Student Teachers' Experiences of Open Distance e-Learning Support in a Posthuman Era: A Learner Engagement Perspective

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ABSTRACT

Online learning uses information and communication technologies which rely on reliable connectivity. While this is a giant step to widen access in South African education as shown by a number of studies conducted already regarding online learning, less focus has been paid on rural students which are under-resourced. They are presumed to have access and support to online learning and assistive ICTs that make online learning possible. Therefore, the focus for this study was on KwaZulu-Natal rural student teachers' experiences of open distance e-learning in a posthuman era. The study focused on students' experiences regarding online support tools like discussion forum and others as tools for student engagement and support on learning management system platform. The problem was investigated using a descriptive qualitative case study, which used individual interviews. The study involved fifteen a South African Open distance Learning (ODL) student teachers from KZN and the findings revealed that, notwithstanding the countless challenges, students were very passionate about the use of online learning in open distance e-learning and they showed a desire to engage more using different types of devices and platforms as they learn through social media and also showed that learning resides in technological appliances they use(posthumanism), hence the study's conclusion and implications stress that the distance between the student and the institution, student and lecturer and student and other students can be mediated and reduced through proper student support services such as provision of gadgets for internet connection, proper telecommunications infrastructure, ICT workshops and training for all students and in posthumanism terms, formal integration of social networks in learning in light of the finding that learning is non-linear and resides in technological devices used to connect students.

KEYWORDS

Rural students, information and communication technologies, open distance e-learning, learning management systems, cooperative learning, posthuman era.

INTRODUCTION AND BACKGROUND

Open distance learning (ODL) serves to extend access to those who don't have access to mainstream, tradition campus-based education, such as the poor, the illiterate, women and those living in remote/rural areas (Olubor and Ogonor, 2008). Dube (2020) defines rural areas as isolated places found in the countryside, in mountains and forests. According to Dube (2020) rural people lack access to socio-economic conveniences, such as quality education, transport, decent health services, libraries, internet cafes and even electricity. Dhanarajan (2001) postulates that ODL is the vehicle that transport the lecturer to the student. The author further states that it is characterised by spatial separation between lecturers and students which is mediated by information communication technologies (online learning). Nipper (1989) relates to distance learning as it was evolving to "third generation" and further referred to correspondence education as the "second generation" model. In his reference, in these models there is minimal to no student-student and student-lecturer interaction. Pelton (1991) postulates that the third generation involves the use of interactive media/technologies (social process) such as computer mediated communication, video conferencing or audio graphics.

Taylor (1992) further advanced Nipper's ideas with the blend of interactive multimedia (IMM) access to World Wide Web resources, asynchronous and computer conferencing being labelled as "fourth generation" or "online learning". Fast-forward to recent times, Kupe (2019) posits that universities in South Africa should re-align themselves to the advent of the fourth industrial revolution (4IR) which has ushered in the posthuman era in order to keep up with global trends (Lubinga et al., 2023). However, Sub-Saharan Africa has so many challenges and inequalities in education due to the past political injustices it suffered (Dube et al. 2022). Nyerere (2016) states that despite Sub-Saharan Africa (SSA)'s efforts to embrace ODL, it still trails the other countries in completely embracing ODL. For instance, prior to the arrival of ODL in Africa, Europe and North America gave access to African students through open distance learning (ODL), and in 1946 The ODL institution in South Africa pioneered correspondence programmes in Africa (Nyerere, 2012). The institution's prosperity paved way for other universities in other African countries to adopt ODL in their educational programmes (Juma, 2003).

Ngubane-Mokiwa (2017) states that South Africa is one of those African countries that suffered greatly during the apartheid era. "Access" to education was only limited to the elite few while most of black South Africans were marginalised. The ODL university under study is the largest ODL provider on the African continent and one of the largest ODL providers in the world and provides access to scores of students on the African continent. Nyerere (2016) states that in South Africa access and success have been widened through this ODL institution by offering an alternative mode of access and success in higher education. This means that through the use online teaching in ODL, universities are able to help redress the past imbalances which have entrenched inequalities in our societies where the price of higher education in traditional face-to-face universities, coupled with the strict points-based admission by most tertiary institutions,

