Connectivism as a deterrent pedagogical approach for blind students at Historically Disadvantaged Institutions

Heritage Moleke[1], Malesela Edward Montle[2]
[1]North-West University
Turfloop Campus, Polokwane 0727, South Africa
[2]University of Limpopo
Pochestroom Campus, 2531, North West, South Africa
Corresponding email: edward.montle@ul.ac.za

ABSTRACT

The educational domain, like other spheres of human endeavour, was impelled to improvise and undergo unforeseen transitions because of covid19. These transitions, among other things, affected teaching and learning processes that had to shift from physical to online mode. Dissimilar to traditional learning approaches such as cognitivism and constructivism which emphasise the cruciality of learning context, connectivism is underpinned by the notion that learning is disseminated through networks using diverse virtual learning platforms. In the case of blind students, these learning platforms require up-to-date technologies for accessibility purposes. The availability of updated technologies is an outstanding matter in most Historically Disadvantaged Institutions (HDI) of higher learning. This disadvantages the affected students in terms of academic progression. Thus, this study aims to divulge the challenges faced by blind students at HDI of higher learning through the Connectivism paradigm. A qualitative descriptive design will undergird the study. Five blind students from HDI will be purposively sampled and interviewed. The findings will be presented and analysed through Qualitative Content Analysis (QCA), and viable recommendations will be made.

Keywords: Transition across approaches to learning, Students with Special Needs, Historically Disadvantaged Institutions, Inclusive perspective

1. INTRODUCTION

The use of Connectivism as a pedagogical approach to remote learning often deters blind students during the learning process. It is sometimes difficult for these students to access learning materials due to teaching and learning being administered online. Connectivism as an approach to learning comprises system connectivity awareness, which is grounded on Web 2.0 technologies. It guides the deliverance of teaching and learning through networks, databases,

and web knowledge using various virtual learning platforms (Hendricks, 2019). These learning platforms are sometimes found to be challenging for blind students as they require advanced technologies for proper access and operation. Thus, this study intends to divulge the challenges faced by blind students at HDI of higher learning through the following themes: transition across approaches to learning, Students with special needs, Historically Disadvantaged Institutions, and inclusive education as a theoretical lens.

Transition across approaches to learning

The teaching and learning process transitioned from physical to online ever since covid19 struck. Even though some institutions had encompassed online learning prior to the covid19 pandemic, the online learning mode became predominately embraced in the education system upon the advent of covid19. In the previous years, the existing approaches such as cognitive – behaviourism and social – constructivism served as major pedagogies for meaningful learning whereas the learning context was considered a key aspect of progressive education.

Drawing from cognitive – behaviourism pedagogy, the educational approach is authoritative in which the teacher serves as an instructor who leads and drives the learning process. It is a teacher-centred approach with limited interactivity even though it is taking place through face-face interaction or physical context. The technologies used in this pedagogy are mass media, print tv, radio, and one-to-one communication. as the focus is on content delivery (Anderson & Don, 2011). Although this pedagogy is characterised by limited interactivity, it offers the students the opportunity for face-to-face communication with the lecturers of which is what blind students need for their special needs to be met.

Similarly, the social – constructivism pedagogy also transpires out of the context of network connectivity in most cases, of which, it was part of approaches that served as main pedagogies in the physical learning context before the covid-19 pandemic coerced institutions to shift to online learning mode. The social - constructivism is a pedagogy that embraces the idea that recent knowledge is constructed based on the preceding knowledge. It is the pedagogy that is characterised by non-autoreactive approach where the lecturer facilitates the discussion, mediates as well as scaffolding the students in the process of teaching and learning. The learning activities in this context include discussions, creation, and construction of meanings whereby the lecturer serves as the head of the process. The pedagogy acknowledges active and collaborative learning as well as the students' individual differences (Spivakovsky, Petukhova,

Kotkova & Yurchuk, 2019). This pedagogy supports inclusivity as it is considering students' individual differences and this eases the academic success of students with special needs such as blind students.

