Exploring Educators' Challenges of Online Learning in Covid-19 at a Rural School, South Africa

Kananga Robert Mukuna
Psychology of Education, University of Free State, South Africa
https://orcid.org/0000-0002-1787-4543

Peter J. O. Aloka
Wits School of Education, University of the Witwatersrand, South Africa
https://orcid.org/0000-0002-4298-9211

Abstract. This study explored the perceived challenges of online learning encounter by rural educators in response to COVID-19 pandemic at a selected rural school in South Africa. Within the qualitative approach, a multiple case study was used as a research design. A sample size of six participants (N=6, two males and four females) was drawn from a rural school in a Thabo Mofutsanyana District in the Free State Province. Purposive and convenience sampling techniques were used to select participants in this study. The participants had teaching experience ranging from 2 to 7 years. Data were collected through telephone interviews and analysed using thematic analysis. The finding suggested that the Protection Motivation Theory was an insightful framework in responding to the challenges emanating from COVID-19 induced online teaching and learning. Thus, the study revealed that there are various challenges to online learning. These include poor parental involvement in children's homework, incomplete work and poor performance, insufficient personal protective equipment, poor access to network access, and lack of learning devices. Subsequently, we recommend that stakeholders such as the Department of Education, Department of Basic Education, and School Governing Bodies, among others, should ensure that parents are sensitized about the need for learners to manage the resources at their disposal. Furthermore, the provision of adequate resources such as; Internet connectivity and Information and Communication Technologies learning devices is imperative.

Keywords: Online learning; COVID-19; Protection Motivation Theory; Rural school; Educators' challenges

1. Introduction

Over the last 20 years, learning facilitated online through network technologies has emerged across South African Higher Education Institutions (Ravjee, 2007). However, online learning refers to learning taken partially or entirely through the Internet (Gilbert, 2015; Sharma, Bhardwaj & Bhardwaj, 2017; MS'Sakshi & Dhull, 2018). The use of online learning involves many technologies that allow knowledge delivery over computer networks in an educational context (Dorin, 2011; MS'Sakshi & Dhull, 2018). However, online learning is an Information and Communication Technologies (ICT) enhanced practice in institutions which include but is not limited to email provision, online journals, and networked libraries to developing creative software solutions for information management tasks in teaching, researching, and administrative systems.

The Department of Basic Education (DBE) responsible for primary school education acknowledges the importance of blended learning in South African schools (Green, 2011). Furthermore, the national Department of Education (2006) published its White Paper on E-Education in 2004 and called together a 'think-tank' that is based on an overview of research and delivery needs related to the 'roll-out' of e-Learning in schools. Thus, it is essential to mention that South African rural areas mostly lack the social and economic viability needed to sustain technological improvement (Cristobal-Fransi et al., 2020). This is because governments find it more challenging to supply quality education services in rural areas. Various factors weaken the quality of learning and teaching in South African rural areas (Du Plessis & Mestry, 2019). It has been realised that online learning is seen as a tool to address trajectories during the times of crisis, not only for survival (by communicating essential information on the fight against COVID-19) but also for teaching and learning by members of deprived communities, such as those of rural schools (Dube, 2020). In lieu of this, Du Plessis and Mestry (2019) recommended, there is a need to put strategies in place to improve teachers' working conditions and the teaching at rural schools to improve learner achievement across the rural areas of South Africa.

The Corona Virus Disease, otherwise known as COVID-19 pandemic, has affected all the nations globally. While some countries have gone past the peak, South Africa continues to experience the effects of this novel global pandemic. Various measures have been devised to mitigate the virus's spread, such as social distancing and the wearing of facemasks, among many other strategies (Scherbina, 2020). Effective implementation of these measures requires the cancellation of public events, educational and commercial activities, and limiting individuals' freedom to non-essential movement to encourage people to remain at home. However, the above-measures' effectiveness is critically based on the compliance of human behaviours in society (Delaney et al., 2013). A plethora of factors that include awareness of the measure, the severity of penalties, and the cost of isolation could affect these measures (Briscese et al., 2020). Among other spheres of life, COVID-19 has reconfigured the teaching and learning process, resulting in online learning as the dominant modus operandi.

Prior to the COVID-19 pandemic, scholars had predicted that online learning styles would grow extensively, coupled with a sharp increase in demand for such programs (Beyer, 2013; Ali & Smith, 2015). In a way, online learning can be considered as a form of distance education where learners are physically or geographically separated from their educators. Some scholars have argued that in online learning, learners should be prepared to develop independent learning capability and motivate themselves to learn and engage in learning activities that make them persistent and successful (Zuhairi, Karthikeyan & Priyadarshana, 2019). Online educational institutions are faced with challenges related to transformation, which entails the digitalisation of learning and teaching. Furthermore, the transition to digitalise the schools should consider the learning needs and the technological support required for learning (Zuhairi, Karthikeyan & Priyadarshana, 2019). However, an assumption exists that the use of online learning is beneficial to learners because it is convenient for them within the comfort of their home. That is, its advantages are vast, and they have been significant to students' development (Lim, 2004; Shimada, 2017; Guspatni, 2018).