has seen most students left out of the system. Dzansi and Amedzo (2014), Nyerere (2016), Ngubane-Mokiwa (2017), Rakoma (2018), and recently, Dube (2020) all postulate that the past political injustices in South Africa have entrenched inequalities especially in rural areas where lack of infrastructure has caused digital divide and dearth of basic skills in education that prevent rural students from fully benefiting in ODL programmes and online learning. This has further been exacerbated by the advent of Corona virus pandemic. Even for ODL institution as an open distance learning institution, COVID-19 has also forced it to conduct online exams across the board, which was not the case before the pandemic. This study focused on the effectiveness of student support through student engagement with their lecturers (lecturer-student) and peers (student-student), and students with the machines like computers, cellphones, IPads, etc., particularly a case study of KwaZulu-Natal rural students at the ODL university under study. The study concentrated specifically on student teacher support in relation to student-lecturer engagement and student-student engagement (co-operative learning) in a posthuman era where engagement is extended to include interactions with machines like computers, cellphones. Davidson (1990) defines cooperative learning as a technique that allows students to learn from each other and gain interpersonal skills. The study will explore the experiences of student teachers regarding student-lecturer engagement, student-student engagement on learning management systems platform. Kaufman, Felder and Fuller (1999) argue that in this (CL) teaching technique there could be hitchhikers (student who don't participate in the group assigned tasks) which may be a problem caused by lack of motivation or a case of a student who is too shy or passive to get involved with the group. In contrast to Kaufman et al.'s (1999) observation, Ascough (2003) and Delmater (2004) hold a different view with regards to cooperative learning online. Ascough (2003) and Delmater (2004) hold the view that online education fosters and nurtures a space where all often-sidelined individuals could be prioritised, leading to heightened participation of students as well as cooperative learning (CL). The technological advances ushering in the fourth industrial revolution have not come without challenges for marginalized and previously disenfranchised communities like rural areas, hence the study set out to explore Rural KwaZulu-Natal student teachers' experiences regarding student support in open distance online learning.

Research Question

What are the student teachers' experiences of Open Distance e-Learning support in a posthuman era.

Research Objective

The purpose of this study was to explore the student teachers' experiences of open distance e-learning support in a posthuman era.

LITERATURE REVIEW

Internationally, Europe is the pioneer of ODL and is leading the other countries in the developments of ODL (UNESCO, 2014). Countries like South Africa and other African countries

benchmark themselves against Europe. European countries synergise their efforts in the propagation and development of ODL. The European Association of Distance Teaching (EAUDTU) launched a project called EMPOWER in 2015.This project's aim is to strategise around student support in the ODL. Europe has its share of challenges regarding ODL, they have higher drop-out rate than that of traditional universities. However, unlike African countries, Europe's challenges are not dominated by lack of funding. Asia's economy has different characteristics, it has developed countries like China and Pakistan. Asia has worked tirelessly to accommodate more students for undergraduate and post-graduate studies through the expansion of tertiary education systems like ICTs and are continuously improving the quality of education (UNESCO, 2014) and countries like Pakistan who, like South Africa, are still bombarded by digital divides. Overall, some Asian countries like China have proper infrastructure for ODL, but still have challenges monitoring the quality of ODL. Likewise, countries like Pakistan experience the same problem, but over and above that have to contend with lack of resources that cause digital divides. The latter phenomenon is exactly like that of South Africa.

According to Nyerere (2016, p.6):

Sub-Saharan Africa (SSA) and the rest of African countries has had a long history in embracing distance education, yet it still trails the rest of the world in fully embracing ODL. Africa, just like Europe, has put measures in place to synergise and strengthen ODL activities and student. The SADC region's head of states signed a SADC Protocol on Education and Training in 1997.

The Protocol recognises ODL as a vehicle for extending access and equity in higher education for non-traditional students and trainees while RETRIDAL was also established in 2013 to develop and create regional networks across West Africa. Unlike Europe and Asia, Africa has a challenge of funding and poor infrastructure emanating from a long political history of decolinisation and apartheid which saw the masses being marginalized from taking part in the economy. These conditions have left many regions and rural areas under-resourced (Braman 1998; Horwitz & Currie 2007; Van Audenhove 1999). This history and lack of infrastructure has had a lot of ODL authors questioning the legitimacy of migration to online learning. Söderström, From, Lovqvist & Tornquist (2012) argue that the rationale behind the use of online learning is to broaden access, accommodate those that work full time and the disenfranchised, and to lower the costs of teaching. In contrast to Söderström et al.'s view, Martin (2007) believes that the use of technology in education would increase costs instead of lowering them, will restrict access and is a tool used by capitalist corporations to generate profit. Martin (2007, p.479) holds the view that "there is no categorical proof that this kind of pedagogy positively contributes to the improvement of education and believes that its use is an agenda propelled by those that stand to gain when they supply technologies for universities and other institutions." This further justified this study as there clearly is a need to investigate online learning in the ODL context especially for rural students.