On the contrary, covid-19 stunned the educational system and that led to a transition across pedagogical practices and approaches to learning. In the process of observing covid-19 rules and regulations, Connectivism as a pedagogical approach was suitable for the new normal circumstance. The pedagogy was seen as one of the inventions, which brought about the necessity of social distancing and isolation. Connectivism is defined as pedagogical approach of distance education that introduced interactive technologies such as audio, text, web as well as immersive conferencing. The knowledge in this context is delivered through multiple networks, which require the students to be technologically wise, for instance, to have the ability to acquire, apply, and contextualise information through network connections. It is a problem-solving pedagogy that relies on network connections such as people, and digital artefacts, and this makes the educational content to be accessed easily through connectivity. However, like any other pedagogical approach, it has its own disadvantages, for example, it is limited to advanced technologies as well as technologically skilled students who are skillful with network connectivity (Siemens, 2005). Consequently, this occasions barriers for students with special educational needs especially those that are enrolled in HDIs, because mostly they do not have adequate if not well-advanced technologies as well as assistive devices to aid their academic success.

Recently, Downes (2019) raised a concern about Connectivism as a pedagogical approach to teaching and learning that it does not accommodate all students in terms of enabling them to be independent and motivated to learn. The findings highlight that it does not cater for all students as the education access in this context necessitates network and connectivity awareness as well as technological resources which can disadvantage students with limited abilities such as computer literacy skills. Thus, it is crucial to divulge the challenges faced by blind students at HDI of higher learning.

Students with Special Needs at HDIs

Students with Special Needs (SwSN) are those who live with various disabilities and require special assistance based on their disability differences for academic success. Several findings in the literature noted that students with disabilities experience academic barriers at higher institutions of learning in most South African contexts. The underlying challenge that was

common in the previous findings is that the needs of students with disabilities are partially met in terms of academic support services which help to avert obstructions and uphold success in learning. These support services include accessibility of academic material, buildings, and assistive devices with a mandate of ensuring that all affected students have equal access to education (Mantsha, 2016; Mutanga, 2017; Moleke, Montle & Mogoboya, 2020; Moleke, 2021). These previous findings show that academic special needs barriers are experienced in HDIs of higher learning.

The primary challenge in the HDIs is the context that is not disability friendly. Zungu, Tugli and Anyanwu (2013) point out that factors such as outdated facilities, and unfriendly physical context, along with others are the most common challenging factors in the HDIs of higher learning in the South African context. This is in line with Moleke's (2021) observation about the need to update facilities such as assistive devices to enable blind students to have access to academic resources and progress in learning. In addition, Zongozzi (2020) asserts that a lack of disability awareness and support from academic staff members leads to academic hindrances for students with disabilities. In other words, a lack of disability knowledge inhibits their motivation to support students with disabilities.

Mutele and Odeku (2014) indicate that a call for innovative infrastructure at HDIs of higher learning should be treated with urgency to accommodate students with disabilities. In other words, the context of the institutions should welcome every person with equal access without any deterrents. This should not be applied to the context only but also the academic resources should be accessible to all students including those with disabilities. It is understandable that many higher institutions more particularly the HDIs are still underdeveloped by virtue of their historical background; however, there could always be a way to distribute equal academic access to all students.

According to Gore (2021), the academic special needs of students with disabilities are overlooked at institutions of higher learning because most of their needs are still outstanding yet they are expected to progress in their studies. For instance, some buildings such as residences and academic areas are not accessible which means that the universities do not grant the students equal opportunities in terms of mobility purposes. This brings a perception that the HDIs of higher learning still have a huge stake to chop in terms of inclusiveness and equal educational access to all students.

Mokoele (2021) states that the reason behind the struggle of students with disabilities for academic success is that most of the academic staff members are not trained in terms of professional development, teaching persons with various needs let alone familiarising themselves with the inclusive education policy of which this perpetuates misconceptions and low academic expectancy on students with disabilities. The author continues that those institutions should employ persons with disabilities in the academic arena to help in strategizing and developing policies, curriculum design, and the transformation of the learning materials, content and etc. for equal education for all. This is in line with Mosia and Phasha (2017) who indicate that "access to education requires that 'every aspect of schooling, from policy to curriculum to pedagogical elements, to leadership, to ethos and culture … change in order to educate learners within a common framework." In essence, no one should be side-lined by either curriculum or pedagogical approaches.

