

Coining Online Teaching and Learning in Higher Education: Reference to COVID-19 Pandemic in South Africa

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Abstract: The purpose of this paper is to conceptually explore and examine teaching in higher education during and post COVID-19 era. This paper uses literature-based approach which considers a narrative review of literature as its main approach in exploring and examining data related to online teaching and learning in higher education. There has been various challenges and criticisms about online teaching ever since lockdown regulations instigated by COVID-19 in South Africa. Online teaching and learning has been criticized for their lack of quality assurance in higher education. Although there are claims, hiccups and criticisms of the quality assurance and credibility of online teaching and learning, accessing education is inevitable irrespective of the challenges encountered. Accessing education is important and goes beyond or post COVID-19 pandemic whereby distance learning should be endorsed in higher institutions. The paper argues that the usage of online platforms during COVID-19 pandemic became a panacea for the students who were remote from physical institutions of higher learning to access higher education. Therefore, the paper submits that while COVID-19 would have its aftermath in higher education institutions, there are lessons and prospects that could be drawn from the challenges. The paper recommends the re-thinking strategies that could possibly be employed to enhance students' learning and engagement thereof. Among those strategies, is a Massive Open Online Courses (MOOCs) that encapsulate the blended method of pedagogy and Open Distance Learning (ODL) that may be effective in teaching and learning in the current circumstances.

Keywords: COVID-19 Pandemic, Lockdown Regulations, Higher Education, Online Teaching and Learning, South Africa.

1. Introduction

It is perceived that ever since the spread of COVID-19 globally, there are various impacts that are experienced by different countries. Such impacts are prominently homogenous, although they seem to be handled differently considering the economic development and status quo of a particular country (Mashilo & Selelo, 2021, p.1). Amongst the impacts, delivery of teaching and learning seem to be impacted and prevalent globally. Meanwhile, COVID-19 enforced institutions of higher learning across the globe to re-

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think their traditional ways of teaching and learning wherein, the new teaching normal was introduced (Motala & Menon, 2020; Jinlei, Ying & Baohui, 2012). This new teaching normal which is online learning, was introduced with great enthusiasm, which is accessible and flexible to all the students in higher education (Motala & Menon, 2020; Jinlei, Ying & Baohui, 2012).

Henceforth, this is compatible with the trend of the Fourth Industrial Revolution (4IR) which holds a view of using smart technology to improve access to online teaching and learning in higher education (Penphrase, 2018).

Consequently, South Africa finds itself amid the challenges and issues posed by COVID-19 pandemic, particularly delivering online teaching and learning. Within that context, it could be argued that the educational system has experienced challenges in delivering online teaching and learning through technology in the COVID-19 era. For a point of reference, some higher learning institutions in South Africa were not prepared and ready to deal with this new normal because of their poor Information and Communication Technology (ICT) resources (Motala & Menon, 2020). Hence, concerted efforts from the government and private sector extended their aid in the execution of the new teaching normal and that higher education should be accessible and equitable to all students despite their socio-economic status. Although higher institutions in South Africa provided students with data bundles and online learning devices such as laptops to carry out the remote learning, that seemed to be difficult due to challenges such as network connections, predominantly to the students from undeveloped rural areas without a proper network connection.

While the paper portrays that online teaching and learning is the future, it also recognizes that the blended method of pedagogy may be accommodative and accessible for students in the remote rural areas of developing countries. Therefore, the paper's focus is to provide the discourses concerning the impacts of COVID-19 pandemic juxta positioning with online teaching and learning in higher education institutions, particularly in South Africa. Furthermore, the paper briefly discusses the use of technology in higher institutions. Moreover, it highlights the plight and future benefits of technology in the teaching and learning of students in higher institutions. This paper is structured in a way that it provides an explanation in the conceptual narrative and underpinnings of what COVID-19 and online teaching and learning mean.

2. Paper Methodology and Framework

This paper relies more on a literature review for exploring the correlation between COVID-19 pandemic and its impacts on online teaching and learning. Within that context, the paper considers literature-based approach analysis considering narrative literature review to explore COVID-19 in concerning online teaching and learning. A narrative literature review is considered in this paper due to its nature of providing a detailed and comprehensive analysis of the current topics which are the COVID-19 pandemic and online teaching and learning in higher education institutions. In this case, the COVID-19 pandemic and online teaching and learning are regarded as the current topics to be examined to critically explore the correlation at the expense of higher education in various institutions. Thus, the paper solely depends on literature for its framework in relation to the aim, crux, argument and rationale of this paper.