Overall, according to many researchers operating in the ODL space, as stated by Afzaal and Ahmad (2011), research suggests that the overall efficiency and success of online education in ODL is reliant upon the interaction (student engagement) which is a vital aspect to a student learning (Anderson & Garrison, 1995; Fresen, 2007; Khe et al., 2018; Moore, 1993; Messias, 2015; Northrup, 2001; Picciano, 2002; Senior et al., 2018; Young & Norgard, 2006). Consequently, Volery (2000) suggested that in order to boost students' interactions, collaborative learning should be encouraged. Building on Volery's suggestion, this study was further justified by the contrast in ideas between Kaufman (1999) arguing that in collaborative learning/cooperative teaching technique there could be hitchhikers (student who don't participate in the group assigned tasks) which may be a problem caused by lack of motivation or a case of a student who is too shy or passive to get involved with the group, and Ascough (2003) and Delmater (2004) who point out that participation is better in online education. It was also further justified by the presumption of culture of use in higher learning where rural students are presumed to possess basic ICT skills and knowledge when they take part in online learning in the ODL environment (Ngubane-Mokiwa, 2017).Understanding how we can support students looking at their background and needs would ensure that the government, the department of basic education and higher learning don't just throw away millions into ICT gadgets in desperate hope to meet the 4IR demands without really understanding first the challenges we face in ICT and education in its current state so that we can respond accordingly (Deloite,2018). Manda and Dhaou (2019) postulates that the 4IR is about disruption, not only for individuals, but for business as well, in a posthuman era the said disruptions may refer to the impact of Corona virus and advancement of technology which have also altered the way learning and teaching take place. This then makes the connectivism theory more relevant as it defines learning as non-linear, residing in non-human appliances (4IR-aligned technological devices) and concerned with connecting specialised nodes or information sources (Siemens, 2015). In ODL students use technology to connect with the university, lecturers and other students. In light of the new definition of learning in the posthuman era and as dictated by the evolution of technology, ODL also has to undergo changes in terms of how the university engages with students. Under COVID-19 it meant ODL students could not visit the institution's support facilities that provide access to internet and computers for their online learning while rural students are nowhere near such facilities as previously disenfranchised communities, therefore this calls for more innovative ways to engage with the students. The next section assists us conceptualise open distance learning in the posthuman era.

Theoretical Framework

In the world of 4IR that includes the use of WEB 2.0 tools (WhatsApp, Facebook, Teams, Zoom,etc) education landscape is no longer defined the same way as it was previously. In the advent of 4IR education needs to be defined in terms of posthumanism. Snaza, Appelbaum, Bayne, Carlson, Morris, Rotas, Sandlin, Wallin, & Weaver (2014) describe posthumanism as a rejection of human-centric ontology and epistemology—a philosophy that decries

anthropocentric positioning of *homo sapiens* with regard to non-human others. The "crisis," as Braidotti (2016) so elegantly proposed, "is not necessarily negative, but rather the coming into focus of new conditions for relational encounters, understanding and knowledge production" (p. 28)-COVID-19, past imbalances, geographical separation are some of the said crises prevalent in the posthuman era. Consequently, Siemen's theory was used as it has qualities that seek to understand education in the posthuman era. Siemens (2005) defines education as knowledge derived from how students interact on networks, and knowledge exists and is distributed on networks, and therefore, learning consists of the ability to construct and traverse these networks. According to Siemens learning is stored and manipulated by technology. It still emphasises interaction just like Moore's theory, but its interpretation of learning is not just limited to the student-teacher, content-student, and student-student interaction, but it also argues that learning resides in non-human appliances (ICTs), thereby accounting for the disruptions and chaos arising as a result of 4IR in the posthuman era. It is argued in this study that this theory could respond to the current distance learning challenges we have in terms of optimally utilising the ICTs in a digital world to reduce the transactional distance and using technology expertly to include rural students. Connectivism is definitely a posthuman theory, just as in Siemens's theory, posthuman author Braidotti (2016, p. 28) proposed that, 'Crisis' is not necessarily negative, but rather the coming into focus of new conditions for relational encounters, understanding and knowledge production". How limiting the bounds of our knowledge and being are when only considered from a human perspective-how boundless the possibilities of knowledge and existence become when we move beyond a siloed understanding. This theory therefore helped us understand that learning in posthuman era should be conceived as not only initiated by lecturers or human beings, but can also be looked at as residing, assisted and propelled by the technological devices that we use on a daily basis. Additionally, the prevalence of web 2.0 tools (WhatsApp, Facebook, Teams, Zoom, etc) justifies the notion by Mbatha (2014) that students are inclined to socializing and intrinsically focus should also be on the gadgets and softwares that facilitate their socializing and learning. These also help with the metaphorical 'chaos' that come with the isolation rural students experience when they can't reach their lecturers on online leaning management system (LMS) platforms like discussion forums and when they can't keep up with scheduled online learning programmes. They can, in the midst of 'chaos' or 'crisis' find solace in the fact that they have their gadgets like cellphones which help them connect with other students and mitigate their failure to adhere to scheduled online learning programmes and expectations set by the university and which also become the sole source at that time, therefore, the device in itself becomes a critical learning tool that cannot be divorced from pedagogical and curriculum planning and development (Adebola & Tsotetsi, 2022; Badaru & Adu, 2022; Hamakali & Josua, 2023; Madimabe & Omodan, 2021; Shava, 2022).

METHODOLOGY

Research Design

This study employed an interpretivist approach, it is descriptive in nature and asks 'what' online students' experiences in the ODL context are in posthuman era, it utilised a case study that helped in gaining deeper insight into student support regarding KZN rural online students in the ODL context. It aimed at gathering and analysing data about prevailing conditions, practices, processes and causal-effect relationships in the ODL environment for rural online students, this is aligned with the notion of Saunders, Lewis and Thornhill (2007).

