Social and Education Sciences* (pp. 25-36). Washington, DC, USA. ISTES Organization.
- Bal, I.A., Arslan, O., Budhrani, K., Mao, Z., Novak, K., & Muljana, P.S. (2020). The balance of roles: Graduate student perspectives during the COVID-19 pandemic. *Association for Educational Communications & Technology*. <https://doi.org/10.1007/s11528-020-00534-z>
- Borgeson, E., et al. (2021). Challenges in PhD education due to COVID-19-disrupted supervision or business as usual: A cross-sectional survey of Swedish biomedical sciences graduate students. *BMC Medical Education* (21)294-305. <https://doi.org/10.1186/s12909-021-02727-3>
- Costa, K. (2019). A systematic review of challenges in research supervision at South African universities. *Global Centre of Academic Research*, 1-45. doi: 10.20944/preprints201812.0305.v1
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online learning readiness among university students in Malaysia amidst Covid-19. *Asian Journal of University Education*, 16(2), 45. doi:10.24191/ajue.v16i2.10294
- Daniel, S. J. (2020). Education and the COVID-19 pandemic: Prospects. <https://doi.org/10.1007/s11125-020-09464-3>.

- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems* 0 (0), 1–18. doi: 10.1177/0047239520934018
- Gray, M.A., & Crosta, L. (2019) New perspectives in online doctoral supervision: A systematic literature review. *Student Continuing Education* 41(2):173–90.
- Helfer, F., & Drew, S. (2013). Small-scale investigation into engineering PhD student satisfaction with supervision in an Australian university campus. *Conference Proceedings of December 2013AAEE Conference, Gold Coast, Queensland, Australia*.
- Hossain., S.F.A., Ying, Y., & Saha, S.K. (2020). *Systematic mobile device usage behavior and successful implementation of TPACK based on university students' need*. Cham: Springer International Publishing.
- Kemoli; A. M., & Ogara, W. O. (2015). Exploring the intricacies of the contemporary PhD research process. *East African Medical Journal*, 92(6), 308-314.
- Kumar, S., Kumar, V., & Taylor, S. (2020). *A guide to online supervision*. UK Council for Graduate Education. Retrieved from <https://supervision.ukcge.ac.uk/cms/wp-content/uploads/A-Guide-to-Online-Supervision-Kumar-Kumar-Taylor-UK-Council-for-Graduate-Education.pdf>
- Government of Uganda. (2013). *Uganda vision 2040*. Kampala, Uganda: Government of Uganda.
- Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education*, 33 (3), 267–281. doi: 10.1080/03075070802049202
- Liguori, E., & Winkler, C. (2020). From offline to online: Challenges and opportunities for entrepreneurship education following the COVID-19 pandemic. *Entrepreneurship Education and Pedagogy*, 3(4), 346–351. <https://doi.org/10.1177/2515127420916738>.
- Masek, A., & Alias, M. (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. Doi: 10.13189/ujer.2020.080633
- Nash, C. (2021). Improving mentorship and supervision during COVID-19 to reduce graduate student anxiety and depression. 12(11). doi: org/10.3390/challe12010011
- Onyema, E.M., Eucheria, N.C., Obafemi, F. A., Sen, S. Atonye, F. G., Sharma, A., & Alsayed, A. O. (2020). Impact of coronavirus pandemic on education. *Journal of Education and Practice*, 11 (13), 108 –121. doi: 10.7176/JEP/11-13-12
- Pyhalto, K., Vekkila, J., & Keskinen, J. (2012). Exploring the fit between doctoral students' and supervisors' perceptions of resources and challenges vis-à-vis the doctoral journey. *International Journal of Doctoral Studies*, 7, 395–414.
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital Science and Education*, 2, 923–945. Retrieved from <https://doi.org/10.1007/s42438-020-00155-y>
- Ujang, S. (2021). *The implementation of the online thesis supervision during pandemic Covid-19 at one of graduate and postgraduate programs in Indonesia*. doi: 10.23960/aksara/v22i1.pp43-53
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2020). *Covid-19 impact on education data. COVID-19 education disruption and response*. Paris, France: UNESCO.
- World Bank. (2020). *Guidance note on using learning assessment in the process of school reopening*. Washington, DC: World Bank Group.
- World Health Organization (WHO). (2020). ILO Standards and COVID-19 (coronavirus) FAQ. Key provisions of international labour standards relevant to the evolving COVID- 19 outbreak. NORMES, Version 1.2. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/publication/wcms_739937.
- Zaheer, M., & Munir, S. (2020). Research supervision in distance learning: Issues and challenges. *Asian Association of Open Universities Journal*, 15(1), 131–143. doi: 10.1108/AAOUJ-01-2020-0003Zraick, K., & Garcia, S. (2020). A list of what's been canceled because of coronavirus: A brief list. New York Times. <https://www.nytimes.com/article/cancelled-events-coronavirus.html>.

Author contributions: All authors contributed equally to this manuscript.

Data and materials: Data can be obtained from the corresponding author.

Consent for publication: All authors consent to the publication of this paper.

Competing interests: The authors have no competing interests.