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The Role of Distance Learning in South African Higher Education Institutions During COVID-19 Period: Challenges and Perspectives

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Abstract

The outbreak of the COVID-19 pandemic forced higher education institutions to adapt to the sudden shift to distance and digital forms of teaching and learning. Through a review of literature, this paper aims to examine the role of distance learning in South Africa's higher education institutions during the COVID-19 period, how Universities coped with the sudden change from face-to-face classes to online classes, to examine if academics were supported in this transition and what impact did this transition have on teaching and learning and students at large. Findings revealed that the lack of internet connection in many parts of South Africa, procurement and logistics issues, scarcity of state resources and lack of training for academic staff were amongst some of the challenges confronting institutions of higher learning during the era of COVID-19. The paper concluded that academics have somehow been overburdened and neglected in responses to COVID-19 by higher education institutions and government because government responses to the pandemic have largely focused on students, thus alienating. The paper, therefore, recommends rigorous training and support for academics by their institutions to ensure effective teaching and learning in the online space.

Keywords
Higher Education, Distance Learning and Covid-19 Pandemic.

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Introduction

When the Second World War ended in 1945, there was consensus among global powers on the need to rebuild, and access to education was to be at the centre of this rebuilding process. Kromydas (2017) contended that education was an instrument to generate and disseminate knowledge that would be the driving force to ensure inclusive socio-economic development. Moreover, from a human capital perspective, the more people get educated, the more likely they are going to contribute to economic development. Hence, governments, globally, invested considerably in education (Barro, 2001). South Africa, being part of the global community was not left behind. The country, post-apartheid took drastic steps to ensure access to higher education, especially for those groups (Black, Indian, and Coloureds) that were disadvantaged by the apartheid regime (Sehoole & Adeyemo, 2016). These steps were taken to ensure that these groups could access higher education to help address the injustices of the past and consolidate education as a key instrument for addressing poverty and inequality. However, this paper argues that the considerable investment and attention afforded to higher education as a key component for development did not factor in possible disruptions (protests and riots, pandemics, infrastructure challenges, lack of skilled human capital, etc.) and how these disruptions would be addressed. This was what the COVID-19 pandemic exposed in the higher education sector globally. In South Africa, the effects have been devastating; face-to-face classes were cancelled, students were sent home and classes were to be conducted online. While the government had no choice in the quest to limit the spread of the virus, this paper argues that there was not enough time to train students on how to use online learning portals (especially in previously disadvantaged universities) and there was not enough time given to staff to capacitate them on how to use of these systems optimally (Ndebele & Mlambo, 2021). In addition to these, internet connectivity issues are prevalent throughout many rural parts of the country, and not all students possess the technological gadgets (such as laptops, tablets, and routers) needed for online learning. These issues have frustrated the government's effort to mitigate the effects of the pandemic on the higher education sector (Mnguni, 2020). With the above in mind, this paper examines the effects of COVID-19 on higher education in South Africa, how it has altered the way higher education is delivered, how it has compelled the higher education sector to haphazardly change from face-to-face classes to online

learning and more importantly, the paper seeks to examine the role distance learning has played in this regard and what were the challenges encountered and how will the higher education sector going forward adjust to these changing circumstances. The paper seeks to gain insight into the following questions: How has COVID-19 disrupted the deliverance of higher education in South Africa? To what extent did government interventions mitigate the effects of the pandemic on higher education and finally, what role did distance learning play to ensure the continuity of higher education amid the pandemic. The South African government from the onset argued that while higher education is key for the country's development, there was a greater need to ensure the safety and well-being of students and staff, hence the decision to shut down contact classes was justified. However, the government committed itself to provide relevant support and resources to ensure higher education continuity amid the pandemic. While interventions such as the procurement of mobile data for students, laptops, and tablets were prioritized, persistent challenges such as poor internet connectivity and the lack and Information and Communications Technology (ICT) in rural South Africa meant some students were not able to feel the true effects of these interventions. No government anticipated the widespread effects of the pandemic; hence, it becomes important for this paper to comprehend how the higher education sector mitigated the effects of the pandemic, what the challenges were and what role did distance learning play? To answer the questions underpinning this paper, a qualitative research approach in which a review of the literature was undertaken. This approach allowed the collection of data from a local, regional and international perspective and was employed to further broaden the understanding of the challenges faced by Higher Education institutions in South Africa concerning online teaching and learning during COVID-19. The central aim of the paper was to reflect on the debates, arguments, and theoretical literature informing this contemporary issue in South Africa, especially considering the strides that the government and higher education institutions have made in consolidating online learning despite the existing challenges (access to internet connectivity, how to cater for students in rural areas and the lack of proper training for staff on the use of online learning portals).