Sample and Data Collection

Powers et al. (1985) outline population as a set of units in which all the dimensions of interest to the researcher specialist are accounted for. The population in this study comprises of the ODL university students in KwaZulu-Natal rural parts. The participants for the study involved 2020 registered students and 2021 registered College of education students living in rural KwaZulu-Natal. They were chosen because they are registered online on LMS platform and have access to discussion forums. The areas of the study focus were selected because they are presumed to have scarce resources, and access of ICTs and connectivity is a challenge. The selection of a population of 2021 registered students was done to get an insight on experiences for students transitioning from high school (who are presumed to have not been exposed to online learning and ICT use) to higher education and those that have had a longer spell at the ODL institution (2020 registered students). The latter provided an in-depth understanding of their experiences by virtue of having been in the system longer. This was done for cross-analysis purposes.

Sampling Procedures

The researcher determines the area that is more representative of what he wants to study, he looks at the population that has the concentration of the characteristics of what needs to be studied (Singleton, Straits, Straits & McAllister, 1988). For heterogeneity I opted for the purposive sampling technique to recruit participants who are affected by online learning differently even though they are all in rural KZN: College of education student teachers at the ODL institution from different rural districts in KwaZulu-Natal. This was from a rural population pool at their registry. There are 11 districts in KwaZulu-Natal and sample was done on five of them. For time and resources manageability purposes, only one ODL university was selected to constitute the sample.

Data Collection

Interviews are central in the case study (Denscombe, 2014). Johnson and Christensen (2012, p.202) states that "interviewing qualitatively enables a researcher to penetrate the innermost world of another individual and to gain comprehension of that individual's vantage point". To gain insight into the world of rural students the interview type for this study was a focussed, semi-structured interview with open-ended questions. Interviews were a once-off for a duration of about 30-45 minutes. The individual interviews were conducted telephonically with an exception of two face-to-face interviews strictly adhering to the COVID-19 protocols. The

environment for all the interviews had a relaxing ambience to allow the participants to be comfortable throughout the interview.

Analysing of Data

The interview data was thematically analysed as per Braun & Clarke's (2006) six-phase framework. The recorded audio interviews were transcribed and transcripts were analysed and based on the coded transcripts, six themes emanating from the data were identified and recorded. Data was coded manually and where pictorial representation of data was required, soft wares like excel were employed. This study looked at the "presumed lack of experience of 2021 online students) and those that were conceived to have had more experience with online learning (2020 students). To deepen understanding of the rural online students' experiences, the analysis did a cross-case analysis to see the similarities and differences of the phenomenon studied. Potentially, this could increase transferability greatly (Yin, 2009).

Finally, the principle of validity in research is the degree to which a researcher can demonstrate the accuracy of the collected data (Denscombe, 2014). This was ensured from the onset when sampling was done. The participants were selected according to the phenomenon studied so that they can provide rich, uncompromised information. The case study used interviews which were digitally recorded and stored for reference at a later stage. This was to keep checking if the data analysis is consistent with what was initially recorded. Sharing of this information with participants improved trust between the researcher and participants. This is aligned with Lincoln and Guba's (1985) notion that to confirm credibility in a qualitative study, the researcher should first seek confirmation from the participant regarding the precision of the data collected. The findings of this study were triangulated through literature sources and verifications with the ODL university's staff and data was also verified with some interviewed participants. This is in line with (Creswell, 2014)'s notion that "triangulation may involve the use of a wide range of informants and, viewpoints and experiences can be verified against others".

FINDINGS

In the interviews conducted the KZN rural student teachers shared their online learning experiences, they narrated their experiences regarding student support and challenges when working online. It is worth noting that about 60% of the participants interviewed were from deep rural areas and were profiled under the following labels: Participant's Proximity to the institution's campuses; Device ownership; frequently used devices; and Internet and Computer access. The data found that in terms of proximity to ODL university's offices/campuses the participants were all at least more than 50km away from the centres/offices, the farthest being 173km away. The findings also revealed that only 60% of the participants had laptops and notably all (15) participants had cell phones. Four key themes emanated from the study regarding online student support which highlighted all the challenges, support given and areas of improvement in future. Posthumanistically, a machine such as a smartphone is conceived as

beyond anthropomorphic because of its intimacy with human beings as it facilitates relationships and is an extension of our individual personality (Braidotti, 2016).

Background understanding of Computer use, internet and online learning facilities

In trying to comprehend the background of rural students' computer use, how they connect to the institution and their studies (internet connectivity) and access to learning facilities, it was revealed that their ICT skills, access to internet and learning facilities were the pre-requisite of their online learning. Understanding this aspect served as the point of departure. The initial stages of the interviews revealed that most of the participants (73%) had never been exposed to any ICT training programmes nor had they ever used a computer at high school level or prior to joining the university.

