ADAPTING TO ELEARNING DURING COVID-19: NEGLECTING STUDENT DIVERSITY IN SOUTH AFRICAN HIGHER EDUCATION

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ABSTRACT

Recent literature on education, economics and other related disciplines have shifted towards embracing the value of diversity, transformation and empowerment. Diversity as a teaching and learning tool in higher education has been popularized internationally. However, South African literature on higher education has revealed the scarcity of literature on the significance of diversity in teaching and learning. The sudden transition to online learning because of level 5 lockdown because of coronavirus has relegated the usage of diversity to just a theoretical concept. Teaching and learning during lockdown were accompanied by multiple challenges such as lack of data, connectivity, gadgets and lack of trained academics and students. Immediately after training academics on Learning Management Systems (LMS), the focus shifted towards covering the lost time and completing the academic year. The pressures to complete the 2020 academic year were divorced from embracing diversity in teaching and learning. Embracing diversity during teaching and learning is rooted in the learning theory called constructivism. The paper argues that embracing diversity during online classes ensures the cultivation of its value to enable students to construct new knowledge. The paper concludes that the lack of professional and pedagogical training is a huge hindrance towards academics embracing diversity for teaching and learning in South African higher education.

Keywords: Diversity, Higher Education, Online/Multimodal Learning, Constructivism, Coronavirus

INTRODUCTION

In recent years, literature on education, economy and related disciplines have shifted focus towards the concepts of diversity, transformation and often empowerment. In particular, diversity in the higher education sector had received sufficient attention as an inspiration for the transformation of all other sectors. For example, Mdepa and Tshiwula (2012) examined diversity in the South African higher education sector, and amongst others noted the changes in student population diversity and pinpointed aspects that hinder diversity. The subject of diversity is indeed an international subject rather than merely the national one. Quaye et al. (2019) suggest that failure to thoroughly and pragmatically address the subject of diversity on its own might lead to dropping outs at American universities, where irrespective of expressed institutional plans for diverse student populations, their campus cultures send the opposite message about the institutional intentions in this aspect, leading to undesired outcomes. On the other hand, Corrin et al. (2010) investigated the nexus between the students' technology usage in their daily lives in comparison to their usage of technology in academic activities in the Australian context, and failed to support the generalized view about the 'net generation' or commonly known as 'post-

millennial' or 'generation Z' upon which strategies for implementation of technology-driven teaching pedagogies are based. Despite, the seemingly rich international literature on the subject, only a few studies are available in the African context.

Constructivism acknowledges the significance of involving a diverse student body to enable the construction of new knowledge in the learning (Hendricks, 2019). However, the immediate halting of blended learning and other learning modules due to the repercussions of Covid-19 enjoined the shift towards online learning platforms (Naidoo & Israel, 2021; Oluwatimilehin et al., 2021). The disruption caused by Covid-19 compelled the reordering of priorities and salvage the 2020 academics (Naidoo & Israel, 2021). The push for Higher Education Institutions (HEIs) through various Learning Management Systems (LMS) to salvage the 2020 academic year was dome the expense of embracing diversity in terms of culture, socio-economic status, background, ethnicity, nationality and disability (coupled with the diversity embedded in people living with disabilities. It is worth noting that across universities amidst Covid-19 "information and communication technology (ICT) has fundamentally changed teaching and learning from lecturers having much personal contact with students to a socially oriented activity" (Dlamini & Ndzinisa, 2020). The paper thoroughly surveyed literature on aspects of diversity and Covid-19, with a particular focus on higher education, and with a focus on the African context to fill the void in knowledge. We take particular interest in the impact of diversity on students' adaptation to blended learning and test the applicability of pertinent theories that attempt to explain the various aspects affecting the implementation of technologically inclined teaching and learning methodologies in higher education and their applicability to modern classrooms.

THEORETICAL FRAMEWORK

In noting the transition from 'Social Learning Theory' to 'Social Presence Theory' (SPT), Tu (2000) identifies the latter as the most significant theory in explaining the current context of online learning. Scholars hold that SPT is the more relevant theory to explain perceptions of lecturers and learners as to their presence when the online mode of teaching and learning is utilized (Tu, 2000). Although this theory does not directly explain the impact of diversity, it is nonetheless useful in understanding and gauging the students' perception in the South African context which is the subject of the current study. In line with Social Presence Theory, the study compares the empirical results obtained from the South African environment to those captured in the literature from other developed economies such as countries in Europe, the USA and Asia amongst others. The theory allows for the understanding as to whether the perception of online teaching techniques differs among the South African students in line with race or tribes, and economic background and most importantly in terms of their disability.