According to Dorin (2011), online learning facilitates transformative learning, which involves critical reflection, reflective discourses, and action. Such an approach encourages learners' engagement with academia. It also ensures flexibility, which entails free learning conditions, self-paced studying convenience, and a comfortable learning environment (Lim, 2004; MS'Sakshi & Dhull, 2018). Furthermore, several scholars have identified the various advantages of online learning that include easy accessibility, cost-effectiveness, personalised learning, development of cognitive abilities, prompting computer skills, developing self-pacing, and accessing globalisation (Bakia et al., 2012; Norman, 2017). Thus, online learning allows individuals to depend more on technology than human connection (Amichai-Hamburger & Ben-Artzi, 2003; Ranaeiy, Taghavi & Goodarzi, 2016). However, research has suggested that online learning is suitable for educational productivity (Bakia et al., 2012). To maximise the benefits of online learning, there is a need to harness the requisite resources, which are carefully managed. In the same vein, there is a need to inculcate such critical values as intensive self-discipline and self-direction among learners (Hickey, 2015). Online learning has changed the very traditional way of learning characterised by loneliness (Pappano, 2001). While online learning, as an alternative to traditional forms of learning, is associated with many advantages, some challenges are context-specific. For example, learners in rural settings bear the burden of online learning. The lack of adequate resources may explain that learners in rural settings are uniquely disadvantaged by online learning. Furthermore, online learning does not effectively facilitate the affective domain in the teaching and learning process offered by face-to-face contact (Ali & Smith, 2015). Deducing from the above gaps, this paper explored the usefulness of the Protection Motivation Theory (PMT) to understanding the perceived challenges faced by educators in a rural setting in South Africa in the context of COVID-19 induced online learning.

2. Theoretical framework

Several models have been developed to respond to life-threatening situations, such as the outbreak of pandemics. These are useful for understanding individual precautionary behaviour to limit diseases' contamination (Jiang et al., 2009; Williams et al., 2015). Others have reviewed how awareness mechanisms might assist in preventing the outbreak of diseases (Redd, 2012; Ling, Kothe & Mullan, 2019). Some scholars have also considered the PMT as an intervention framework for various pandemics (Plotnikoff et al., 2010). Therefore, this study adopted the Protection Motivation Theory (PMT) developed by Ronald Rogers in 1975 to comprehend educators' responses to the challenges emanating from the COVID-19 pandemic. PMT is a psychological model developed to understand better the individual's motivational responses to potential threats related to their health and safety (Rogers, 1975). This theory suggests that individual and environmental factors may affect or contribute to the development of protective behaviours, which should be mediated by individual cognitive processes (Clubb & Hinkle, 2015). It has generally been used to understand protective behaviours that people may adopt to reduce the perceived threat of pandemic diseases in various fields such as health, education, and psychology (Baghianimoghadam et al., 2014; Williams et al., 2015). Most of the studies on health psychology have focused on research that are mostly scared of the pandemic. However, the present paper demonstrated protective measures in response to COVID-19. PMT's relevance to online teaching and learning in the context of COVID-19 is reflected in considerable alignment. That is, the consistent implementation of protective measures is necessary to protect vulnerable populations in unaffected regions.

Hence, it averts unnecessary alarm and harm during outbreaks of emerging infections (Jiang et al., 2009). Therefore, we argue that PMT is critical because it motivates using individual protective equipment and actions to normalise human behaviour and enhance safety. This theory is useful in exploring the perceived challenges to online learning encountered by educators in rural settings.

3. Literature review

Several studies have focused on conceptualising social isolation feelings. Social isolation is a lack of meaningful human contact with other persons (Hortulanus et al., 2006). Priego and Peralta (2013) highlighted that lack of face-to-face contact with others could cause social isolation. Studies have revealed that the face-to-face connection's quality is helpful because it allows individuals to express their emotions towards peers (Holmes & Reid, 2017). Currently, individuals struggle to connect with others due to COVID-19 related restrictions. For example, the need to maintain social distancing compels people to limit discretional movement. In online learning, communicating with fellow learners and educators is challenging, especially when all interactions occur remotely. It is essential to consider that the era of COVID-19 may contribute to increased feelings of anxiety. It is relevant to differentiate the cause of social isolation and its development. Some scholars revealed that social isolation could contribute to a high withdrawal rate during online learning compared to the traditional face-to-face approach to learning (Ali & Smith, 2015; Schaeffer & Konetes, 2010). Studies have suggested that social isolation could be an obstacle to academic performance and

achievement (Bester & Budhal, 2001; Tingstad, 2019). It may lead to increased anxiety, depression, and feelings of sadness (Ali & Smith, 2015; Matthews et al., 2016).