> Participant TA 2, interview, 25 November 2021: "……… *I didn't have access to computers at high school level, so the only time I got exposed to the digitized world in terms of smart phones was when I got to* campus*, so it's kind of like being thrown into the deep end, the transition from high school to varsity is a big jump for other people, especially for someone who has never been exposed to computers before"*

Additionally, the findings revealed that participants used their cellphones most of the time to connect to the internet and LMS platform, very few participants owned and used laptops. In this study it was found that all participants preferred using their phones to connect to the internet for general use and for their studies. The preference stemmed from the mobility and portability of the cellphone and the flexibility it provides when one is not receiving a stronger network signal. In posthuman thinking, this is evidence of the intimacy students have with their smartphones as cited by Braidotti (2016) who posits that smartphones are the extension of our individual personality, in this case the mobility and portability of the cellphones enable one to find a signal in areas that are poorly connected or equipped in terms of telecommunications giving a student a fighting chance in the carrying out of online activities.

> Participant TA 3, interview, 25 November 2021: *"I use a phone, it is better to connect with a phone, it connects easily to the internet, more mobile than the laptop, and it's a problem carrying the computer around-high rate of crime".*

The extract above suggests that participants struggle with connectivity in general and have to move around to get signal, a cell phone was the most preferred tool based on its mobility and easy connection to the internet. The participants, as indicated in their profiles, are situated far from the institution's facilities and most of the participants lamented that the cafés were all not within walking distance. The challenges they encountered included lack of ICT skills due to no prior ICT training, connectivity issues, data costs, load shedding and distant internet cafés and facilities, COVID-19 dictates that they write online exams despite all these challenges hampering their online learning.

> Participant TA6 and TB12, interview, 26 November 2021: *"Our network is too poor, this affects me negatively, especially when I have to write a paper, before writing I have to go to town to write, and when we have load shedding it is even worse."*

Participant TA4, interview, 26 November 2021: *"We live in rural areas, there is no network, we don't have services like electricity and other infrastructure, and it affects the network. Data is expensive, I spend about R500 per month on data."*

Despite the 11 out of 15 participants not having any formal training in high school none of the participants reported a challenge navigating the internet or knowing how to use the internet. It was obvious though that the challenges they encounter have a bearing on their online learning.

Students' experiences regarding user-friendliness of university learning management system platform and student engagement

In accordance with the CoL (2015) all ODL institutions are required to afford sufficient student support in person and online through their Learning Management Systems. In the case of institution, they use their Learning Management system which is meant to facilitate student engagement (student-student, group discussions and lecturer-student). The findings revealed the following sub-themes: LMS platform Navigation, Employment of discussion forums, Facebook, YouTube, WhatsApp and Telegram and student-lecturer interaction and student-student interaction (cooperative learning) on the discussion forum.

The two groups of participants which are those that were registered in 2021(Group A-presumed to be less exposed to ICT/online learning) and those registered in 2020 (Group B-presumed to have had more ICT/online experience) shed the light regarding the use of LMS. The findings indicated that that participants in group B (presumed to have more exposure to online) found LMS platform to be very user-friendly and they frequented it more than those in group A (presumed to have less online exposure).This cross-examination of data showed that those that have been registered longer and have worked online longer found LMS friendlier and frequented it more than those that haven't been with the university longer. This means that with enough training and the longer the students are registered with the institution the more likely they are to use LMS efficiently and frequently thereby enhancing their online learning experience.

Initially the idea was to explore just the use of discussion forum as a learning tool used to connect the students and facilitate an integral part of online learning which is student engagement. During the interviews it became evident that in other to fully gain a deeper understanding of online learners' experiences of discussion forum and engagement, the researcher needed to look at the discussion forum in relation to the other discussion platforms like Facebook, WhatsApp, Telegram and YouTube, this way, not only would we understand the effectiveness of discussion forum, but we would also understand its limitations in relation to other preferred forms of engagement. As supported by the extract above, other learning sites were used by the participants. The findings revealed that WhatsApp is the most used or preferred platform followed by discussion forums, Telegram, YouTube, Facebook and Google Scholar. This was gauged in terms of frequency of use and preference. This finding is in line with

ideas of posthumanists such as Siemens (2005) in connectivism theory who states that learning in the digital age is the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organisation or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more significant than our existing state of knowing. Similarly, the distance online students at the ODL institution resorted to other means of learning by connecting to specialized information sets like social media and abandoning their existing knowledge that the institution is the centre of information (abandoning LMS platforms like discussion forums) and through their personalized tool in the smartphone developed learning connections through collaborative learning. In the midst of metaphorical 'chaos' such as COVID-19 restrictions that prevented them from visiting the online support centres like internet laboratories, internet cafés, and libraries or lack of such facilities, and delayed lecturer response on discussion forums, they re-invented themselves into social collaborative beings assisted by their smartphones which became central to their online learning. The following extract sheds lighter on why the participants preferred certain sites in addition to discussion forum to support their learning.