Theoretical Underpinning

Figure 1 is a representation of the community of inquiry model by Garrison, Anderson & Archer (2000) which deliberates on the unique teaching and learning experience in an online environment resulting from a paradigm shift (from traditional face-to-face teaching and learning to an online environment). Central to the community of inquiry model is the educational experience that, to effectively take place, requires three components to be in sync, namely, cognitive presence, teaching presence, and social presence (Garrison et al. 2000)

Figure 1: Community of Inquiry Model

Source: (Garrison, Anderson, & Archer, 2000)

Online teaching and learning are different from the usual traditional face-to-face teaching and learning. While there has been a steady increase in the demand for online learning in South Africa over the last decade, its implementation in the higher education sector was still not seen as an urgent requirement until the COVID-19 pandemic halted contact classes, subsequently, there was a rush to migrate from contact classes to online learning platforms, often with little training for both staff and students on the use of these platforms. However, early mistakes included believing that a normal mixture of teacher and technology will often yield effective teaching and learning practices (Goodyear, Salmon, Spector, Steeples & Tickner, 2001). Moreover, the paradigm shift has severely affected not only students but academics as well, who have had to face new

challenges but with some new areas for opportunities as well (Anderson, 2008). Despite the transformation of higher education institutions, their inability to prepare for the informative digital era had always been questioned (Dolence & Norris, 1995). The model emphasizes that cognitive presence ensures a space where learning can affect the growth and development of critical thinking and reasoning. Additionally, with a social presence, teachers are required to create an online presence to support students, in the process making them comfortable to learn and interact in a more personal functional way not necessarily technology-driven but aided by technology. Lastly, the model includes the teaching presence element, where the teacher handles creating, designing, and organizing an effective teaching and learning experience for students and, in so doing, creates an interactive and supportive environment for both teacher and student (Anderson, 2004). Therefore, this paper posits that the adoption of emergency remote learning by higher education institutions stands to affect cognitive presence, social presence, and teaching presence which in turn, affects the educational experience.

Challenges faced by academics during COVID-19

The pandemic has repeatedly forced traditional higher education institutions to migrate most, if not all of their teaching and learning activities to online platforms. Higher education across the globe, to curb the spread of the virus and protect its stakeholders, resorted to closing institutions, prohibiting face-to-face teaching and learning, and adopting emergency remote learning. In the European Union (EU), Australia and the United States (US) traditional higher education institutions had to quickly adopt and adapt to online emergency remote learning (Czerniewiez, 2020). This was met with some successes and several challenges, in South Africa, when the country was put under lockdown from 15th March 2020, higher education institutions had to instantly put measures in place to counter the risk of losing the 2020 academic year (Motala & Menon, 2020). Subsequently, traditional higher education institutions had to adopt reactive measures to counter the detrimental effects of COVID-19 on their traditional face-to-face teaching approaches (Abbasi, Ayoob, Malik & Memon, 2020).

This emanates from the realities of traditional higher education institutions having online learning management systems (LMS) in place, but even though it is ‘nice to have backup tools, they are rarely used optimally (Ribeiro, 2020). With the pandemic suffering periodic surges, higher education institutions had to enforce closures and

barred traditional face-to-face teaching and learning, and student access to campus and campus facilities. Hence, academics had to deliver teaching via emergency remote platforms (Hassan & Mirza, 2020). It is from the holistic adoption of emergency remote teaching and learning that academics from traditional higher education institutions had to hastily adjust to teaching remotely. With the use of online modalities of teaching and learning, staff and students were often presented with opportunities to create an interesting teaching and learning atmosphere, when educators and learners were in sync with the digitized teaching and learning space occasioned by the emergency introduction of remote learning. However, in contrast, academics were still faced with challenges in successfully carrying out teaching and learning fully using the emergency remote teaching modality (Mukhtar, Javed, Arooj & Sethi, 2020).

