



# The Impact of COVID-19 on Completion of PhD Programmes in Public and Private Universities: Experiences of Supervisors and Graduate Students in Kenya

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## Article History

Received: 2023-11-02

Revised: 2023-12-19

Accepted: 2023-12-27

Published: 2023-12-28

## Keywords

COVID-19

Education

Graduate students

Supervisors

## How to cite:

Ileri, N. W., Ndiao, E. O., Mbogo, R. W., Omondi, A. W., & Mauki, M. M. (2023). The Impact of COVID-19 on Completion of PhD Programmes in Public and Private Universities: Experiences of Supervisors and Graduate Students in Kenya. *Research Journal of Education, Teaching and Curriculum Studies*, 1(1), 37-50.

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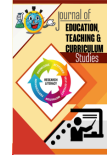


## Abstract

This research aimed to establish the psychosocial, social and economic impact of COVID-19 on the supervision and writing of dissertations in Kenyan universities. The study adopted a mixed-method design incorporating quantitative as well as qualitative approaches. A total of 40 questionnaires were distributed, 30 to doctoral students and 10 to doctoral supervisors from both public and private universities. The questionnaires included both structured questions as well as unstructured questions. The questionnaire was used to ascertain the influence of the pandemic on many sectors, including education, more specifically, the doctoral dissertation writing and supervision process. This study was guided by the following research questions: What are the psychological impacts of COVID-19 on dissertation writing and supervision in completing a PhD in both public and private universities in Kenya? What are the social impacts of COVID-19 on dissertation writing and supervision in completing a PhD in both public and private universities in Kenya? What are the economic impacts of COVID-19 on dissertation writing and supervision in completing a PhD in both public and private universities in Kenya? The study found that the pandemic affected students' completion rates as it affected both the students, supervisors and the universities. While this crisis had profoundly disruptive educational implications, it did not begin with predetermined outcomes. The nature of communities' and nations' collective and systemic responses to these disruptions determined the extent to which people were affected by them.

## Introduction

The COVID-19 pandemic remains one of the most devastating public health challenges of the 21st century. It profoundly impacted academic systems globally, and stakeholders in the academic realm grappled with multiple challenges during the pandemic (cf. Mandillah, et al., 2022). There is a shortage of studies done to establish the subjective burden and views on the COVID-19 pandemic's impact on institutions of learning for both workers and learners. The COVID-19 pandemic did not stop at national borders but affected people regardless of nationality, level of education, income and gender



(WHO, 2020; Mbogo, et al., 2020). But the same has not been true for its consequences, which have hit the most vulnerable demographics the hardest. Attrition of doctoral students has been a well-recorded and problematic global phenomenon before COVID-19, partly due to dissertation supervision challenges (Rigler, et al., 2017). Our previous study, before COVID-19, investigated supervision challenges among doctoral students and supervisors (Mbogo, et al., 2020). This ensuing study aimed to establish the psychosocial and economic impact of COVID-19 on the supervision of dissertations among students and supervisors in Kenyan universities, specifically in Nairobi, where universities could transition to virtual learning soon after global and national closures of institutions.

The crises caused by COVID-19 exposed the many inadequacies and inequities in the Kenyan education systems. These range from poor access to broadband internet and computers needed for online education to a supportive environment to focus on learning and the misalignment between resources and needs (Areba & Ngwacho, 2020).

The COVID-19 pandemic harmed higher education as universities closed their premises and countries shut their borders to contain the spread of the disease (Elnaggar & Sharaf, 2022). Although higher education institutions quickly replaced face-to-face lectures with online learning, these closures affected learning and examinations and international students' safety and legal status in their host countries (Elnaggar & Sharaf, 2022). The impact included but was not limited to reduced public financing of education from their countries, disruption in international student mobility, loss of instructional time delivered in a school setting, challenges in students' learning during school closure, as well as constraints in teachers' preparedness to support digital learning among others. Perhaps most importantly, the crises raise questions about the value offered by a university education, which includes networking, social opportunities, and educational content.