> Participant TA1 and TA8, interview, 24 November 2021: "*I have never attended discussion forums, I have heard about them, I have never got clarity regarding them.*"

> Participant TB14, interview, 24 November 2021: *"Sometimes I use YouTube if I don't understand a certain topic. I also attend discussion forums almost daily. Lecturers respond once in a while. Lecturers take forever to respond. I find discussion forums are not addressing our problems as quickly as they should, as much as working in a group is useful, it is difficult to get the attention of the lecturer."*

Under the sub-theme: 'Student-lecturer interaction on discussion forum and student-student interaction (cooperative learning)', findings revealed that participants felt that the discussion forum has a potential to be beneficial to their online learning, but all lamented that lecturers take too long to respond to questions posted on the platform. They said while it's helpful to work with their peers, they still need a lecturer's constant presence to keep them in line.

> "I don't use discussion forums on LMS , instead we form WhatsApp groups because of data, It is bad, they don't respond to our questions, by the time they do, after about a month, it is too late.", lamented Participant TB13, interview, 26 November 2021.

> In another interview Participant TA6, interview, 26 November 2021 said:

> "Sometimes I do feel uncomfortable, other students respond negatively to our questions, you would find that you ask a clarity seeking question, but others would deem it stupid and I would appear as if I'm stupid or slow, I tend to then withdraw. "

> On the other hand, Participant TB15, interview, 26 November 202 said that:

"Discussion forums are very helpful, I got study mates on the discussion forums. On this platform we post our views, and we discuss certain topics. These are very useful. The challenge is sometimes lecturers are slow to respond but discussion forums help, because you can read through the comments and still learn something."

Overall, all participants found the LMS platform to be user-friendly and indicated that the discussion forum has a potential to assist them greatly, but its challenge was that the lecturers and or tutors were not actively involved in the discussions.

DISCUSSION

The results of this study were summarized under the following themes: The ODL rural student teachers' experiences regarding lecturer-student engagement, The rural student teachers' experiences regarding student-student engagement (cooperative learning), Student teachers' experiences on learning management system LMS and lecturers' encouragement of interaction and participation in online discussions, and lastly, Commendations made for the enhancement of student support at the institution in general, and specifically for rural students. It was notable that students were very enthusiastic about the use of online learning in Open Distance e-Learning and they showed a desire to engage more using different types of devices and platforms as they learn through social media and that learning also reside in technological appliances they use(posthumanism), hence the study's conclusion and implications stress that the distance between the student and the institution, student and lecturer and student and other students can be mediated and reduced through proper student support services such as provision of gadgets for internet connection, proper telecommunications infrastructure, ICT workshops and training for all students and in posthumanism terms, formal integration of social networks in learning in light of the finding that learning is non-linear and resides in technological devices used to connect students.

The findings align to the notion by Mbatha (2014) and Ngubane-Mokiwa (2017) who state that students who are in need of additional interaction may want to engage more on social media platforms, and that it is high time ODL institutions embrace the Web 2.0 applications (WhatsApp, Facebook, Telegram, Mixit, YouTube, etc.).Additionally, they also contribute to trying to settle the argument where Söderström et al. (2012:2) argue that "the rationale behind the use of online learning is to broaden access, accommodate those that work full time and the disenfranchised, and to lower the costs of teaching". This puts ICT at the centre of ODL and the new dispensation. In contrast to Söderström et al.'s view, Martin (2007) believes that the use of technology in education would increase costs instead of lowering them, will restrict access and is a tool used by capitalist corporations to generate profit. Martin (2017,p.479) holds the view that "there is no categorical proof that this kind of pedagogy positively contributes to the improvement of education and believes that its use is an agenda propelled by those that stand to gain when they supply technologies for universities and other institutions". The findings confirm what Söderström et al. (2012) asserted, despite the challenges faced by the

participants, overall, they still felt online learning is working in a positive development of their learning.

Experiences of rural student teachers regarding lecturer-student engagement

Based on the findings from the data collected it was found that the most used learning site or platform is WhatsApp ahead of discussion forums which is on the learning management system. All the participants cited limited lecturer engagement on the discussion forum, and they cited that as off-putting, hence they resorted to using other sites like WhatsApp, Telegram, Facebook, etc. for additional interaction.

Even though the participants in this study cited less lecturer involvement as a reason that put them off from using the platform more, this trend of the emergence of these social media tools in learning was also evident in the study conducted by Mbatha (2014) who posits that ODL is branded by use of new Web 2.0 tools, which enable more lecturer-student interaction, student-learning environment interaction, student-student interaction, and student-institution interaction. Other studies done posit that this is different from the previous first, second and third correspondence models where the lecturer was the only constant link between the student and the learning environment (Taylor, 1995). This body of literature supports the theory that underpins this study, which is Siemens (2005)'s theory, connectivism: a learning theory for digital age that delineates that social network analysis is an added element in comprehending learning models in a digital era. The health of the learning ecology of the organisation is reliant on effective cultivation of information flow

Given what is presented above, while it is clear that the ODL institution under study would have to revamp the discussion forum, but it would also be wise to look at embracing the Web 2.0 applications as central to learning given that technology has altered the way we learn.