Despite that other communication modes such as phone and email can be used for interactions where both audio and video messages can be exchanged, the real facial expressions and body movement cannot be detected during a phone call (Conrad & Donaldson, 2012; Lehman & Conceição, 2010). However, social distancing and social isolation are important strategies that an individual may adopt to mitigate the risk of acquiring or spreading COVID-19. Therefore, individual rights to free choice and to accomplish routine activities are limited to decreasing the risk of spread and contamination. Research has shown that engaging in protective measures can significantly decrease the possible infection (Clubb & Hinkle, 2015). Considering the nexus between social isolation and online learning, it is important to link social isolation to online learning and teaching in schools. Social distancing is an action taken to minimise contact with other individuals. It worth noting that social distancing measures comprise one category of Non-Pharmaceutical Countermeasures (NPCs) aimed at reducing disease transmission, which translates to reduced pressure on health services (Anderson et al., 2020; European Centre for Disease Prevention and Control [ECDPC], 2020). There is a lack of knowledge to explain behavioural responses to the pandemic's cognitive of contamination risk. Social distancing might reduce social contacts, responding to the pandemic (Williams et al., 2015).

Literature review on challenges of education delivery about pandemics like COVID-19 exists. For example, Wenham, Smith & Morgan (2020) reported that the closure of beyond might have a differential effect on women, who provide most of the informal care within families, with the consequence of limiting their work and economic opportunities. Similarly, McKibbin and Fernando (2020) found out that the pandemic could significantly impact the short run's global economy. Daniel (2020) adds that the COVID-19 pandemic is a huge challenge to education systems and suggested that the normal classroom subjects teaching should put COVID-19 in a global and historical context. Di Pietro et al. (2020) suggested that COVID-19 influence negatively both cognitive and non-cognitive skills acquisition and may have significant long-term consequences in addition to the short-term ones. Besides, Dube (2020) reported that online learning alternative in the context of COVID-19 excludes many rural learners from teaching and learning in South African primary schools. Due to a lack of resources to connect to the Internet, the learning management system, and low-tech software. Furthermore, Ebrahim et al. (2020) argue that the state of lockdown halted learning in South African schools, and learners and educators in rural areas are helpless on approaching online learning during the COVID-19 lockdown. Finally, Ngogi (2020) concludes that blended learning practised in South African Schools is commendable but suggested that rural schools would be disadvantaged because of several challenges.

The self-efficacy associated with PMT components was a strong predictor of the intention to stay at home in a pandemic using social distancing behaviours in a

hypothetical pandemic. Similarly, Williams et al. (2015) found out that both PMT and social distancing behaviour were responded to simulated factors in reducing the infectious disease epidemics. However, in rural locations of South Africa, the inability of learners to socialise may have affected their online learning capacities. Studies have shown that rural schools lack Internet connectivity, hence, learners in such environments have little or no access to the relevant tools required for online learning tools during the era of COVID-19 (Omodan, 2020; Dube, 2020). From the literature review conducted, little exists on the challenges of online learning in South African schools. Therefore, the present study explored the perceived challenges encountered by educators at a selected rural school in South Africa in meeting their mandate during the era of the COVID-19 pandemic.

4. Current study
This study explored the PMT's usefulness to understand educators' challenges of online learning in COVID-19 at a selected rural school in South Africa.

5. Methodology
5.1 Research design and participants
The study adopted a phenomenology research design. This design is suitable for research that seeks to describe the essence of a phenomenon by exploring it from the perspective of those who have experienced it (Teherani et al., 2015). The goal of phenomenology is to describe the meaning of experience in terms of what was experienced and *how* it was experienced (Teherani et al., 2015). This design was chosen because it helped the researchers to explore the individual challenges experienced by educators from a selected rural school.

The population consisted of all educators from the rural schools in the Thabo Mofutsanyana District, Free State province, South Africa. The participants were selected using purposive and convenient sampling techniques due to accessible factors to the population's specific characteristics in exploring challenges educators encountered during the COVID-19 period at the rural primary school. These sampling techniques were important to select the participants who were available to participate in the study during the national lockdown level 3 in South Africa. During this phase, schools were closed, and participants were encouraged to work remotely from home. Thus, the participants had been contacted to participate in the study. Six educators (N=6, two males and four females) constituted the sample size. All participants had at least two to seven years of teaching experience. They were responsible for Life Skills and Life Orientation subjects that empower learners to achieve their full physical, intellectual, personal, emotional, and social potential. Their experiences were considered phenomenal to enable juxtaposition of both pre-COVID and COVID-19 related experiences.

5.2 Instruments
Data collection was made through qualitative telephone interviews. This technique was adopted because it provides a balanced distribution of power between interviewer and interviewee (Vogl, 2013). This method was applicable to the study because it aligned with the social distancing, as it was a strategy that

meant currently to reduce the spread of COVID-19. This technique was reasonable during COVID19 because it was not feasible for the researchers to travel to individual educators' schools or homes to conduct the interviews. This study used open-ended questions related to the educators' challenges during the COVID-19 at a rural school. The interviews included *parental involvement in children's homework, network access, and learning devices.* All participants felt comfortable participating in this study, and the interviews were naturally and friendly taken in English to facilitate the data collection process. Participants were asked more than once to ensure data credibility. The trustworthiness was made and followed up.