Inclusive education policy as a theoretical lens

Inclusive education policy serves as a guiding theoretical lens for this study to strategies in finding a solution for students with special needs. This policy should be advocated with no exception for remote teaching and learning. It is grounded on the conviction that promotes equality in education for all students including students with disabilities. In the context of remote learning, this equality should be maintained for all students without imbalances. According to Gous and Mfazwe (1998), the policy on inclusive education encourages the educational practitioners to have knowledge about the students and their difference to deliver a meaningful education. These practitioners are expected to function based on the four qualities namely, skills, knowledge, attitudes, and values (SKAV). Additionally, Durojaye and Nanima (2021) define inclusive education as a process of tackling and retorting to the needs of individual learners' differences by ensuring that all the constraints are being eradicated for the learners to fully access education. The policy focuses on developing and edifying the content, approaches, structures, and strategies to accommodate all students including students with disabilities for successful education. These qualities serve as guiding principles for inclusivity purposes as the policy contends for equality and fairness in terms of treatment and provision of services to maintain fruitful education for all students.

More importantly, UNESCO (2009) accentuates that the fundamental key of inclusive education is to pinpoint and confiscate the constraints in the educational system to maintain attendance, participation and success for all students including students with disabilities. The

above highlights three elements, attendance, participation, and success, as a mandatory element to give the students full access to education. In other words, all students should have access to attend lectures, be able to participate in class and any other academic-related activities, and succeed in learning. On the contrary, the current literature does not correlate with the inclusive education perspective since most of the students living with disabilities are facing a pool of challenges that affect their academic success. As Mantsha (2016); Mutanga (2017); Moleke, Montle and Mogoboya (2020); Moleke (2021) assert that the needs of students with disabilities such as academic support services are partially met. In this case, the students with disabilities still experience challenges in terms of accessing lecture halls, material as well as up-to-date assistive devices. Hence, this study selected the inclusive education policy framework to serve as a guiding principle to help shape the pedagogical approaches to teaching and learning to accommodate students with special needs.

2. METHODOLOGY

This study selected a qualitative descriptive design to provide in-depth information about the use of Connectivism as a pedagogical approach for remote learning and its challenges towards students living with blindness. This design will help the researcher to describe the nature of the situation and to discover new meaning (Dulock, 1993). The researcher purposively sampled five students living with blindness to explore and gain in-depth knowledge about the challenges these students face in the process of remote teaching and learning (Kumar, 2014). The criteria of this selection of sample are supported by Dörnyei (2007) who points out that, unlike a quantitative study, qualitative research is determined by a miniature of the participants' sample to abet the researcher to obtain comprehensive information respecting the studied subject. More importantly, interview served as an instrument for data collection for the purpose of obtaining detailed information about the challenges blind students encounter in the process of remote teaching and learning. This is because interviews are regarded as a crucial instrument in qualitative studies to get historical information as well as aspects which cannot be observed within a brief period. The study further adopted qualitative content analysis (QCA) to identify, analyse and report patterns of meaning across the findings that provide answers to the objectives of the study (Creswell & Creswell, 2018).

3. FINDINGS AND DISCUSSION

Five blind students who were purposively sampled were asked questions based on the objectives of the study. The students' responses were presented according to the generated themes below:

Online teaching and learning platforms

The students were asked to indicate the online platforms that they are currently using for learning purposes such as attending classes, seminars as well as assessments. They responded that google meet, zoom, blackboard as well as email serve as a means of platforms for educational purposes. They further mentioned that initially, teaching and learning was taking place through google meet, zoom and emails for tests and assignment submission purposes. At this stage, blackboard was still in the process of being upgraded to meet the current standard, remote teaching, and learning. This was a challenge to the students living with blindness more particularly in the early days of the covid-19 pandemic. These platforms were more demanding, and it was a challenge for them to operate them without an assistant. One of the respondents indicated that in cases of large classes, she would struggle to log in and at some point, she will end up not joining the class because platforms such as zoom and google meet have a certain limited number of participants. In other words, these platforms operate by a first come first serve notion whereby if one does not join swiftly, the platform will close entry once it reaches the target. The other respondents confirmed what she said, and this, undeniably, makes their learning process difficult. This is in accordance with the findings of Moleke (2021) who indicates that the online platforms that are used for educational purposes have limitations and these limitations temper with the educational success of the students with special needs.