South Africa provides a rich context with citizens divided into unique races, e.g. whites, black Africans, colored etc. and also sentimental tribes, e.g. Zulus, Vendas, Tsonga etc. (Cope, 2014). This theory will be helped understand if either race or gender plays important role in explaining the students' perception of online teaching and learning approaches. While it has been accepted to base research studies on one theory in the past, Cope (2014) explains the value derived when triangulation, in general, is used. Amongst others, this study claimed that triangulation of theories encompasses the use of different theories to analyses and interpret data. This allows the researcher to have different perspectives in supporting or refuting the empirical

results. Likewise, we will enhance the current study by adding another theory in enhancing our understanding of the results of the current study

LEGAL FRAMEWORK

The roll-out and integration of Information and Communication Technologies (ICT) in the Education Higher Sector of South Africa starts with the broader mandate encapsulated by the New Partnership for Africa Development (NEPAD) (Sutori, 2020). This was informed by several policies that were incorporated into a continuously developing South African ICT Policy in Education (Sutori, 2020). In particular, this policy recognizes the broad benefits that the integration and effective use of technology can bring to economic and social development, hence, technology receives the highest attention at the top levels of government. On the other hand, the Draft White Paper on ICT Policy recognizes the importance of ICT usage in redressing the unequal access to resources that are experienced by South African (Department of Telecommunications and Postal Services, 2016).

It must be noted that the roll-out of ICT online learning in Higher Education Institutions should not recreate the inequalities (Black et al., 2020). These forgoing policies were fuelled by the general adoption of electronic communications in business, especially after promulgation of the Electronics Communications and Transactions Act (Act 25 of 2002), which amongst others had objectives to promote broader usage of technology and development of e-strategy by the national government. Collectively, the foregoing policies and pieces of legislation provide a framework of reference in the South African context as far as implementation of e-learning, usage of technology and related aspects are concerned. Despite the promulgation of the policies to foster the increased usage of ICT in HEIs, lockdown level 5 exposed the deep underlying structural inequalities in South Africa. According to Black et al. (2020), the "social, economic and political problems are the crux of the coronavirus problem, a messy knot of radicalized, classed, gendered and geographies inequity and deprivation that has forced open the eyes of those who have too long looked away from the violence inflicted by prevailing social arrangements on marginalized communities". Furthermore, the sudden employment of online learning, which required data, learning gadgets (laptop and/or smartphone) and proper connectivity not only exposed the level of inequality but also deepened the situation.

ICT AS A TEACHING TOOL IN HIGHER EDUCATION

Since the introduction of the internet in the 1960 there have been tremendous developments in the field of ICT leading to many business processes. Furthermore, the integration of ICT by various governments was used as their modes of services delivery and interactions (Mabinane & Edoun, 2018). Consequently, the adoption of ICT by private sectors led to the emergence of new concepts such as e-Commerce, e-Business, e-Marketing amongst others, and later the concept of e-Government around the world (Ndlovu & Moll, 2016; Mabinane & Edoun, 2018). The education sector is not an exception to these developments; hence, the debates around the provision of education using online modes began to gain momentum at the beginning of the previous decade. In the education space, the early literature on ICT had focused on the provision of ICT infrastructure for the schools and equipping educators with basic skills. However, as noted by Ndlovu and Moll (2016), basic skills on ICT itself proved to be insufficient to enable teachers to effectively integrate ICT in the South

African township schools and Historically Disadvantaged University. The first-generation approaches to technology-based education had focused on merely replicating the physical class format and pedagogies over the internet, hence, merely delivering the classroom experience digitally (Singh, 2003).

Lately, international literature had moved towards more integrated learning approaches using amongst others cognitive online tutors, although mostly in structured and scripted format lessons and assessments (Blikstein, 2013). The paper explores the learning approaches that attempted to incorporate technology in teaching introduced at the beginning of this decade by most South African institutions of higher learning called 'blended learning' and the impact of diversity on students' adaptation to this pedagogy. According to Singh (2003), 'blended learning is the most effective format of teaching and learning and essentially "mixes various event-based activities, including face-to-face classrooms, live e-learning and self-paced learning, and is often a mixture of traditional instructor-led training, asynchronous self-paced study, and structured on-the-job training from an experienced worker or mentor". Implementation of blended learning presents interesting dimensions in the South African education sector, with a special interest in diverse student population challenges. However, the Covid-19 has rendered the application of blended pedagogy impractical, hence, HEIs shifted towards e-learning as an attempt to salvage the 2020 academic year (Asamoah, 2021; Naidoo & Israel, 2021). Asamoah (2021) posits that the higher education sector throughout the world is under pressure to use ICT as a tool to enhance teaching and enable students to acquire requisite skills and the preposition for the job market.