To ensure the continuity of education despite the lockdown, higher education institutions resorted to using technology to offer online classes and learning experiences as a substitute for in-class interactions. However, many universities struggled and lacked the experience, infrastructure, and time to conceive new ways to deliver instruction and assignments. Examinations were also affected, disrupting students' learning trajectories and progression. Although many higher education institutions had been offering online courses before the pandemic, few students considered it as the sole alternative to physical in-person learning. For example, in the United States, only 13% of first-cycle tertiary students were exclusively enrolled in distance education courses in 2017 (NCES, 2019). The academic year was severely compromised with the reopening of institutions following the fall in the number of cases in most countries. It remained restricted, forcing international students to deal with the reality of online learning.

Regarding the supervision of doctoral dissertations, studies found several challenges. Wisker et al. (2021) identified the "challenges and affordances" of remote supervision of a dissertation to be centred around five themes, namely, "intellectual/cognitive, instrumental, professional/technical, personal emotional and ontological". This implies multifaceted dimensions in navigating dissertation supervision during the pandemic. Börgeson et al. (2023) found that dissertation writers in Sweden felt supported when their supervisors used multiple ways (email, text messages, etc.) to communicate with them during the pandemic. In South Africa, Pillay and Jarbandhan (2023) found that economic inequalities among students determined their capacity to access supervision services online; some had outdated equipment or could not access Wi-Fi. No known study had been done in Kenya to explore how doctoral dissertation supervisions were navigated during the pandemic at the time of this study.



The study, therefore, sought to investigate how COVID-19 affected conveniently selected dissertation writers and supervisors in Kenya Universities.

### **Theoretical Underpinnings**

This research used the Ecological systems theory by Urie Bronfenbrenner (1994). The theory helps in articulating people's responses to the macro environment of the pandemic, which was characterized as disruptive (Colpitts, Usick, & Eaton, 2020; Elangovan, Mahrous, & Marchini, 2020), stressful (Guidotti Breting, et al., 2020; Hung et al., 2020; Elangovan, and anxiety-producing (Guidotti Breting, et al.; Cao et al., 2020). The theory purports that people reflect on experiences interacting and intersecting dimensions across the different environments: microsystem, macrosystem, mesosystem, exosystem and chronosystem. The microsystem refers to the current settings, which refer to the different universities' factors regarding effective and supportive learning environments, positive supervisor-supervisee relationships, and positive peer interactions. Any change in the immediate environment, for example, a shift to online supervision, may have positive or negative effects. Since the universities were closed during COVID-19, different colleges adopted various approaches to supervise students' dissertations. Moreover, the theory holds that people encounter different environments and events throughout their lifespan, which may influence their behaviours in one way or another in varying degrees over an extended period. Hence, students' responses to supervision during the pandemic may have had diverse effects.

### **Literature Underpinnings**

This paper seeks to establish the impact of COVID-19 on dissertation writing and supervision in both public and private universities in Kenya. The study of literature sought to garner research knowledge about the challenges institutions faced during the COVID-19 pandemic.

The novel coronavirus disease was first reported in December 2019 in Wuhan City, Hubei Province, of the People's Republic of China. Although there is no consensus on its origins, the virus is suspected to most likely have been passed on to humans from wild animals, e.g., bats, at a meat market in Wuhan city (Huang et al., 2020). This is because the first documented occupational cohorts at risk were those working in seafood and wet animal meat wholesale markets (Nienhaus & Hod, 2020). The COVID-19 pandemic will probably be historically recalled as a watershed public health crisis (Nienhaus & Hod, 2020). Its profound adverse effects have had ramifications that traverse almost all aspects of human life at the individual, company, country, regional, continental, and global levels (Kuper, et al., 2021). The COVID-19 pandemic revealed the glaring lack of congruence in the risks and damages frontline workers are exposed to vis-a-vis the safety and security (financial, social, and health) offered to them (Nienhaus & Hod, 2020). As cases escalated, learning institutions and healthcare workers were identified as high-risk groups for acquiring this infection.

A study conducted at the epicentre of the COVID-19 outbreak in Wuhan City, China, found that 13.5% of health professionals treating COVID-19 patients showed signs of depressive disorder, 24.1% showed signs of anxiety disorder, and 29.8% showed signs of stress. Similarly, 49.3% of health workers in Italy reported experiencing post-traumatic stress symptoms, 24.7% symptoms of depression, 19.8% symptoms of anxiety, 8.27% insomnia, and 21.9% high-perceived stress (Williams et al., 2020).