5.3 Procedure for data collection

The Research and Ethics Committee of the University of Free State approved the study. The participants were informed of their right to voluntary participation and the right to withdraw from the study at any stage of the research process without expecting any negative consequences. All the interviews were conducted telephonically using English as the medium of communication. Each interview session was audio-recorded. All the participants voluntarily provided their consent to be audio-recorded. The individual interviews with the educators took approximately thirty to forty-five minutes per participant. The study was conducted at a rural school in the Thabo Mofutsanyana district in Free State province, targeted Life Skills (LS)/Life Orientation (LO) educators, and used telephone interviews. The educators were interviewed during the day. They selected times that were convenient for them.

5.4 Data analysis

The thematic analysis approach was adopted for data analysis. This method seeks to identify categories and to report patterns (themes) that may emerge within data. It minimally organises and describes the data set in (rich) detail. However, thematic analysis often goes further than this and interprets various aspects of the research topic (Boyatzis, 1998). First, the interview data were transcribed, and interviewee responses were coded as participants: Participant 1, Participant 2, Participant 3, Participant 4, Participant 5, and Participant 6 in line with their responses to each question. Researchers familiarised themselves with data by transcribing, reading, re-reading, and taking notes. We coded the data into potential themes and gathered all relevant data to each potential theme to measure the coding quality. We reviewed themes generated from a thematic "map" of the analysis and checked the themes' relevancy from coded extracts and entire data. We named emerging themes refined from theme's specifics and the overall story; the analysis tells and generated clear definitions and names for each theme. We finally produced integrated results, which assist the coherence of the write-up report.

6. Results

The study explored the perceived challenges to online learning in the COVID-19 pandemic at a selected rural school in South Africa. The results suggested that as an approach, PMT is insightful for understanding intention in online learning and

allowing the implementation of social distancing behaviours among rural school educators to reduce the spread of COVID-19. Several themes emerged, indicating that various challenges affect the efficacy of COVID-19 induced online learning and teaching. These include poor parental involvement in children's homework, submission of poor quality work, and incomplete tasks, insufficient personal protective equipment, poor network access, and lack of Information Communication Technology (ICT) devices to access the Internet.

Poor parental involvement in children's homework
The results indicate that many factors influenced poor parental involvement in children's homework in the COVID-19 induced lockdown at the selected rural school. Language barriers could be a factor of poor parental involvement in children's homework. Most participants indicated that language barriers inhibited some parents from assisting their children with homework during the COVID-19 induced lockdown. This challenge mostly affected those that were always dependable on the educators and friends' assistance their children needed help. For example, learners that reside in rural areas with their grandparents or other family members during this time had to endure the most of online learning. One participant reported that:

> *"We have found that many parents do not want to help their children. They claim that it is the school's responsibility to help learners. Hence, they are not supporting their children, the school or the educator"* (Participant 2).

The lack of time could influence the poor parental involvement in children's homework in lockdown at the rural school from the interview excerpt. However, most parents designated as essential workers, spending a lot of time at work, were not available to assist their children with homework. While most of them would be available only during the weekend, many be catching up with their work. As a result, they could not contribute meaningfully to their children's education.

> *"Parents do not have time as they are working during the lockdown, complained of lacking time"* (Participant 3).

From the interview excerpt, the lack of technological gadgets could explain the poor parental involvement in children's homework, the COVID-19 induced lockdown at the rural school. Participants mentioned that the parents are not much involved because they lacked the technological access, among other socio-economic barriers. As a result, education changed dramatically, with the distinctive rise of online learning, and the study materials were required. Furthermore, online submissions required internet connection, and parents were unable to check their children's work. Participants indicated that it was difficult to join and communicate with the learners' parents or guardians during the COVID-19 induced lockdown.

> *"Study materials are available on the Department of Education's website and also on other Internet platforms such as a worksheet, cloud, and other such platforms. Unfortunately, most parents are unable to help their children with school work"* (Participant 1).

Regarding those mentioned above, the extract from one participant illustrates the following:

> *"Subjects like Mathematics and Technology are the types of subjects where learners need the most intervention. Unfortunately, these topics suffer the most. Those schools that have been sharing work with learners cannot carry out assessments and observation, which is vital when educators want to continue with lessons. Feedback is impossible as the platforms are not interactive"* (Participant 6).

From the above interview excerpts, Participant 1 confirms that online learning tools are available at the learners' disposal. Still, they were not effectively utilised because of illiteracy among the parents, resulting in them failing to assist their children. This scenario is peculiar to schools in rural settings. Participant 6 did not only link the matter to parents but that some of the important subjects were not effectively discharged because of the technicalities involved. Therefore, poor parental involvement was not solely a result of parents' reluctance to assist their children. Lack of Internet connectivity was also a major challenge.