Another challenge that was found regarding student-lecturer engagement was that of network, travelling costs to cafés and data costs. Participants cited these challenges as limiting and as a stumbling block to continued online engagement. These findings are in line with the study by My Broadband (2018) which reported that South African broadband prices were by far the highest than other countries'. Healin (2019) also reported that the report released in December 2019 showed that South Africans were paying way higher in data than other countries. Commissioner Tembinkosi Bankable said that two of the biggest cellular networks in SA were at least 50% more expensive than other African countries serviced by these companies (ibid.). The recent study done by Research ICT Africa (2020) still found that most South Africans still cannot afford to go online despite the mandatory reduction on prices, this is still due to high data costs. This finding was in line with Mahlangu's (2018) study which stated most of his respondents had no access to internet which excludes them from student support systems and electronic communications and that the majority of South Africans are poor, living in the rural areas where the Internet access is problematic and are generally illiterate as far as the internet is concerned. The high data prices significantly put rural students at a disadvantage given their background. This is against the notion by Commonwealth (2015) regarding inclusivity in higher

education, their policies advocate for equal access to education, not education determined by one's spatiality and social and economic standing.

Experiences of rural student teachers regarding student-student engagement (cooperative learning)

The findings revealed that the preference in learning sites was informed by the participants' experiences. The participants preferred WhatsApp ahead of the discussion forum. The optimum use of the discussion forum was discouraged by limited lecturer engagement. The participants reported positive learning experiences when engaging with their peers. They engage on all these social media platforms including discussion forum because of the need for additional interaction as indicated in Mbatha's (2014) study who posits that institutions start embracing the social media platforms as central to learning. Another study to this effect was done by Ngubane-Mokiwa (2017) who states that research shows that most of students are comfortable with the use of social media tools like Facebook, Instagram, Twitter, Mxit, and other synchronous platforms.

While the experiences of working with their peers online was positive, there were however, concerns from other participants that they endure hostility from other participants who deem their questions as stupid and unnecessary when they are working online. Siemens' (2005) states that the health of the learning ecology of the organisation is reliant on effective cultivation of information flow. In the case of this study the learning ecology was not cultivated by lecturers as participants stated that lecturers seldom respond to their questions. It is this lack of supervision that makes students to not work in harmony on the discussion forums and other sites.

Kaufman et al. (1999) argue that in this teaching technique there could be hitchhikers (student who don't participate in the group assigned tasks) which may be a problem caused by lack of motivation or a case of a student who is too shy or passive to get involved with the group. In contrast to Kaufman et al.'s (1999) observation, Ascough (2002) and Delmater (2004) hold a different view with regards to cooperative learning online. Ascough (2002) and Delmater (2004) hold the view that online education provides an environment where all and often marginalized voices could be heard, contributing to a higher participation of students as well as cooperative learning (CL).In the case of this study my findings aligned with both Kaufman, Felder and Fuller (1999) and Ascough (2002)'s assertions. In terms of posthumanism, this finding proves that education no longer just resides in humans, but we have to explore it as also residing in non-human appliances (Siemens, 2015). The lack of motivation from lecturers causes a hostile environment for other students who then decide to keep quiet and not engage and they become hitchhikers as Kaufman and Fuller suggest, and on the other hand the participants did say that they enjoy working online with other peers, they help one another a lot.

Another challenge the participants cited was that of connectivity. These students are from rural areas and are under-resourced, this is due to the historical imbalances. This history and lack of infrastructure has had a lot of ODL authors questioning the legitimacy of migration

to online learning. While these challenges also reduce peer to peer interaction online, they don't completely impede it which talks about the frequency of visiting online learning site. These findings are in line with Rakoma's (2018) who found that despite the challenges the rural participants still spent an acceptable amount of time online which was not too far off from the global satisfaction level of 21 hours per week.

Commendations can be made for the enhancement of learner support in general, and specifically for rural students.

Based on the participants' challenges the participants made commendations for the enhancement of their online learning support. There were *two* types of commendations made, those that could be implemented by and are within the unvesrity control, and those that could be implemented by other stakeholders like government and private sector. These were central and important in gaining deeper understanding of their experiences.

Those that the ODL institution can implement include: The provision of online orientation and ICT courses for basic use of the computer and the LMS this came after students felt the University was using a blanket approach and assumed the culture of ICT use for rural students. The students' perceptions here are supported by Ngubane-Mokiwa's (2017) assertion that the advancement of technology has serious ramifications for rural students doing online learning in the ODL context as it (online learning) presumes existence of a culture of use, and reliance on modern electronic technologies. Similarly, Letseka (2015) highlighted the same challenge that the move from ODL to ODeL assumes existence of an established culture, use of, and reliance on modern electronic technologies. But while South Africa has pockets of urban cosmopolitan territories like of big modern cities and sub-urban areas, the larger geographical spread of the country remains rural, communal, consistently poor and excluded from the broader benefits of modern electronic technologies in what is known as the 'digital divide'.