A meta-analytic study was done in August 2020 and included 61 studies, mainly done in hospitals in Asia. It investigated the mental health status of healthcare workers during the COVID-19 pandemic. Cognizant of the fact that most of the studies did not use validated instruments to assess mental health



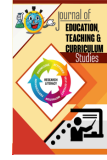
status, the study showed an increased pooled prevalence of anxiety, depression, acute stress, and post-traumatic stress disorders in health care workers (HCWs) (Kramer et al., 2020). A systematic review of the same trajectory concluded that poor mental health outcomes were associated with exposure to high-risk environments, with strict regulations involving quarantine, poor organisational support, role-related stressors, and a lack of subjectively perceived safety (Brooks, 2020). These findings assert increased subjective stress and concerns about the future of families and an increase in subjective workers against COVID-19 (Christa, 2020). However, German HCWs rated the overall availability of personal protective equipment as positive (Kramer et al., 2020). “The high level of psychological distress prompts the need to provide sufficient support, especially for this cohort, to reduce their risk of developing stress-related disorders now and in the future” (Arndt et al., 2020). Nevertheless, the mental health burden may lead to burnout and force staff to take sick leave or leave their professions altogether. It can cause doctoral students to give up on their studies, cause delayed feedback from dissertation supervisors and increase doctoral attrition.

In the realm of financial losses, the COVID-19 pandemic affected workers' incomes in many ways (de Miquel et al., 2022). COVID-19 has led to psychological outcomes and trauma that result from experiences of loss, whether of a loved one, income, or freedom, as well as anxiety that results from the uncertainty that comes with a new global pandemic (Razai, 2020). Some of these losses were economic; some lost employment or a business that had been their livelihood. Government-initiated lockdowns orchestrated other losses that affected education (Engzell, et al., 2021) and peer associations, which are crucial for development. According to Razai (2020), social distancing, lockdowns, quarantines, and self-isolation led to disconnections due to restrictions on social gatherings, entertainment places, or the library. Isolation affects the mind and causes anxiety; it makes people feel lonely, frustrated, bored, fearful, hopeless, and depressed, among other mental issues (Sher, 2020). Doctoral students were not spared these negative impacts of COVID-19 and related stress, which affected their academic progress (Mathuva, Nassiuma & Mbogo, 2023).

However, the challenges did not end with the observed crises. Constricted spending on education continues to be compromised and may persist in the coming years. As public funds got re-directed to health and social welfare, long-term public spending on education is at risk despite short-term stimulus packages in some countries (Sulaiman, 2021). Private funding will also become scarce as the economy weakens and unemployment rises (Sulaiman, 2021). At the tertiary level, the decline in international student mobility following travel restrictions is already reducing the funds available in countries where foreign students pay higher fees (Devi & Subbulaksmi, 2021). More widely, the lockdown exacerbated inequality among workers. While teleworking is often an option for the most qualified, it is seldom possible for those with lower levels of education, many of whom have been on the front lines in the response to the pandemic, to provide essential services to society. Doctoral students in Africa are usually leaders in various sectors of society. They had to be at the forefront to offer solutions to the pandemic crisis as they also took care of their health and their families. These ubiquitous responsibilities compounded stress levels for dissertation writers and supervisors during COVID-19 (Mathuva, Nassiuma & Mbogo, 2023).

### **Methodology**

The study adopted a mixed-method design incorporating quantitative as well as qualitative approaches. The study's target population were doctoral students and supervisors from public and private universities in Nairobi, Kenya, who were actively in session when the COVID-19 pandemic was raging. The study employed a purposive sampling methodology to identify conveniently



accessible dissertation writers and supervisors who eventually participated as respondents. A total of 40 questionnaires were sent out digitally, 30 to students and 10 to supervisors, of which 30 were filled correctly and returned. Of these, 26 were doctoral students, while 4 were doctoral supervisors. The questionnaires had both close-ended and open-ended questions. They sought to get the views and experiences of both the doctoral students and supervisors on the impact of COVID-19 on the completion of PhD studies. The results were analysed using descriptive statistics and thematic analysis.