Quality enhancement

Higher education institutions are traditionally known for creating and imparting in-depth knowledge and understanding and, in the process, developing and properly guiding students to new frontiers of knowledge within their respective disciplines (Aithal, Rao & Kumar, 2015) from which they can go on to positively impact economies and societies (Lomas, 2004). The goal of quality education in higher education is to sharpen the skills of students, unleash them to be seekers of new knowledge and ultimately to gain employment or use these skills to solve problems (Ndebele & Ndlovu, 2020).

However, with the persistence of COVID-19 making the higher education sector vulnerable, and with the unexpected shift to emergency remote learning further fueling uncertainty and distress for the higher education sector worldwide, South Africa included, traditional universities have found it difficult to devise feasible and effective plans to cope with the sudden shift to remote teaching and learning (International Association Universities, 2020). This has raised new questions on the maintenance of quality teaching and learning, course redesign, learning materials, tools preparation and prompt and appropriate learning outcome evaluation (Oliveira, Texeira, Torres & Morais, 2021; Huang et al., 2020; Marinoni, Van't Land & Jensen, 2020) and the absence of tools to authenticate the quality of online teaching (Chen et al., 2020; Goh & Sandars, 2020; Teras et al., 2020). Since quality enhancement is critical for the higher education sector in South Africa, which over the years has been plagued with

transformative debates about ensuring transformation and enhancing quality by adding value to students learning needs (Pretorius, 2003 & Seepe, 2017). It is a system that has been critiqued over the years for its inadequacies in providing enough support for ensuring student success (Scott, 2018). Faced with these already existing challenges, COVID-19 added more challenges within the sector, not only relating to teaching and learning issues but also governance.

A Zimbabwean study by Garwe (2015) affirms that considerable efforts need to be undertaken by higher education institutions to ensure that enough synergies are made to deliver the implementation, monitoring and raising of education standards. However, most education systems around the globe are not designed for pandemics or hard country lockdowns. And as a result, the quality of teaching offered during this time has often raised concerns around quality especially considering the haphazard migration from contact classes to remote learning (Pokhrel & Chhetri, 2021; Dorn, Hancock, Sarakatsannis & Viruleg, 2020). In contrast, a Spanish study of Iglesias-Pradas, Hernadez-Garcia and Chapparo-Pelaez (2021) interestingly found that academics' and students' performance improved immensely during the emergency remote teaching and learning period under strict lockdown. Whatever the case might be, the future of higher education has been somehow unintentionally re-imagined by the coronavirus pandemic. Despite the availability of or opportunity to acquire the required tools to aid emergency remote teaching, academics were often overwhelmed by the sudden paradigm shift (from traditional face-to-face teaching to online teaching) and did not immediately grasp the new modality of teaching and learning, which then hindered the development and provision of quality teaching (Zhu, 2020; Zhu & Lu, 2020). This is unfortunate, and somewhat ironic, given the centrality of teachers in the delivery of high-quality remote teaching (Demuyakor, 2020; Zhu & Liu, 2020).

Instructional tools

Traditional higher education institutions, with their adoption of mostly conventional teaching and learning approaches, resulted in their academics and the student populace fearing the sudden shift to emergency remote learning, due to the anxiety of not getting inducted into the newly adopted online teaching and learning approaches (Lepp, Aaviku, Leijen, Pedaste & Saks, 2021; Maatuk, Elberkawi, Aljawarneh, Rahaideh & Alharbi, 2021; Pokhrel & Chhetri, 2021; Aboagye, Yawson & Appiah, 2020; Klapproth, Federkeil, Heinscke & Jungmann, 2020). Given the fact that traditional

higher education institutions in South Africa largely use conventional teaching (face-to-face), it was critical for them to provide induction, training, and support to academics in order to counter any possible challenges posed by the emergence of remote teaching and learning. Chaka's (2020) assessment of the response by South Africa's higher education institutions to the pandemic regarding the use of online instruction and online tools and resources found that different institutions in South Africa adopted various instructional tools to conduct their teaching, such as Blackboard, Moodle, Institutional Learning Management Systems (LMS) and Coursera, further supported by Zoom and Microsoft Teams, with some institutions even adopting more than two tools. However, only seven of the 26 institutions offered their staff induction and training on the newly adopted teaching tools (Chaka, 2020).