Although the internet has transformed many sectors over the years, the higher education sector has become slow learning to effectively employ ICT to enhance quality teaching and learning (Asamoah, 2021). Level 5 lockdown exposed the unpreparedness of students and faculties for the transition into the new teaching and learning environment because of their lack of digital knowledge or literacy. Therefore, a sudden shift towards online learning as a consequence of covid-19 made faculties transfer their face-to-face teaching pedagogy into the LMS (Hendricks, 2019). This is because many of the faculties in higher education have not undergone through professional training in terms of teaching in higher education. The inability to change pedagogy with the changing teaching environment has shifted the focus of inculcating diversity into teaching towards just salvaging the academic year. Hendricks (2019) stated that Connectivism is a learning that theory that stems from the "thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks". This provides students with a learning environment where they plug into the network and create their knowledge. "Unlike traditional learning methods and theories like cognitivism (where learning is an active, constructive process), behaviourism (a theory of learning based on the idea that all behaviours are acquired through conditioning) or constructivism (the theory that humans construct knowledge and meaning from their experiences), with connectivism, learning is defined by connections to a network of knowledge that can include any form of interaction" (Hendricks, 2019). Therefore, the transition to online learning still allows for academics to embrace diversity as a tool for students to create their learning.

DIVERSITY AND ONLINE PEDAGOGY IN HEIs

Sufficient international studies have interrogated the aspects of technology adoption in teaching and learning (Abbad et al., 2009; El-Masri & Tarhini, 2017; Ngemba & Hendra, 2017). One of the early works by Abbad et al. (2009) explored the adoption of e-learning in the Asian environment, followed by El-Masri and Tarhini (2017) who focused on the United States of America (USA). While Ngemba and Hendra (2017) explored the adoption of e-learning in the Indonesian environment. Amongst the few that concentrated on the African continent, including Yakubu and Dasuki (2019) who investigated factors that influence the adoption and use of educational technology by students in higher education, using the Nigerian data. While on the other hand, Attuquayefio (2019) developed a conceptual framework to examine Ghanaian higher education students' adoption of ICT for learning.

Surprisingly, while South Africa is recognized as the leader in online technologies (Assie-Lumumba, 2004) in Africa, and despite the rich international literature on the subject, lesser studies focused on the South African environment which has a history of inequality and inadequate access to resources and infrastructure by the poor leading to differing levels of preparedness to adopt technologies by her students. Mdepa and Tshiwula (2012) noted that "South Africans speak eleven (11) different official languages, and [therefore] an understanding of how to harness student diversity in the context of access, participation and social cohesion is crucial". Despite this clear appreciation that inculcating diversity in higher education is imperative, most faculties are struggling to integrate student profiles into curriculum development and design (Hendricks, 2019; Themane, 2021). The integration of diversity as a learning component of online learning has not been explored. Many faculties have not undergone pedagogical training and most do not understand the value of harnessing diversity in the classroom. The difficulty to harness the value of diversity during the face-to-face classroom makes the transition to online learning impossible to use the important teaching tool.

Since the groundbreaking works of Singh (2003), the blending of e-learning advantages and traditional classroom approaches has been hailed as the most effective approach to teaching and learning. However, the hereto literature appears to focus mainly on e-learning with only a handful of studies assessing the blended approaches. Sergis et al. (2018) assessed the impact of Flipped Classroom Model (FCM) blended learning on students' cognitive learning outcomes in the Australian and Greece context. Sergis et al. (2018) concluded that there is a consistent pattern of positive findings regarding the capacity of FCM enhanced blended learning environments. In similar efforts, in the European continent, Boelens et al. (2018) explored the instructors' strategies for and beliefs about differentiated instruction in blended learning in response to student diversity. The foregoing study also noted that instructors concurred on resorting to 'additional support' in addressing diversity in their blended learning strategies. Covid-19 made it impossible to blend the online and traditional face-to-face teaching approaches (Black et al., 2020; Asamoah, 2021; Naidoo & Israel, 2021).

In the same context of Europe, Vanslambrouck et al. (2018) brought a different perspective by assessing students' motivation for participating online. The transition to online teaching and learning which is attributable to the coronavirus was accompanied by many challenges such as poor class attendance (Vanslambrouck et al., 2018). Vanslambrouck et al. (2018) posit that the main reasons for poor participation in the class are attributable to the various negative aspects associated with online learning such as high workload makes it difficult to manage and harder to organize group work makes online learning unattractive. Contrary to the findings of Vanslambrouck et al. (2018), a similar study in the United Kingdom revealed that the majority of the students are reflecting positive attitude citing amongst other things their appreciation of

online learning as it enhances convenience for studying at the location of preference (Brook & Beauchamp, 2015). Despite the rich literature on online learning, its value in embracing diversity remains fragmented. Whereas in the emerging countries such as Asia and Africa, studies assessing online learning adoption with a focus on diversity remain scarce, while the majority of these studies relate to Asia and our knowledge, none of the studies interrogated the aspect of diversity concerning blended learning adoption in Africa. Therefore, the current study aims to fill this knowledge gap and contribute to the ongoing international debate on diversity and online learning.