### Quantitative Findings

#### *Doctoral students' views about the impact of COVID-19 on dissertation supervision*

The study sought to determine the impact of COVID-19 on the supervision of PhD students in public and private universities in Kenya. Descriptive statistics based on students' and supervisors' views about the impact of COVID-19 on the supervision of PhD Students are presented in Tables 1 and 2, respectively. The scale used was as follows: Very great extent (1), great extent (2), moderate extent (3), small extent (4) and minimal extent (5).

*Table 1: Students' views on impact of COVID-19 on supervision of PhD Students*

Students' views	N	Mean	Std. Deviation
The supervisors who contracted the disease were not available for the students	26	2.88	1.73
The supervisors were difficult reach because the university was closed	26	2.77	1.53
Social distance rules made physical meetings with supervisors impossible	26	1.81	1.17
Students had to resort to online/virtual meetings with their supervisors	26	1.62	1.24
Feedback from supervisors was delayed due to disruption of learning by the pandemic	26	2.35	1.23
The stress from the pandemic affected the relationship between supervisors and students	26	2.92	1.35
Supervision became more costly to students as virtual meetings required data bundles	26	2.27	1.43
Some supervisors are used to physical meetings and were not willing to engage online with the students	26	3.46	1.61
The closure affected the moral support graduate students get from one another when they are together	26	2.12	1.24
Supervisors did not give feedback to students in good time	26	2.96	1.37

Results in Table 1 indicate that most of the students agreed, to a great extent, students had to resort to online/virtual meetings with their supervisors (mean=1.62), that social distance rules made physical meetings with supervisors impossible (mean=1.81), the closure affected the moral support graduate students get from one another when they are together (mean=2.12), supervision became more to students' costly as virtual meetings required data bundles (mean=2.27), and feedback from supervisors was delayed due to disruption of learning by the pandemic (mean=2.35). On the other



hand, many of the students agreed, to a small extent, that some supervisors were used to physical meetings and were not willing to engage online with the students (mean=3.46).

*Table 6: Supervisors' perspective views about impact of COVID-19 on supervision of PhD Students*

Supervisors' perspectives	N	Me an	Std. Deviation
Some students disappeared during the pandemic period	4	2.5	1
The pandemic slowed down the progress of the students	4	2.3	1.5
Students did not respond to feedback in good time	4	1.5	0.57
Students were in places where they struggled with internet connections	4	2.5	1.29
The university closure affected the student's access to library resources	4	2	0.81
The stress from the pandemic affected the student's concentration on their thesis	4	1.8	0.95
Being away from their colleagues affected their motivation	4	2.5	1.29
Financial challenges due to impact of Covid-19 affected the students' progress	4	2.3	0.5
Students did not adhere to timelines for submitting work as agreed with their supervisor	4	1.8	0.5
Students faced challenges of balancing their studies with other responsibilities in the family during this time	4	1.5	0.57

Results in Table 2 indicate that a significant number of the supervisors agreed to a great extent with the view that students did not respond to feedback in good time (mean=1.5), students faced challenges of balancing their studies with other responsibilities in the family during this time (mean=1.5), stress from the pandemic affected the students' concentration on their thesis (mean=1.8), students did not adhere to timelines for submitting work as agreed with their supervisor (mean=1.8), the pandemic slowed down the progress of the students (mean=2.3), and financial challenges due to impact of COVID-19 affected the students' progress (mean=2.3).

*Doctoral supervisors' views about contextual factors affecting quality of supervision during the pandemic period*

The study sought to assess the contextual factors contributing to such challenges. Descriptive statistics based on doctoral supervisors' views about contextual factors affecting quality of supervision during the pandemic period are presented in Table 3. The scale used was as follows: Very great extent (1), great extent (2), moderate extent (3), small extent (4) and very small extent (5).