3. Conceptual Underpinnings

On one hand, COVID-19 is known as a new phenomenon that is regarded within the context of disaster management (World Health Organisation, 2020); while on the other hand, online teaching and learning have been discussed prior to COVID-19. Thus, with the absence of a theoretical framework, the paper solely relies on the conceptual soliloquy discourse by scholars and authors with respect to online teaching and learning in the COVID-19 context. The paper acknowledges and considers the fact that COVID-19 pandemic is a disease that evolved and spread swiftly around the world hence it was not expected. However, it does not superimpose a lack of services in higher education but rather exposes the weaknesses in teaching and learning which should be attended to. The era of COVID-19 is perceived within its nomenclature because it is an abbreviation of coronavirus disease identified in 2019 (WHO, 2020). As a result, COVID-19 becomes an acronym used globally. Accordingly, the COVID-19 pandemic and online teaching and learning are defined in line with the aim, purpose, argument and rationale of this paper.

3.1 COVID-19 Pandemic

According to the World Health Organization (WHO) (2020), COVID-19 is defined as “a disease caused by a new strain of coronavirus”. The WHO (2020) dissects COVID-19 in a format that “CO stands for corona, ‘VI’ for a virus, and ‘D’ for disease”. Ghosh (2020) affirms that COVID-19 is defined as an “illness caused by a novel coronavirus called severe acute respiratory syndrome (SARS) which was formerly called 2019-nCoV, that was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China”. The WHO (2021) observes that COVID-19 is a contagious disease that spreads itself by saliva droplets, through sneezing and coughing and by touching infected surfaces. Meanwhile, the Centre for Disease Control (CDC) (2021), in the United States of America (USA) highlights that the virus has many variants such as B.1.1.7 (Alpha) and B.1.351 (Beta) amongst others. However, in the context of South Africa COVID-19 is perceived as a disaster or calamity under the Disaster Management Act 57 of 2002. This is essential because COVID-19 pandemic has brought hardships, mishaps and misfortunes to the poor and the vulnerable.

3.2 Online Teaching and Learning

Law (2021) refers to online teaching and learning as the process of educating others via the internet. Law (2021) further indicates that this is done through the usage of different methods such as webinars, online platforms such as Microsoft Teams, Zoom, Skype and Google meet amongst others. The author is corroborated by Sadiku, Adebo & Musa (2018) who indicate that online teaching and learning refers to education that is done over the internet with an aim of transferring knowledge, skills, values and methods through the use of Massive Open Online Courses (MOOCs) as an example of online learning. Additionally, Kotze (2021) provides empirical data, with analyses, that reflect Open Distance Learning as accommodative to students in the technological era. Undoubtedly, online teaching and learning have become significant and widely considered to be embraced by the institutions of higher learning under the current unpalatable milieu brought by COVID-19 pandemic so that students could continue their academic assessments.

4. The Impact of COVID-19 Pandemic on Higher Education Institutions

The calamity of the COVID-19 pandemic has shaken the whole world and has tested the capabilities and capacity of the countries in terms of the Higher Education Institutions (HEIs) infrastructure. The pandemic has halted the lives and livelihoods of the people, created a vacuum in the higher education sector, disturbed academic assessments, and led to the restructuring of the academic year 2020 (Dawadi, Giri & Simkhada, 2020). In Sudan, it is suspected that university students experienced anxiety during the initial stage of COVID-19 (Abas, Alejail & Ali, 2021). In South Africa, COVID-19 pandemic has come at a point wherein there were great digital inequalities already (Choung & Manamela, 2018); thus, the COVID-19 pandemic impacted higher institutions amid the first semester of the academic year 2020. Furthermore, the pandemic has come at a point where HEIs are caught in the process of adopting, considering and implementing the 4IR with respect to technological advancements in teaching and learning. It thus revealed the shortcomings in the institutions of higher learning to be caught in such a situation without proper ICT infrastructure. As a result, COVID-19 pandemic on the impact of the students in higher education was exacerbated by the lockdown regulations and restrictions thereof.