EMBRACING DIVERSITY THROUGH ONLINE PEDAGOGY DURING COVID-19

"E-Learning has become prominent due to the advent of the Internet and telecommunication infrastructure, the increase in digitally-oriented students, the internalization of the higher education market and the pressure from the Covid-19 pandemic" (Asamoah, 2021). The transition to online learning is seen as a form of education that demonstrates the separation between instructor and learner (Nkala & Ncube, 2020; Kotzé, 2021). This is based on the fact that the lecturer is unable to comprehend diversity within the classroom. Furthermore, the proponents of social constructivism have argued that students are social beings and they construct their knowledge and they learn better when the content taught is contextualized to their own life (Camp, 2007; Kalina & Powell, 2009). A plethora of literature has demonstrated the significance of harnessing the value of diversity within the classroom. The pressure to transit to online or e-learning by Covid-19 (Asamoah, 2021) has overwhelmed most faculties. Universities such as the University of Limpopo provided training to the faculties regarding online teaching and learning to ensure that classes take place amidst Covid-19 lockdown regulations. However, there was no training on how to inculcate diversity in online teaching. This is based on the notion that students learning through their experiences and interaction with other people. The inability to embrace this important learning tool makes online learning a pedagogy that provides information that is not contextualized towards students' realities.

The pressures to complete the 2020 and 2021 academic years amidst Covid-19 through differing LMSs (Hendricks, 2019; Asamoah, 2021) have left out the significance of diversity in higher education. Dalton et al. (2019) argue that the "institutions of higher education are recognizing their responsibilities to achieve the full inclusion of individuals with differing needs and/or disabilities". Therefore, the role of universal design and universal design for learning "to strengthen successful inclusion of persons with differing needs in higher education programs is presented from literature, inclusive of national and international policies and resources" (Dalton et al., 2019). It is worth noting that the students with disabilities were still experiencing challenges during the traditional teaching approach because many academics are not trained to assist these types of students. Therefore, the transition to online learning makes learning more difficult.

Covid-19 has exposed the structured inequality and exclusion experienced as the curriculum has been transferred to online learning (Dalton et al., 2019; Nkala & Ncube, 2020; Asamoah, 2021; Themane, 2021). Online learning has not embraced the diversity of the student body in South African higher education. These cracks in higher education have the potential to derail the attainment of quality education. Most lecturers are focused on delivering the content to students without considering the students with diverse disabilities. The presence of students of all students is considered during the assessment. The inculcation of the notion of diversity into the online curriculum is imperative for learning. Scholars have argued regarding the difficulty to

ensure that lecturers harness diversity for teaching and learning (Dalton et al., 2019; Black et al., 2020). The inability to embrace diversity as an important teaching and learning tool, deter the ability of students to construct new knowledge and thus, culminating the use of constructivism as a learning theory. Therefore, many students will resort to memorization of content without synthesizing and engaging the study material. Furthermore, these challenges stem from the fact that many academics have not received training in terms of pedagogy and professional development (Nkala & Ncube, 2020; Asamoah, 2021; Themane, 2021). To ensure the usage of constructivism for teaching and learning, academics should ensure that students continuously reflect on their context and relate it with the learning materials. This ensures that the content is relatable and practical. In the University of Limpopo, academics are urged to request to the student profile from institutional planning of the university be utilised during the planning of the module and classes. The student profile is important to ensure that the lecturer understands the diversity of the classroom and to employ it as an important teaching and learning instrument in class. Although lecturers are edged to use student profiles as a teaching tool, most have not made inroads in attempted to harness the opportunities harbored in the diversity. Therefore, the transition to online teaching and learning has relegated the notion of diversity and constructivism to just concepts that are complex to implement. This is mainly because many academics are focusing on finishing the academic year through completing the teaching and assessing.

CONCLUSION

This study aims to assess the impact of diversity on the students' adaptation to blended learning. The study is mainly necessitated by the scarcity of scientific studies in the African continent on the subject while international literature to remains fragmented. The study has reviewed the legal framework informing ICT usage and integration in South Africa, and noted that the NEPAD in the African context drives ICT usage in its member states. South Africa has affected this by developing the integrated ICT Policy at the national government level that informs various departments and legislation development around matters involving ICT. Furthermore, the study has interrogated exhaustively, pertinent literature on the subject and confirmed that there is indeed a paucity of knowledge on the subject of blended learning in the African continent and South Africa in particular especially as far as the impact of diversity is concerned. Finally, the relevant theories to guide our study were identified and the need for triangulation of theories was explained, while this essay was wrapped by stating the purpose of the study.

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