*Table 3: Doctoral supervisors' views about contextual factors affecting quality of supervision during the pandemic period.*

Contextual factors	N	Mean	Std. Deviation
Supervisors have other responsibilities apart from supervision	4	1.5	0.577
The pandemic disrupted the university calendar which also affected completion timelines	4	1	0
Lack of supervision regulation for evaluating the supervision of supervisors during the pandemic	4	2.25	0.957
Lack of facilitation from university with facilities or remote supervision	4	1.75	0.957
Non-enforcement of supervisory regulations during the pandemic	4	2.25	0.957
No code of ethics guiding supervision process during the pandemic	4	2.5	1.291
Physical interaction between supervisor and students was affected by university closures	4	2.5	1.732
Resource constraints to have supervisory meetings online	4	2.25	0.957
Insufficient training on effective virtual supervision	4	2	0.816
Weak structure on remote thesis supervision	4	2.25	0.957
Ineffective monitoring and evaluation of supervision during the pandemic	4	2.5	1.291
Inefficient communication between supervisors and students during the pandemic	4	2.5	1.291
Disruption of university calendar affected student motivation and drive for progress	4	2.25	1.258

Results in Table 3 indicate that a significant number of the supervisors agreed to a great extent that the pandemic disrupted the university calendar which also affected students' completion timelines (mean=1), lack of facilitation from university with facilities or remote supervision (mean=1.75), non-enforcement of supervisory regulations during the pandemic (mean=2.25), resource constraints to have supervisory meetings online (mean=2.25), insufficient training on effective virtual supervision (mean=2), weak structure on remote thesis supervision (mean=2.25), and disruption of university calendar affected students' motivation and drive for progress (mean=2.25).

*Doctoral supervisors' views about ensuring effective supervision during pandemics*

The study sought to find out strategies recommended by students and supervisors to provide quality supervision in a timely manner during such outbreaks and crises. Descriptive statistics based on doctoral supervisors' and students' views about ensuring effective supervision during pandemics are presented in Table 4 and 5, respectively. The scale used was as follows: Very great extent (1), great extent (2), moderate extent (3), small extent (4) and very small extent (5).



*Table 4: Doctoral supervisors' views*

	N	Mean	Std. Deviation
Show an interest in the students' research during the pandemic	4	1	0
Provide critical feedback on student written work in good time during pandemics	4	1	0
Encourage the student to present their work at virtual seminars/conferences	4	1	0
Be knowledgeable about online/remote supervision	4	1	0
Be available whenever the student needs help with their research	4	1.5	0.577
Provide assistance in orientating the student towards appropriate behaviour in the virtual examination	4	1.5	0.577
Give the student information about virtual meetings, conferences and training opportunities	4	2	0.816
Be willing to offer psychosocial support to their students affected by the pandemic	4	2.25	0.5
Ensure that the student meets deadlines even during the pandemic	4	1.75	0.957
Be a good role model to the student	4	1.25	0.5
Give detailed advice and set deadlines for the submission of reports and parts of the thesis	4	1.25	0.5
Ensure that supervision records are written, agreed and subsequently filed	4	1	0
Continually motivate the student	4	1.75	0.957
Be accessible on phone regularly when the student needs help	4	1.5	0.577

All the supervisors agreed to a very great extent on the need to show interest in the students' research during pandemics/crises (mean=1.0); provide critical feedback on student written work in good time during pandemics/crises (mean=1.0); encourage the student to present their work at virtual seminars/conferences (mean=1.0); be knowledgeable about online/remote supervision (mean=1.0); and ensure that supervision records are written, agreed and subsequently filed (mean=1.0).

Further, significant number of the supervisors agreed, to a great extent, the need to: give detailed advice and set deadlines for the submission of reports and parts of the dissertation (mean=1.25); ensure that the student meets deadlines even during the pandemic (mean=1.25); be available whenever the student needs help with their research (mean=1.5), be a good role model to the student (mean=1.25), assist in orientating the student towards appropriate behaviour during virtual examination (mean=1.5), be accessible on phone regularly when the student needs help (mean=1.5).