The lockdown regulations on institutions of higher learning have caused a huge disruption in students' teaching and learning disturbed academic activities and led to the re-arrangement of academic calendars (Dawadi, Giri & Simkhada, 2020; Mishra, Gupta & Shree 2020; Ngwacho, 2020). No one knew about the emergence of this pandemic and how it would spread globally, despite the political commentators and scientists' prognosis. However, in every crisis and calamity, there is always a good side that could overcome the negative deeds. Perhaps, it is true that 'it is darkest before dawn; that lightness would always supersede darkness'. The meaning behind this adage in respect to the purpose of the paper is that despite the challenges posed by the COVID-19 pandemic, there are some positive elements that emerged as a result to re-think and re-shape higher educational institutions. However, this became an apex priority for the policymakers to develop new teaching and learning methods to ensure that the institutions of higher learning execute their duties (Toquero, 2020b). The planners in higher institutions had to be faced with the issues of drafting new academic calendar and developing new ways of returning students to campuses. Moreover, the opportunities that emerged resulting from the pandemic are dominantly the use of technology in teaching and learning.

5. The Use of Technology in Higher Education Institutions

Many countries such as Kenya, India, Nigeria, Italy, China, and South Africa have executed a call by United Nations Education, Scientific and Cultural Organization (UNESCO) to continue teaching and learning using technology (UNESCO, 2020). The use of technology amid COVID-19 pandemic is inevitable. Technology has become a source of keeping the institutions of higher learning relevant in the current pandemic (Jacob, Abigeal & Lydia, 2020). COVID-19 has come to a point whereby the 4IR is already around us and such is also incontrovertible. Perhaps, the 4IR could serve as a panacea to salvage and rescue the unpalatable conditions brought by the COVID-19 pandemic in higher educational institutions (Penphrase, 2018). Moreover, the use of technology benefits both the universities/colleges and students (Daniel, 2020; Ngwacho, 2020). Although some institutions of higher learning such as the University of Limpopo, University of Fort Hare, Mangosuthu University, and the University of Venda,

did not have sufficient resources to counter the predicaments of the COVID-19, the government and private sector put concerted efforts and resources to such previously disadvantaged institutions.

The previously disadvantaged universities/colleges in South Africa capitalized on the use of technology during the pandemic. The pandemic presented an opportunity for these institutions to build on the existing ICT infrastructure and enhance their modes of teaching and learning to be more modern (Ngwacho, 2020; Toquero, 2020a). Equally, the disadvantaged universities/colleges were expected to migrate from their old teaching methods (contact learning) to new and innovative teaching and learning methods (cloud/digital). This means that online teaching and learning were introduced by the universities/colleges to finish up their academic year. Hence, the Department of Higher Education (DHE) developed a theme “save the academic year, safe lives” (Mashilo & Selelo, 2021). At the centre of the theme, the online teaching and learning became an ingredient to materialize the objectives of the theme. Moreover, the use of online teaching and learning enabled disadvantaged universities/colleges to enhance their ICT (Jena, 2020; Toquero, 2020b). Most of the institutions improved their Blackboard functioning to complement online learning. This led to the staff and lecturers having to adapt to innovative pedagogical approaches, and ways of delivering teaching and learning (Ngwacho, 2020). This point is lengthened by Schleicher (2020) who demonstrates that institutions of higher learning should reinvent their learning settings so that digitalisation develops and complements student-teacher and other associations.

6. Teaching and Learning Considering Lockdown Regulations and COVID-19 Pandemic

As highlighted, there are lockdown regulations that outline the restrictions that impacted teaching and learning globally (Mishra, Gupta, & Shree 2020; Tejedor, Cervi, Pérez-Escoda & Jumbo, 2020). The paucity of internet connectivity became a problem for students from poor background on how they are going to access education. However, the lockdown speeded up the usage of digital technology for the purpose of online learning. During the pandemic, the question of accessibility of education triggered the thoughts of students, particularly those who are from poor background (Mishra, Gupta & Shree, 2020; Ngwacho, 2020). Students are used and find it appealing to be close to the institutions to meet new people, socialize and do their academic activities. However, such social cohesion was decimated by the pandemic which required that students be moved from the university premises to their homes (Ngwacho, 2020). This was not forcefully done but, to ensure that students observe COVID-19 regulations such as social distancing and to reduce the spread of the virus. However, technology became their safety net for digital education.