In light of the findings, the ODL institution should build more support ICT centres in rural areas to support those students in deep rural areas like KZN. Mashile and Pretorius (2003) posit that the students' socio-economic standing of and the affordability of assistive technologies and poor infrastructure in their rural dwellings, contributes to the digital divide dominant amongst students, chiefly the rural students.

Findings of the study also revealed that it was necessary to fortify the discussion forums through enhanced student-lecturer engagement and open itself to the possibilities of using other platforms as well, and rollout discussion forums and other platforms across all modules. This view is supported by an international study done in Pakistan's Allama Iqbal Open University (AIOU) by Afzaal and Ahmad (2011) which found that in distance education conventions, interaction is often reflected as a defining characteristic of quality learning experiences. Similarly, in the education literature, researchers' belief in the importance of student-teacher interaction is so prevalent that it is presumed to be a basic need for learning to take place (Anderson & Garrison, 1995).This is also supported by the theoretical framework of this study.

Another finding revealed that there might be a need for the insitution to integrate or incorporate WhatsApp/umoya onto LMS platform, this was driven by the participants need for additional interaction as they complained that there was minimal interaction by lecturers on discussion forum. This finding is supported by Mbatha (2014) and Ngubane-Mokiwa (2017) who state that students who are in need of additional interaction may want to engage more on social media platforms, and that it is high time ODL institutions embrace the Web 2.0 applications (WhatsApp, Facebook, Telegram, Mixit, YouTube, etc.).This is also in line with the views of posthumanists like Snaza (2014).

CONCLUSION

This study reports student teachers' experiences of open distance e-learning in a posthuman era-a learner engagement perspective in the rural KwaZulu-Natal, data found that all the students were embracing online learning and just wanted the institution to recognize their challenges and unique rural circumstances when they plan their support strategies especially during COVID-19 which meant migration from venue-based exams to online exams. All the participants could work online independently indicated that they would like to engage more with lecturers, subject content, other students and technologies.

RECOMMENDATIONS

Governmental Level

Government should fix the issue of load shedding in South Africa. Load shedding is not only affecting our economy but education as well. Online students rely on the internet connection and electricity powered gadgets for their online studies and exams. When there is load shedding the internet also dwindles and gadgets cannot be powered. Government should also improve infrastructure in rural areas. Telecommunications infrastructure and electricity need to be improved as lack of network coverage was cited as a barrier to online learning, students engage less online because they lack reliable connectivity which is caused by the fact that rural areas are still vastly under-resourced.

Institutional Level

The South African ODL university should build more support ICT centres in rural areas to support those students in deep rural areas like KZN and these should be well-marketed. The ODL university under study should also provide online orientation and ICT courses for basic use of the computer and LMS platform to novice students. This will deal with the challenge of students not optimally using online support. The training should be hybrid(online and on site) to make sure it is effective as noted that sometimes online learning is disturbed by issues of connectivity in the rural areas.

The ODL university should fortify the discussion forums through enhanced student-lecturer engagement, and a rollout of discussion forums across all modules. Constant engagement between lecturers and students and amongst students will make students more confident and motivated to do their online studies and improve the quality of online learning

and cooperative learning. The institution must also integrate or incorporate WhatsApp and other social media platforms onto LMS platform, 'The university should embrace these social media platforms (WhatsApp, Facebook, Telegram, YouTube, etc.) to fully support online students. This will also assist those students who feel they are isolated in their learning. The insitution should increase the frequency of virtual classes to engage with students more. The ODL researchers suggests that online students support should be modelled looking at the traditional universities support or should be similar to that one. Student engagement will be increased as in traditional universities if it can be conducted regularly.

Lastly, the ODL university should extend its partnership with network companies and must collaborate with the department for communications and provide data bundles to all the students throughout the year for continued connection while they work online. This will mitigate the challenge of students who cannot afford the data which limits their online learning and engagements.

Limitations

This study was only limited to one faculty, the faculty of education regarding rural KZN students. The study utilised qualitative data with a limited number of 15 participants, which may not be representative sample to 100% guarantee transferability of the entire districts in KZN. The main aim of the study though was not to generalise, it was to gain insight into a selected group of online students' experiences and understand their challenges in rural scenario. Despite the limitations mentioned, the findings can still be employed to better assist and tailor support to the needs of ODL university's KZN rural students and it can also serve as a yardstick study for other researchers who may want to explore other rural communities with similar geographical locations and background.

Ethical considerations

All the participants gave informed concerned and written consent. The Ethics Research Review committee at the College of Education of UNISA (Ref: 2021_RPSC_084) gave ethical approval. Anonymity and confidentiality were adhered to throughout the study.

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