Poor quality and incomplete work submissions

The participants' responses suggested that educators experienced poor work submissions because of using online teaching and learning as a method of content delivery during the COVID-19 induced lockdown. They further mentioned that parents were unable to assist their children in delivering quality work.

> *"Even under normal circumstances, most children struggle with their schoolwork because they live with old people who cannot help them. To them, the only place they should learn is at school; hence, home is only space where they must relax"* (Participant 4).

From the interview excerpt, participants indicated that learners were produced and submitted incomplete or unfished works while others could not even attempt the tasks given to them. Participants indicated that they received learners' work of poor quality-suggesting that they would have rushed through the work to complete it. Furthermore, they complained that learners were not following instructions when doing tasks, and some were writing illegibly.

> *"We also receive work that is of a very poor quality, where you can easily see that the learner has rushed the work to complete it. They also do not follow the instructions sent to them. Furthermore, they write illegibly. We also have some learners who have not submitted any work over 4 weeks after the due dates"* (Participant 2).

From the interview excerpt, the result of poor quality work submissions could be regarded as socio-economic barriers. Most of the parents who live in rural communities are uneducated, unemployed, and faced serious challenges with limited infrastructure available for their children at home, making it difficult for teaching and learning to occur effectively. The below statement corroborates the above;

> *"The ability to go outside and play with their friends is an easier option for them. I have spoken to some parents, and all of them say*

> *that everything in the townships is normal, and children are playing*
> *around outside and should be at school"*(Participant 6).

Therefore, participants believed that perhaps some parents were helping or even doing the work for their children. The participants demonstrated that learners produced a high quality of work and performed better than they did in class. It is important to note that some parents inspired the high standard of work their children produced and did not accept any poor work. They mentioned that 'online' assessment should be continued to be a language of the educator, and the learners could still complete essays and other written tasks.

During the COVID-19 induced lockdown, we have also realised that some learners depended on others' help. For example, not doing their work but wait for others to do it for them. From the above analysis, it is clear that the outbreak of COVID-19 precipitated the 'new normal', which hindered learners' productivity as confirmed by the participants that learners produced poor quality work.

Insufficient personal equipment and poor network access
The participants' transcripts indicated that educators lacked sufficient personal equipment, such as personal computers and electronic devices, laptops, and smartphones. This equipment has become a learning device with extraordinary potential for both classrooms and outdoor learning.

> *"Out of 48 learners, 28 parents have cell phones, which are*
> *smartphones, but they are not familiar with how to use them, and*
> *the rest have cell phones that can be only be used for phone calls*
> (Participant 5).

> *"The lack of devices makes it almost impossible to teach and learn*
> *during this time since we are not able to meet face-to-face. The lack*
> *of ICT devices means that children will miss out. In the context of*
> *COVID-19, working without these devices means that both*
> *educators and learners will not make any significant progress. Most*
> *learners cannot afford ICT devices, and that means they*
> *automatically become academically excluded. Not being able to get*
> *an education because you lack facilities constitutes a violation of*
> *one`s right to education."* (Participant 4).

From the above interview excerpts, it is clear that most of the participants lacked the relevant ICT devices, and some did not know how to use them to enhance online learning.

Participants also indicated that most parents and guardians were unfamiliar with ICT gadgets due to several factors such as the cost of purchasing mobile phones that are compatible with Internet connectivity, lack of electricity, low network coverage, and expensive maintenance requirements for data, Wi-Fi. The participants reported that the lack of these devices affected online teaching and learning because even when trying to make means, it becomes a challenge to parents due to data costs. Regarding the school environment, these are the main challenges that hinder learning and for it to continue taking place during the

COVID-19 pandemic. Participants mentioned that the lack of ICT devices made them frustrate both educators and learners.

> *"Network limitations and Internet access have had a big impact on learning. Not all learners have easy access to the work sent to them. This results in their failure to keep abreast with the syllabus"* (Participant 2).

The response from Participant 2 demonstrated that poor network access was a challenge that affected online teaching and learning during the COVID-19 induced lockdown. They recognised that most learners hailed from informal settlements and townships. In these settings, Internet access is considered a luxury compared to other things such as food and shelter. Most residents in informal settlements had no access to the Internet. Lack of internet connectivity made it difficult for learners to access study materials. Furthermore, participants mentioned that network-related limitations affected many learners, who struggled to submit their work before stipulated due dates. This, in our argument, can cause anxiety in the learners as they are scared that they will not get the marks they have worked for, and educators battle to mark and control work as they are constantly trying to gain access to learners' work.

Lack of learning devices
Since the outbreak of the COVID-19 pandemic has redirected the teaching and learning spaces in the schools, adequate provision of online teaching-learning material are imminent. In this regard, there is a need for personal electronic and Internet devices for learners to cope and meet up with their urban counterparts. Failure to access the online learning devices has many effects, such as withdrawal and feeling isolated due to the lack of needful material to support learning. The revelations from educators showed that the reverse is the case. The below statement contained the statements;

> *"Unfortunately, learners' parents do have some access to devices; however, they will not be prepared to share it with their children, and they will rather wait for schools to provide the necessary equipment"* (Participant 5).
> *"Some learners have to share devices with siblings and parents, often resulting in their work falling behind or causing friction in the households"* (Participant 6).