The institutions of higher learning became accessible to students and lecturers through the use of digital technology (Jena, 2020; Toquero, 2021). The government, universities and colleges took proper initiatives such as the provision of data and learning devices to make education accessible to all students who do not have the device for online learning (Dawadi, Giri & Simkhada, 2020). Social media such as Zooms, WhatsApp, Google meet, and Blackboard were digital platforms that enabled teaching and learning to be done remotely. The use of such digital platforms is supported by Jena (2020) who makes an assertion that in India technology-based education is transparent and an emerging tool for ameliorating the current crisis (COVID-19) pandemic that affects institutions of higher learning. Kotze (2021) further posits that Open and Distance Learning (ODL) became an effective way of learning during the pandemic in South Africa. However, the circumstances of COVID-19 which exist in India are partially the circumstance that prevails

in South Africa as far as technology and institutions of higher learning are concerned during COVID-19 pandemic. Therefore, despite the challenges brought by the pandemic in higher education, the accessibility of education was also challenged but not completely dismissed. Hence, the use of technology to implement digital remote learning surpassed the challenges of COVID-19 in higher education (Toquero, 2020a; Toquero, 2021). The assumption is that the use of e-learning is expected to gain momentum in higher education in South Africa. This means that education beyond COVID-19 would still be accessible through online teaching and learning.

6.1 The Privileged and Disadvantaged Higher Educational Institutions during COVID-19 Pandemic: Issues of Inequalities

There seems to be a greater inequality amongst the students since the online teaching and learning instigated by the lockdown regulation informed by COVID-19. Choung and Manamela (2018) suggest that digital inequalities have been perceived as a challenge in South Africa amongst the students in higher institutions. This might radiate the inequalities amongst the privileged and disadvantaged students in South African higher institutions. As a result, it could be argued that issues and challenges of technological devices, access to a network and other related aspects of teaching and learning are prevalent among the students. Accordingly, the fiasco of COVID-19 pandemic exposes inequalities and shortfalls in the institutions of higher learning in South Africa. Clearly, it has brought to light technological inequalities within the institutions of higher learning. On that note, there are great inequalities between what is popularly referred to as privileged universities/colleges and disadvantaged universities (Schleicher, 2020). In this case, the 'privileged universities/colleges' refer to the institution which had sufficient resources to maintain their teaching and learning during the pandemic.

The institutions did not struggle to roll out online teaching and learning because the system of online learning was already in place. This includes institutions such as the University of Pretoria, Wits University, Stellenbosch University, the University of Johannesburg inter alia. Meanwhile, previously disadvantaged universities refer to institutions that are mostly in rural provinces and have suffered the legacy of apartheid with inadequate technological resources for online learning. These institutions include the University of Limpopo, the University of Venda, the University of Fort Hare, Mangosuthu University, the University of Mpumalanga inter alia. The majority of the disadvantaged/marginalized institutions struggled to roll out online learning during the pandemic and were left behind in the completion of the academic year 2020. Most of the institutions completed their academic year 2020 in early 2021. A significant number of institutions of higher learning were not prepared nor equipped with digital facilities to deal with the rapid change to migrate from traditional education to a digital educational system in South Africa (Jena, 2020). To be precise, COVID-19 exposed the milieu of great inequalities in the institutions of higher learning as far as technology is concerned.

6.2 Assessing the Quality of Education through Online Teaching and Learning

While acknowledging the improved access to online learning, the quality of education remains in question. The pretence that students are passing with distinctions does not mean that the quality of education is improved. The over-celebrated passing rate of students is a misguided idea because students can access any extra help which may benefit them in their academic assessment (Mashilo & Selelo, 2021). Perhaps,

it means that students have a leeway to consult any material that would be of assistance in the formative and summative assessments (Mashilo & Selelo, 2021). Moreover, the quality of graduates that would be the product of online learning could experience certain challenges in the workplace because they are merely learning for the purpose of passing, not for the purpose of getting knowledge. The sentiment is corroborated by Azorín (2020) who indicates that there is a memorizing content instead of applying what is learned in Spain. Hence, it is for this reason that Ngwacho (2020) suggests that strategies for online quality assurance should be developed to check the relevance and quality of the assessments. Perhaps, to ensure the quality of education studies, there must be an application of concepts, and theories rather than merely naming and explaining.