*Table 5: Doctoral student's views about ensuring effective supervision during pandemics.*

	N	Mean	Std. Deviation
Be knowledgeable about the standards expected	24	1.21	0.509
Positively accept and address shortcomings of their work and progress	24	1.21	0.509
Be keen to present their work at virtual seminars/conferences	24	1.33	0.565
Be able to work independently	24	1.5	0.834
Be proactive in updating the supervisor on their progress	24	1.38	0.576
Seek assistance in orientation towards appropriate behaviour in the virtual examination	24	1.5	0.885
Seek supervisor's availability whenever in need of help with their research	24	1.29	0.55
Seek help to get online resources while away from the university	24	1.58	0.584
Have good virtual communication skills	24	1.21	0.415
Request supervisor for information about appropriate virtual meetings, conferences and training opportunities	24	1.42	0.654
Ensure that deadlines are met	24	1.46	0.721
Ensure adequate preparation for the virtual examinations	24	1.33	0.702
Seek supervisor's assistance to acquire appropriate specialist research and generic skills	24	1.42	0.584
Have self-leadership skills	24	1.58	0.654
Ensure that supervision records are written, agreed and subsequently filed	24	1.71	0.806
Be accessible on phone when the supervisor needs to interact with student	24	1.67	0.816
Continually updates the supervisor on progress	24	1.5	0.659
Ensure to attend various relevant virtual training to identify and address personal and professional skill requirements	24	1.58	0.776

Results in Table 5 indicate that most of the students agreed, to a very great extent, the need to: Be knowledgeable about the standards expected (mean=1.21), positively accept and address shortcomings of their work and progress (mean=1.21), have good virtual communication skills (mean=1.21), seek supervisors' availability whenever in need of help with their research (mean=1.29), ensure adequate preparation for the virtual examinations (mean=1.33), be keen to present their work at virtual seminars/conferences (mean=1.33) and be proactive in updating their supervisor on their progress (mean=1.38). Further, the students agreed, to a great extent, the need to be able to work independently (mean=1.5), seek assistance in orientation towards appropriate behaviour in the virtual examination (mean=1.5), continually update the supervisor on progress (mean=1.5), have self-leadership skills (mean=1.58) and be accessible on the phone when the supervisor needs to interact with the student (mean=1.67).

**Qualitative Findings**

Respondents indicated that universities should be flexible with the calendar of supervision, facilitate students and supervisors with internet bundles, enable virtual access to online libraries and resources, have facilities for COVID-19-compliant meetings, allow for online or hybrid supervision, have



systems for tracking the progress of students during such crises and provide psychosocial support to students and supervisors affected by the virus or otherwise.

Conversely, supervisors asserted that students should remain engaged with their studies during the pandemic/crises, be proactive in seeking out their supervisors and not just wait for them to contact them. Additionally, they should endeavour to keep timelines agreed upon with the supervisor and use online digital tools to communicate with their supervisors (see Table 4).

Dissertation writers indicated that their supervisors should be available for their supervisees virtually, physically, or by phone and should be well-equipped with virtual/digital dissertation supervision skills. Moreover, they should emotionally support students during pandemics/crises, communicate with their students about their challenges promptly and give them feedback on time (see Table 5).

### **Discussion**

The findings of this study indicate that universities must work together with supervisors and students to achieve success in the dissertation supervision process. In times of crisis, teamwork is even more critical. Both students and supervisors have areas to work on based on perceptions shared by each group. Supervisors and students must adhere to timelines, improve communication, and develop digital skills. Moreover, supervisors indicated supervisees need to be more proactive in seeking help, and students indicated supervisors need to be more accessible and responsive to their students.

The pandemic crisis significantly exposed universities' value proposition. Traditionally, students were unlikely to spend much time and money consuming online content. Students primarily went to universities to meet great people, have inspiring conversations with faculty, collaborate with researchers in the laboratory and experience the social life on campus (OECD, 2020). Universities had to reinvent learning environments so that digitalisation expands and complements but does not replace student-teacher and student-student relationships. At some point, students demanded a partial refund of their tuition fees, and many institutions made pro-rata refunds on room and boarding fees or offered fee deferrals (OECD, 2020). With the enrolment of international students for the coming academic years severely compromised, this is expected to cut into universities' bottom line, affecting their core education services, the financial support they provide domestic students, and research and development activities.