The transcripts from participants' responses suggested the lack of school provisions' devices such as laptops and smartphones affect online learning and teaching during the COVID-19. The participants recognised that some parents had these devices. Participants highlighted that learners who do not have access to devices could fall behind, as they do not have access to their work, causing them to wait for long periods. Another concern has also been that not all devices can access the various platforms used for online learning. This includes the devices' inability to access Microsoft Software, such as teams and forms and WhatsApp to receive work. From the above, Dube (2020) argued that one of the challenges learners face during COVID-19 is a lack of teaching and learning resources such as the Internet of things, gadgets, tools that could enhance their productivity towards their academic performances.

7. Discussion

The study sought to explore the perceived challenges of online learning during the COVID-19 pandemic. It focused on a selected rural school in South Africa. The findings revealed that the challenges to online learning in the context of COVID-19 were poor parental involvement in children's homework, poor quality and incomplete class-work submissions, insufficient personal equipment, poor network access, and lack of learning devices. In terms of poor parental involvement in children's homework, the study found out parents were not adequately involved and available to assist their children. According to the analysis, this was linked to poor socio-economic backgrounds, rural characteristics, and illiteracy through argument within. It also emerged that some parents were busy doing their work and running errands; hence, they were unable to attend to their children's schoolwork during the COVID-19 lockdown. The above finding contradicts Đurišic and Bunijevac (2017), who argued that parents' involvement in children's education is significant to their academic performance. Similarly, Lemmer (2007) argued that some parents cannot read and write and can only communicate in their mother tongue, which presents a challenge when they are expected to assist their children at home. On the other hand, Lau, Li and Rao (2011) found that parents' involvement in children's education yielded positive outcomes in primary and high schools. These findings may have originated because the learners in lower education grades, such as primary and secondary/high schools, are still underage and needed to be guided both at home and in schools. However, this study confirms that the study area is faced with poor parental involvement in children's schoolwork, which is not healthy for the academic development and productivity of the learners, especially in the context of COVID-19 lockdown.

The study revealed that the selected schools' learners were submitting poor quality work to their educators during COVID-19-induced lockdown. In some instances, the learners were not serious about their homework. It was reported that learners could submit incomplete tasks to their educators, which was also linked to rural characteristics, including the poor socio-economic status of parents who were unable to provide the necessary resources for their children to facilitate online learning. Similarly, Omodan (2020) found out that the outbreak of COVID-19 increased rural dwellers' vulnerability because learners living in rural locations have the relevant infrastructure, such as the Internet, required to sustain the new normal. Furthermore, Dube (2020) also found out that, although the government of South Africa tried to provide various academic relief materials for learners to cope with online learning. Therefore, learners in rural communities lack access to Internet gadgets such as computers, phones, and other equipment to enhance their academic progress during COVID-19 (Dube, 2020). This finding is in tandem with the World Bank's (2020) observation that online learning disproportionately benefits the advantaged students ahead of their disadvantaged counterparts. In this context, learners in the selected location are regarded as disadvantaged. This is not only peculiar to secondary schools. For example, Cristobal-Fransi et al. (2020) confirmed that rural universities had limited educational resources to sustain their students, especially those living in remote areas. Generally, rural

locations suffer unequal distribution of academic resources (Grydehøj, 2016; Omodan, 2020).

The study also found that learners lacked ICT-related gadgets to work from home during COVID-19 lockdown. On the one hand, this was linked to parents' inability to share their devices with their children, and on the other hand, it was linked to schools' inability to provide devices for their learners. Learners living in rural locations, either by omission or commission, have little or no online learning access. Montrieux et al. (2015) argued that policy and curriculum planners should consider providing technical and pedagogical support to both learners and educators to enable them to cope with the demands of 21st-century teaching and learning. In line with this, we also argue that there is a need for increased personal protective equipment to redress the challenge faced by rural schools.

8. Conclusion and recommendations

The study concludes that online learning was initially considered as a major problem for learners and affected learners' completion of their academic programmes. Further, it also affected their academic performance because of several limitations related to the subjects offered. The recent COVID-19 pandemic increased the need for online teaching and learning and changed people's perceptions. It is important to understand the gravity of social isolation and online learning before we approach online education. This was unpacked with a qualitative approach employed by this study. From the above-reported results, we conclude that learners' challenges in rural communities during the COVID-19 pandemic included poor parental involvement in children's homeworking, poor quality and unfinished academic works, insufficient personal protective equipment, and poor network access, and lack of learning devices. Upon the exposition of the challenges, we recommend that all stakeholders such as the Department of Education, Department of Basic Education, and SGBs, among others, to ensure that parents are sensitised about online learning to ensure that they take charge of their children when they are working at home, should make a concerted effort. Secondly, the learners must be encouraged by both parents and the educators to always manage the resources at their disposal to ensure that their work is done perfectly and submitted on time. Besides, the government should, as a matter of importance, rescue the learners living in rural communities by providing adequate resources in the form of internet access and ICT devices.