6.3 The Plight amongst Students during COVID-19 Pandemic

At the pinnacle of the pandemic, some students in South Africa were left perturbed and puzzled in respect to their academic activities. Specifically, students from poor backgrounds with no access to smart internet, a poor connection to network at home, no internet data and others did not have smart learning devices to continue the academic assessments online (Ngwacho, 2020; Toquero, 2020a). This was a very draining and difficult period for students without smart devices to access online teaching and learning software or applications (Schleicher, 2020). Majoring of these students heavily relied on computer labs and access to Wi-Fi to do their assessments in the institutions. Unfortunately, the havoc of the pandemic forced the institutions to shut down for a few months and students were removed from university premises. At times, some poor students suffered the most from the pandemic and were confronted with a situation whereby, they had to choose with their last money to either buy bread or buy data just to do academic assessments remotely (Jena, 2020; Ngwacho, 2020). Additionally, the learning environment in rural areas is not conducive enough for students to study, perhaps because of the number of people in the family in a limited space also becomes a challenge (Reimers & Schleicher, 2020). These predicaments faced by students from poor backgrounds caused them to be left behind in terms of their academic assessments. This stance is extended further by Schleicher (2020) who indicates that students in the marginalized groups, with no access to online learning or digital learning, or even lack the resilience to learn independently are at a huge risk of falling behind. These were unfortunate circumstances that poor students had to endure to survive. However, mercy prevailed from the collaboration of the universities, government, and private sector to ameliorate such difficult and unpalatable conditions faced by poor students.

The devastating impact of COVID-19 on students' academic assessments could not be circumvented, however, the role played by different institutions in assisting the poor students to cope with the pandemic in terms of the provision of smart devices to compliment online learning is inevitable in amelioration the devastating impact of COVID-19. Reimers and Schleicher (2020) and Schleicher, (2020) solidify the latter point by indicating that institutions of higher learning should provide support to vulnerable students during the continuation and implementation of online education. This stance became a practical reality in South Africa wherein most poor students were provided with laptops and data to access and complete the academic year 2020 successfully. Despite the challenges of network dilemmas in rural areas, some students were given catch-up programs to ensure that no student is left behind. Accordingly, the provision of laptops and data, enabled the successful rollout of online teaching and learning remotely. However, this

trend is expected to go beyond COVID-19 pandemic and be a form of new ways of learning in the long run.

The national lockdown in South Africa compelled institutions of higher learning to shut down and postpone the academic activities and examinations. This led to an alternative way that the institutions had to adapt, which is to consider online learning (Dawadi, Giri, & Simkhada, 2020). Initially, this caused students and lecturers to be confused and not fathom how to come and manage the academic activities in a crisis of COVID-19. Nevertheless, during the pandemic, students, and academic staff especially in the disadvantaged institutions have become conscious that there is a vacuum that needs to be closed. Jena (2020) refers to such a vacuum as the absence of the technological advancement and knowledge. The disadvantaged institutions in South Africa were required to put more effort and resources to strengthen their ICT infrastructure which can roll out online learning (Jena, 2020; Toquero, 2021). The national lockdown presented a flood of teaching and learning online platforms to choose from and has given a sense of hope to both lecturers and students to continue their academic activities.

7. Conclusion and Recommendations

It can be concluded that the COVID-19 pandemic and lockdown regulations and restrictions, demonstrated the complex nature of technology in offering online teaching and learning in the higher institutions of South Africa. This is informed by the fact that there are still digital inequalities amongst the students in higher education institutions in South Africa. As a result, that depicts the unpreparedness of the DHE to mitigate the risks posed by the unpredicted nature of the impacts of COVID-19 and lockdown regulations in accordance with the South African Disaster Management Act. It thus, depicts that the procedures were not followed in line with the Disaster Management Act 57 of 2002 for the implementation of accommodative and flexible online teaching and learning environments for disadvantaged students. Hence, the paper suggests and recommends the construction of accessible online facilities such as repositories for the future generation in remote and disadvantaged areas. Perhaps, that could also be applicable looking at the direction South Africa is taking in terms of the adoption and implementation of the 4IR online learning technologies.

In the current fiasco of COVID-19, the initial and interim recommendations that should be put in place is integration of online teaching and learning in the current system of traditional (contact) teaching and learning. To be precise, the adoption and use of blended learning should be considered due to the uncertainty of the future. It would be crucial for higher education institutions working with the government and the private sector to rollout a comprehensive blended learning system in the midst and post COVID-19 pandemic. This is because COVID-19 has exposed some of the shortfalls in the current system of higher education which has necessitated that the institutions consider the use of blended teaching and learning. This paper recognizes that blended teaching and learning is gaining prominence and appears to be a viable and feasible method that is fascinating and a participative method for engagement for students and facilitators. It concludes that the use of MOOCs and blended learning as part of online learning are an effective tool in delivering higher education to students during and post COVID-19 pandemic.

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