The advancement of ICT has the potential to increase productivity; but it is also a potential threat to the existing traditional forms of work (United Nations, 2018). Furthermore, young academics are in a better position than their older, more experienced colleagues, due to their early adoption and use of technology (Chen et al., 2020), whereas the older and established academics, will have to undergo a substantial process of training and development (United Nations, 2018). Whatever the case might be, it can be concluded that academics at some point or the other, were faced with a dilemma in terms of which instructional tools to use, as the pandemic also made it difficult to adjust to all teaching and learning needs of students due to the various challenges on their side (Pokhrel & Chhetri, 2021; Mseleku, 2020), leaving academics with the difficult task of designing teaching and learning to accommodate the circumstances of all students. With further debates on the use of synchronous or asynchronous or the combination of the two (Oliveira et al., 2020), therefore, academics were faced with the challenge of making rapid decisions about the instructional methods to use for their remote teaching (Maatuk et al., 2021; Pokhrel & Chhetri, 2021; Donitsa-Schmidt & Ramot, 2020).

Workload and behavior management

It should be noted that the field of academia is often associated with a high workload at times. Within the South African context, this includes increased pressure to produce research outputs, administrative duties, and other university roles (Pienaar & Bester, 2006). Even before COVID-19, academics were stressed and the sudden abrupt

shift to remote teaching further gave rise to renewed uncertainties (Klapproth et al., 2020; Kim & Asbury, 2020). As a result, the implications of such changes have a significant effect on academics (Oliviera et al., 2021).

Worryingly, during this period of remote teaching, academics have had to incorporate a huge number of responsibilities together with their teaching. Because of the pandemic and the notion of working from home, responsibilities, such as caring for children, taking care of the elderly and sick, and having to manage themselves as well have become an everyday occurrence (Kim & Asbury, 2020). Furthermore, while simultaneously undertaking the abovementioned responsibilities, academics had to hastily adjust to redesigning already designed teaching and learning curriculum to suit online delivery, increasing their online presence, and constantly offering student support online (Kim & Asbury, 2020), leaving academics overwhelmed by these changing roles and responsibilities driven by the COVID-19 pandemic. In the process, the continued overburden of roles and responsibilities stands to negatively affect academics' confidence in their ability to fulfil their roles, as they are emotionally exhausted by the sudden tension arising from the increased roles resulting from the COVID-19 effect on the higher education sector. Hence, it is important to protect the abilities and capacities of academics in order to ensure they can effectively fulfil their roles (Kim & Asbury, 2020).

Reflections of government on distance learning into higher education institutions in era of COVID-19

In South Africa, the government was keen to ensure that higher education was not completely disrupted by the pandemic, however, there were doubts as to whether the world can positively respond to the pandemic at the same time ensuring that the sector is brought to a complete standstill. Undoubtedly, the pandemic forced the government to re-think how we deliver higher education going forward. Building on this insight, Universities South Africa (USAF) believed that COVID-19 has presented an opportunity to Africa's universities to take stock of their current practices and identify new ways of doing things driven by the resilience and continued relevance beyond this pandemic (Universities South Africa, 2020). Benjamin Ola Akande Assistant Vice-Chancellor, International Affairs - Africa at Washington University in St Louis in the United States argued that while the pandemic has grounded the higher education sector it should be seen as an opportunity for African

universities to reassess their positions and become more creative in changing "what we do and how we do it, as we prepare for the future, post-COVID-19" (Universities South African, 2020). Even though the world might work together to see a reduction and eventual elimination of the virus, there is a great need for new strategies on how higher education needs to be delivered, in preparation for future pandemics. While the government admitted that South Africa had a long way to go in consolidating online learning in the higher education sector, this paper contends that the pandemic forced the government's hand to accelerate the implementation of distance learning initiatives. Hence the rushed process of its implementation was bound to result in some challenges. In the context of COVID-19 and distance learning, the government undertook several measures to help students cope with the demands of distance learning.