9. References

Ali, A., & Smith, D. (2015). Comparing social isolation effects on students attrition in online versus face-to-face courses in computer literacy. *Issues in Informing Science and Information Technology, 12*, 11-20.

Amichai-Hamburger, Y., & Ben-Artzi, E. (2003). Loneliness and Internet use. *Computers in human behavior, 19*(1), 71-80.

Anderson, R., Heesterbeek, H., Klinkenberg, D., & Hollingswort, T. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *Lancet*, 395(10228), 931-934.

Baghianimoghadam, M. H., Sharifpour, Z., Lotfizadeh Dehkordi, M., Nadgarzadah, A., & Hashemi, A. S. (2014). The role of protection motivation theory in predicted of

nutritional behavior in prevention cancers in mothers in Yazd city, Iran. *Progress in Nutrition, 16*(3), 197-203.

Bakia, M., Shear, L., Toyama, Y., & Lasseter, A. (2012). *Understanding the Implications of Online Learning for Educational Productivity.* Office of Educational Technology, US Department of Education.

Bester, G., & Budhal, R. S. (2001). Social isolation: a learning obstacle in the primary school. *South African journal of education*, *21*(4), 330-335.

Briscese, G., Lacetera, N., Macis, M., & Tonin, M. (2020). *Compliance with covid-19 social-distancing measures in Italy: the role of expectations and duration* (No. w26916). National Bureau of Economic Research.

Clubb, A. C., & Hinkle, J. C. (2015). Protection motivation theory as a theoretical framework for understanding the use of protective measures. *Criminal justice studies, 28*(3), 336-355.

Conrad, R. M., & Donaldson, J. A. (2012). *Continuing to engage the online learner: More activities and resources for creative instruction* (Vol. 35). John Wiley & Sons.

Cristobal-Fransi, E., Montegut-Salla, Y., Ferrer-Rosell, B., & Daries, N. (2020). Rural cooperatives in the digital age: An analysis of the Internet presence and degree of maturity of agri-food cooperatives' e-commerce. *Journal of Rural Studies*, *74*, 55–66. https://doi.org/10.1016/j.jrurstud.2019.11.011

Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects*, 1-6. https://doi.org/10.1007/s11125-020-09464-3

Delaney, L., Kleczkowski, A., Maharaj, S., Rasmussen, S., & Williams, L. (2013). Reflections on a virtual experiment addressing human behavior during epidemics. *Proceedings of the 2013 Summer Computer Simulation Conference*, 33, 1-8.

Department of Education. (2006). *White Paper on e-Education Transforming Learning and Teaching through Information and Communication Technologies (ICTs)*. Pretoria: Government Printers.

Di Pietro, G., Biagi, F., Costa, P., Karpiński, Z., & Mazza, J, (2020). *The likely impact of COVID-19 on education: Reflections based on the existing literature and international datasets*. Publications Office of the European Union, Luxembourg. https://doi.org/10.2760/126686, JRC121071

Dorin, H. (2011). E-learning tools for teaching and learning. *Journal Plus Education, 7*(2), 110-115.

Du Plessis, P., & Mestry, R. (2019). Teachers for rural schools – a challenge for South Africa. *South African Journal of Education, 39*(1), 1-9.

Dube, B. (2020). Rural Online Learning in the Context of COVID-19 in South Africa: Evoking an Inclusive Education Approach. *Multidisciplinary Journal of Educational Research*, *10*(2), 135-157. http://dx.doi.org/10.447/remie.2020.5607

Đurišic, M., & Bunijevac, M. (2017). Parental involvement as an important factor for successful education. *CEPS Journal, 7*(3), 137-152.

Ebrahim, S. H., Ahmed, Q. A., Gozzer, E., Schlagenhauf, P., & Memish, Z. A. (2020). Covid-19 and community mitigation strategies in a pandemic. *British Medical Journal, 2*, 368-378.

European Centre for Disease Prevention and Control [ECDPC]. (2020). *Guidelines for the use of non-pharmaceutical measures to delay and mitigate the impact of 2019-nCoV*. Stockholm: ECDC.

Gilbert, B. (2015). *Online learning revealing the benefits and challenges*. Education Masters. St. John Fisher College.

Green, W. (2011). Foundation Phase teacher provision by publishing her education institutions in South Africa. *South African Journal of Childhood Education, 1*, 1-10.

Grydehøj, A. (2016). Navigating the binaries of island independence and dependence in Greenland: Decolonisation, political culture, and strategic services. *Political Geography* 55, 102-112. https://doi.org/10.1016/j.polgeo.2016.09.001

Guspatni, M. (2018). Students' activities in, perceptions of and expectations for e-learning: A case in Indonesia. *Knowledge Management & E-Learning: An International Journal, 10*(1), 97-112.