The second participant mentioned that although the lecturers provide the recording after each lesson which gives them the opportunity to go through the lesson in their spare time; however, it becomes difficult when the symbol illustrations are involved, and the lesson is context embedded. The context-embedded situation is when a person is using pointing figures and not explaining enough, holding an idea that the listeners know the origin of the conversation or discussion. For instance, is when the facilitator uses a pointing form such as 'this and that' without an adequate explanation of what the symbols are about. In this case, the blind students will find it difficult to understand or cope without any assistance as their assistive devices do not support the pictorial symbols. This pictorial inclusion was not a major challenge before remote learning because the students were able to assist swiftly the lecturer during face-to-face consultations. This is in line with Parker and Alfaro (2021) who state that the operation of remote learning platforms frustrates blind students as at some point their assistive devices do not correlate with the educational platforms, which, in most cases, limits the students to get full access of the provided content. Remote learning is a major source of learning in the current

state which is found to be overwhelming especially for students with disabilities. The online operation goes beyond their abilities and somehow hinders their learning success.

Similarly, the third participant mentioned that most of the institutions including the one where he is enrolled were obliged to upgrade blackboard to meet the demands of remote learning. He further indicated that although blackboard collaborate solved the issue of 'first come, first serve' in terms of attending the lessons but it does not solve the issue of pictures and symbols as well as the tendency of pointing without a detailed description which most of the lecturers adopted. "We really hoping for independence, especially in this era of the fourth industrial revolution but the devices and techniques that we are using deny us with it." He emphasised. From the response, one may conclude that we still have a long way to reach inclusivity in education. The students with disabilities are facing challenges of which some are overlooked and seen as minor until one pays close attention to them; and the more we pay attention as researchers, it is the better chance to help in terms of closing the gaps that inhibit the success of inclusive education. As Moleke, Montle and Mogoboya (2020) underline that the educational stakeholders and other special needs experts should produce strategies to develop technologies to maintain the fair provision of educational services that leads to a successful education for all students including students living with disabilities.

Correspondingly, the fourth participant said that "We have a lot to say but we just don't know where to say and to who, because of the misconception that people have about us, persons with disabilities, which makes our voices not being heard even before we rise them." The participant's lamentation is a call for other researchers about the needs of students with disabilities. This response calls for unity, both persons with and without disabilities, to make inclusive education a success which will help persons with disabilities to reach their goals and succeed without hindrances. The inclusive education model promotes equal access to the education but the implementation is still a challenge since the gap is still extensive in the arena of special needs. Besides, the issue of misconception is not a new thing amongst the issues of special needs as Moleke, Montle and Mogoboya (2020) suggest that the implementation of disability campaigns will assist in raising awareness about students with disabilities and their needs which will serve as an instrument to eradicate the myths if not misconceptions about students with disabilities.

Equally significant, the last participant mentioned that although each platform has its own flaws but personally, he would prefer to use google meet and zoom over blackboard since the two

collaborate with primary assistive devices for learning, jaws and NVDA unlike blackboard is difficult to operate with these devices. He further explains that it is unfortunate that his preferences would not help because blackboard is used as a primary platform for teaching and learning. "You see why we say, 'nothing about us without us?'" He articulated. From his responses, one may be uncertain about the consultation of inclusive education policies in the process of decision-making about educational strategies to meet remote learning demands. If indeed thorough consultations were made, the implemented strategies would have covered the needs of students with disabilities. This is in line with Collins, Azmat and Rentschler (2019) who aver that lack of disability awareness as well as representation results in limitations in terms of meeting the needs of students with disabilities.

The rate of online learning platforms in relation to special needs

The students were further asked to rate the online educational platforms in terms of accessibility and effectiveness in relation to their special educational needs. Their overall response was that the online educational platforms do not fully meet their needs, because all of them do not recognise the pictorial symbols whereas some do not correlate with their assistive devices. For instance, it was noted that it is challenging for the students to perform several operations after login into blackboard. "The only thing that I can do is to login and listen to the lesson and the rest such as participating I cannot." She spoke. The students further stated that there is no online learning platform that meets all their educational needs, thus they all rate them moderately in terms of their relationship with their special needs.