The government negotiated with online web providers (websites) to provide access to educational websites at no charge, to ensure that a greater number of students can access educational content regardless of their location or access to data (McKane, 2020). While these interventions by the government were welcomed, they were not without challenges. Firstly, the tender process for the laptops was slow and was marred by government indecisiveness. The higher education minister, Dr Blade Nzimande, argued that there was a need to ensure that the tender was not tainted by corruption. The procurement of laptops was announced in April 2020, but in November 2020, the minister announced that a laptop tender that had been advertised in September had been cancelled because none of the 140 bidders met the requirements (BusinessTech, 2020). This meant a further delay to the process while institutions continued with online learning. As a result, towards the end of 2020, some students had still not received laptops. However, one cannot blame the government for this delay as, globally, laptop manufacturers were under pressure to meet increasing demand and therefore it was always going to be a first come first serve situation.

The South African Union of Students raised concerns that students at historically disadvantaged institutions were adversely affected because they did not receive laptops and data. In contrast, other institutions continued with online teaching and learning (Macupe, 2021). The Union demanded that students be provided with the devices urgently. Some of the students said they had received data but no laptops. Some said their lecturers were using WhatsApp for teaching and learning in the absence of laptops. Indeed, it is not all about providing laptops. The key to effective online learning is the availability of broadband/internet to ensure no one gets left behind. South Africa's Internet penetration measures above the halfway mark, with 56.3% of the population reported being internet

users, which further complicated the government's drive to ensure that no student got lefts behind with regards to online learning (Mzekandaba, 2020). Supporting this view, the Organisation for Economic Co-operation and Development (2020) asserted that the first concern, which had arisen, was that online learning is only available to students that have access to a broadband connection at home that is fast enough to support online learning and that those who do not are likely to get left behind. In South Africa, Hanekom (2020) reflects that COVID-19 has exposed South Africa's digital literacy divide.

When the government imposed the first lockdown in March 2020, the higher education sector had to stop all face-to-face activities and find new ways to continue educating South Africa's 1.8-million tertiary students. With only 37% of South African households having consistent access to the internet through cell phones or computers, according to Statistics South Africa, the departments of basic education and higher education and training were faced with the nearly impossible task of continuing the academic year (Hanekom, 2020). However, the government's response was only limited to students who were funded by the government's National Student Financial Aid Scheme. That meant that those students who were in the higher education system but not funded by NSFAS were not a beneficiary of these government interventions. This paper argues that the government from the beginning stressed that no student will be left behind, so one would have assumed that interventions would apply to all students regardless of whether they were funded by NSFAS or not. Neglecting those who are not funded by NSFAS is contrary to the government's statement of supporting all students. Presumably, the government assumes that all those who are not funded by NSFAS have the ability and means to pay for themselves, which in many cases is not true. This has been the biggest criticism levelled at the government's response to the pandemic in higher education.

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The above deliberation reflects that even though both government and higher education institutions have implemented measures to respond to the pandemic, there are challenges that need to be addressed. However, addressing these challenges needs long-term solutions. For example, there is a pressing need to increase internet access in rural South Africa (Sithole, 2013). Regarding higher education, there is a need to ensure that universities and colleges have sufficient resources available in terms of infrastructure and financial and human capital. There is also a need to ensure that, going forward; online learning and its components are integrated into the curricula (Queiros & de Villiers, 2016). Even though the

pandemic has completely altered the way higher education is delivered, it has also presented an opportunity for the higher education sector to develop new and modern teaching and learning pedagogies that speak to the current reality whilst at the same preparing for the future.

Future of teaching and learning in South Africa

There is no doubt that the pandemic and lockdown restrictions will have unprecedented effects on the future of teaching and learning in South Africa. However, it is not clear whether these effects will be positive or negative, considering the different views from different authors. Ndebele & Mlambo (2021) argue that the inequalities in the higher education sector that were already present in the system have been exacerbated by the pandemic. It has therefore catalyzed systemic change. COVID-19 has magnified the urgent need to expand connectivity and access to technology to accommodate the needs of the future of teaching and learning in South Africa. The actions that the international community, national governments, and localities take (or fail to take) in response to the pandemic will have profound effects on students and early-career scholars, particularly the most vulnerable, in the coming years. Furthermore, the importance and usage of modern physical resources (technological tools) have become an important observation in the global higher education sector, hence it is important for South Africa not to get left behind (Mpungose, 2020). This, therefore, calls for all higher education institutions in South Africa to accommodate and embrace E-pedagogy as part of their teaching and learning method (Hannaway, 2019).