During the pandemic, remote learning became a lifeline for education, but the opportunities that digital technologies offer go beyond a stop-gap solution during a crisis. Digital technology offers entirely new answers to what people learn, how they learn, and where and when. Technology can enable supervisors and doctoral students to access and share their dissertation work in multiple formats and in ways that can bridge time and space. Still, requisite structures, training and provision of resources are needed. Moreover, working alongside supervisors, intelligent digital learning systems can adapt learning experiences to suit dissertation "students' learning styles with great granularity and precision" (Aljuhani, et al., 2018).

The COVID-19 crisis struck when most of the education systems covered by the countries were not ready for the world of digital learning opportunities. A quarter of school leaders across countries noted that shortages or inadequacy of digital technology were hindering learning in one way or another, ranging from 2% in Singapore to 30% in France and Italy (OECD, 2019). Even before the crisis, teachers reported a strong need for ICT training, with 18% across OECD countries identifying this as



a high training need (OECD, 2019). Effective learning out of school has placed greater demands on students' autonomy, capacity for independent learning, executive functioning, self-monitoring, and capacity to learn online (OECD, 2020). These are all essential skills for the dissertation writing processes' present and future. Therefore, the plans to enhance dissertation supervision and writing should focus on more intentional efforts to cultivate these essential skills among all dissertation writers and supervisors.

Theoretically, an individual's ongoing experiences and responses can be nested and explained by forces in the macro-environment (social, economic, and political structure), which can indirectly affect the social and psychological features of the microsystems through the exo-environment (community and institutional) to the meso-environment (immediate community) and ending up at the micro-environment (the family). During the COVID-19 pandemic, it is evident that all these environments played a significant role in the lives of both dissertation writers and their supervisors daily. Time affects the people, settings, relationships, exosystem, macrosystem and all the other aspects of the person and the ecosystem. However, if the policymakers (macro-system) are swift to respond to prevailing circumstances, the potential damage the crises would have caused would be prevented. Decisions made by the government, institutions, dissertation supervisors, and students, among others, all influenced the dissertation supervision process during COVID-19.

### **Conclusion**

The study found that institutions need to develop/enforce policies that support ongoing hybrid approaches to dissertation supervision, which can help mitigate learning loss during pandemics and crises in the future. Additionally, university calendars should be flexible to accommodate future unpredictable interruptions like COVID-19. Dissertation writers and their supervisors must be trained in using digital platforms for supervision. They also need to adhere to their mutually set timelines within the dissertation supervision cycle provided by the university. Conversely, supervisors need to be well equipped with dissertation supervision competencies to support their students during such pandemics/crises and beyond, and supervisees need to be proactive in seeking and following through on completion timelines using creative ways. In working together as communities of higher learning, universities can enhance the dissertation supervision process to be successful regardless of prevailing circumstances.

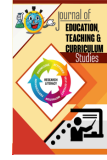
The pandemic exposed humanity's vulnerability to crises and revealed how precarious and interdependent the world's economies are. Disruptions on the scale witnessed recently are not limited to pandemics but may also arise from natural, political, economic, and environmental disorders. Our capacity to react effectively and efficiently in the future will hinge on governments' foresight, readiness, and preparedness. Through their role in developing the competencies and skills needed for tomorrow's society, education systems will need to be at the heart of this planning. This includes rethinking how the economy should evolve to guard against adversity and defining the skills, education and training required to support it. This also means working closely with other government and private sectors to increase certain professions' attractiveness and labour-market prospects, including those considered paramount for the common good. Real change often occurs in deep crises, and this moment holds the possibility that we won't return to the status quo when things return to "normal". While this crisis has deeply disruptive educational implications, it has no predetermined outcomes. The nature of our collective and systemic responses to these disruptions will determine how they affect us. In this sense, the pandemic is also a call to renew the commitment to the



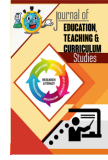
Sustainable Development Goals, especially SDG 4, which emphasises inclusive and equitable education and lifelong learning opportunities for all (UNESCO Website, December 2023), ensuring that all people can succeed at school and develop the knowledge, skills, attitudes and values that will allow them to contribute to society. is at the heart of the global agenda and education's promise to our future society. The COVID-19 crisis tested humanity's ability to deal with large-scale disruptions. It is now up to us to build a more resilient society as its legacy.

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