The above findings concur with the findings of Nkosi (2017); Moleke, Montle and Mogoboya (2020); and Moleke (2021), who maintain that the provision of adequate educational support for students with disabilities remains unresolved matter more especially as their needs are overlooked. Also, Mather and Sarkans (2018) found that the challenges faced by students in higher education whirl around technology in this era of remote teaching and learning. The challenges include completion of tasks, retrieving educational material as well as lesson attendance. These previous findings concur with the present findings as they all emphasise the idea that there is a gap between technologies and remote learning.

Suggestions for inclusivity

The students were also requested to give suggestions about the challenges they are facing concerning online teaching and learning platforms. One of the students mentioned that the best solution for their challenges is to upgrade their assistive devices, special software such as

NVIDA and jaws, to the level that they work hand in hand with all online learning platforms. The student further stated that the upgrading of the devices will benefit them in terms of independency as well as debunking the myths that persons without disabilities have, for instance, the view that persons with disabilities are underperforming and irresponsible. "It is challenging to deconstruct such myths while operating with partially effective assistive devices for academic achievement," he said. This is where the social model of disability comes in, which states that persons with disabilities are not disabled but it is the environment if not the society that disables them (Doyle & Robson 2002). In other words, if the environment is disability-friendly with appropriate special devices that will allow these students to work effectively, therefore, disability will not stand in their way of academic success. In this case, the students will have equal access to all the educational platforms which will promote inclusivity in education.

Equivalently, the other student indicated that one other challenge that inhibits the provision of innovative devices is the lack of attendance of disability awareness by management if not the university community as a whole; hence our grievances are overlooked and that results in academic stagnancy. "Disability awareness should be mandatary especially to persons without disabilities for understanding purposes because lack of understanding affects attention and thrive to act," she said. The student in this case highlights the idea that people lack knowledge when coming to disability which gives them no reason to act swiftly towards disability matters, hence the participant encourages a prominent level of attendance for disability awareness. This could be a helpful method, to make people aware of disability challenges and to fasten the process of implementation since the strategies on how inclusion can be ushered are already in place. These findings are in line with Zongozzi (2020) who asserts that a lack of disability awareness and support from academic staff members leads to academic hindrances toward students with disabilities.

Significantly, the remaining three students from the interviews had a similar view about the viable solutions with regard to the challenges they are facing in remote learning. The students said that people who facilitate academic development activities mostly are persons without disabilities with little or no knowledge of what constitutes special academic needs in teaching and learning and as a result, they run the workshops exclusively without considering accommodating students with disabilities. For instance, one of the students among these three mentioned that as a postgraduate student she must obtain certain skills that are offered in various workshops as part of academic development activities; however, the platforms that they

use are not disability friendly. She continued that the situations such as this one forces them to rely on their peers. "We really do not know where and how will we send our grievances because people show lack of interest when coming to disability awareness" she emphasised. This validates the argument brought by Gore (2021) that the academic special needs of students with disabilities are overlooked at institutions of higher learning; hence, prompt action is needed.

4. CONCLUSION

The intention of the paper was to unveil the melancholic reality of what blind students experience in the era of connectivism as a pedagogical approach to remote teaching and learning. The findings show that the transition of pedagogical approaches, from face-to-face to online, escalated the demands of students with special needs, noticeably blind ones, as the current approach requires a lot of independencies as well as adequate educational resources. The students accentuated that the current assistive devices do not tally with the online teaching and learning platforms; thus, the transition to Connectivism as a pedagogical approach lingered as a demanding approach to blind students. This serves as a call for innovative intervention, such as the introduction of up-to-date technologies if not assistive devices that will give these students full access to their educational activities. Also, Connectivism as a pedagogical approach to teaching and learning must be examined thoroughly and edified from the perspective of inclusion where all students will have access to attend classes, and be able to make contributions by participating in all academic activities as well as succeeding in their learning.

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