To ensure the effectiveness and quality of teaching and learning, South African universities should also review their systems of assessment of students and researchers. According to Hassan et al (2021), there is no doubt that the pandemic has exacerbated inequality and therefore the assessments of students and researchers should carefully consider how COVID-19 has affected them, particularly when considering vulnerable populations. Furthermore, the challenges that both students and lecturers face suggests that universities should have policies in place that will guide the use of e-learning and the provision of training to ensure quality.

Discussion and implications

Government's effort to mitigate the effects of the pandemic

As the pandemic spread beyond China, no higher education system in the world anticipated the level of disruption it would bring. This paper reflects on the fact that the unequal nature of higher education in South Africa meant that responses to the pandemic were going to be different. This paper acknowledges the government's attempt to mitigate the effects of the pandemic through the procurement of laptops and mobile data for students. However, the focus on students somewhat neglected the focus on academics. Even though higher education institutions do support staff in terms of training and development, the sudden and unplanned migration from face-to-face classes to online learning meant there was also a need to ensure the academics were given substantial training on how to use online teaching systems, especially those in previously disadvantaged universities. Therefore, limited training and the rush to implement online learning systems was not only a disadvantage to students but also academics. Nonetheless, there were always going to be challenges as no government was prepared for the effects of the pandemic and hence, we conclude that the government's response was sufficient (in the short- term) to mitigate the effects of the pandemic in the higher education sector although considerable challenges (notably, lack of internet connection in many parts of South Africa, procurement and logistics issues, and scarcity of state resources) persisted.

Future Trends in South African higher education institutions post COVID-19

As argued above, the pandemic has shown the higher education sector that reform is needed, that there is a need to incorporate the digital element into higher education curricula regardless of courses taken or degrees pursued (i.e. every degree programme should have a compulsory computer module). Additionally, the pandemic has exposed how governments around the world need to be aware and prepared for the sudden disruption in higher education while at the same time being proactive regarding these possible disruptions. In South Africa, higher education institutions need to invest in staff development, they need to invest in online learning platforms and need to consolidate the ideas of online learning among students. Concerning the government, considerable investments are needed in the telecommunication sector to mitigate the disruption of face-to-face classes and to ensure that students can access online learning portals. Finally, the government needs to ensure that the value supply chain network is transparent and effective to be able to respond promptly to increased demand for learning material and technological devices. For example, the demand for laptops

placed great strain on the government's supply chain, which resulted in some students going for months without laptops, thus hindering their participation in online learning portals.

Recommendations and limitations

From the findings of this paper, the following recommendations are made:

- Higher education institutions should provide rigorous digital training and support for their academic staff, to ensure effective teaching and learning in online spaces.
- The government should immediately find solutions to persistent structural problems in South Africa, particularly, electricity outages and lack of connectivity in remote areas, which disrupts the teaching and learning process
- Online, blended and hybrid teaching and learning remains a debate within the South African context given the challenges faced by the country and the higher education sector, but their adoption is inevitable. Therefore, higher education institutions need to bolster their staff and assemble the necessary infrastructure and resources to complement these additions to their teaching and learning modalities beyond COVID-19.

Although the results and insights provided by this paper are encouraging, there are limitations and caution should be exercised regarding generalizability as it relied on previously published studies (both review and empirical). More rigorous primary research is called for to explore the challenges faced by higher education institutions in South Africa, using quantitative research methods accompanied by larger sample sizes to enable transferability of the outcomes to the whole higher education sector. The researchers specifically encourage longitudinal studies to investigate the effects of the pandemic as it continues to unfold and affect teaching and learning within the higher education sector.

Conclusions

This paper examined South African higher education institutions' challenges and perspectives with distance learning ensuing from COVID-19. Based on the findings, the following conclusions are drawn. An overview of the literature showed the inequalities

within higher education institutions in South Africa were exacerbated by COVID-19. Moreover, academics were overburdened and to some extent neglected in the responses to COVID-19 by higher education institutions and government, as more attention was focused on assisting students, as a result, this affected the cognitive presence, social presence, and teaching presence. This, in turn, affected the educational experience for students. Hence, regular academic staff development programmes are identified as critical in optimizing their online teaching skills, as well as the provision of adequate structural and infrastructure support from the government to ensure smooth online teaching and learning during the COVID-19 period and beyond.

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