Hickey, R. (2015). *Disadvantages to consider about online education*. Retrieved from https://www.petersons.com/blog/5-disadvantages-to-consider-about-online-education/ Retrieved May 2020

Holmes, C. M., & Reid, C. (2017). A comparison study of on-campus and online learning outcomes for a research methods course. *The Journal of Counselor Preparation and Supervision, 9*(2), 15.

Hortulanus, R., Machielse M., & Meeuwesen, L. (2006). *Social isolation in modern society*. New York, NY: Routledge.

Jiang, X., Elam, G., Yuen, C., Voeten, H., de Zwart, O., Veldhuijzen, I., & Brug, J. (2009). The perceived threat of SARS and its impact on precautionary actions and adverse consequences: a qualitative study among Chinese communities in the United Kingdom and the Netherlands. *International Journal of Behavioral Medicine, 16*(1), 58-67.

Lau, E. Y. H., Li, H., & Rao, H. (2011). Parental involvement and children's readiness for school in China. *Educational Research, 53*(1), 95-113.

Lehman, R. M., & Conceição, S. C. (2010). *Creating a sense of presence in online teaching: How to" be there" for distance learners* (Vol. 18). John Wiley & Sons.

Lemmer, E. M. (2007). Parent involvement in teacher education in South Africa: *International Journal about parents in education,* 1(0), 218-229.

Lim, D. H. (2004). *The Effect of Flexible Learning Schedule on Online Learners' Learning, Application, and Instructional Perception.* Presented at Academy of Human Resource Development International Conference (AHRD) 2004. Retrieved from https://www.learntechlib.org/p/59833/.

Ling, M., Kothe, E. J., & Mullan, B. A. (2019). Predicting intention to receive a seasonal influenza vaccination using Protection Motivation Theory. *Social Science & Medicine, 233*, 87-92.

Matthews, T., Danese, A., Wertz, J., Odgers, C. L., Ambler, A., Moffitt, T. E., & Arseneault, L. (2016). Social isolation, loneliness and depression in young adulthood: a behavioural genetic analysis. *Social psychiatry and psychiatric epidemiology, 51*(3), 339-348.

McKibbin, W. J., & Fernando, R. (2020). The Global Macroeconomic Impacts of COVID19: Seven Scenarios. Centre for Applied Macroeconomic Analysis. Working Paper 19/2020. Australian National University. http://dx.doi.org/10.2139/ssrn.3547729

Montrieux, H., Vanderlinde, R., Schellens, T., & De Marez, L. (2015) Teaching and Learning with Mobile Technology: A Qualitative Explorative Study about the Introduction of Tablet Devices in Secondary Education. *PLoS ONE, 10*(12), 0144008. https://doi.org/10.1371/journal.pone.0144008

MS'Sakshi, P., & Dhull, I. (2018). Collaborative and Cooperative Learning: An Overview. *Journal of Education, 34*, 21-30.

Ngogi, E. M. (2020). *The Impact of COVID-19 Pandemic on Education: Navigating Forward the Pedagogy of Blended Learning*. Department of Education KwaZulu-Natal, South Africa.

Norman, S. (2017, August 03). *5 Advantages of Online Learning: Education without Leaving Home.* Retrieved August 08, 2017, from https://elearningindustry.com/5-advantages-of-online-learning-education-without-leaving-home

Omodan, B. I. (2020). The Vindication of Decoloniality and the Reality of COVID-19 as an Emergency of Unknown in Rural Universities. *International Journal of Sociology of Education*. 1-26. https://doi.org/10.17583/rise.2020.5495

Pappano, L. (2001). *The connection gap: Why Americans feel so alone.* New Brunswick, NJ: Rutgers University Press.

Plotnikoff, R. C., Lippke, S., Trinh, L., Courneya, K. S., Birkett, N., & Sigal, R. J. (2010). Protection motivation theory and the prediction of physical activity among adults with type 1 or type 2 diabetes in a large population sample. *British Journal of Health Psychology*, *15*(3), 643–661. https://doi.org/10.1348/135910709X478826

Priego, R. G., & Peralta, A. G. (2013). *Engagement factors and motivation in e-learning and blendedlearning projects.* In Proceedings of the First International Conference on Technological Ecosystem for Enhancing Multiculturality (pp. 453-460).

Ranaeiy, S., Taghavi, M. R., & Goodarzi, M. A. (2016). The effect of loneliness on social networking sites use and its related behaviors. *Global journal of health science, 8*(8), 162-171.

Ravjee, N. (2007). The politics of e-learning in South African higher education. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, *3*(4), 27-41.

Redd, B. R. (2012). *Using the protection motivation theory to examine the effects of obesity fear arousal on the physical activity of young adult female college students*. Wayne State University Dissertations.

Rogers, R.W. (1975). *Cognitive and psychological processes in fear appeals and attitude change: A revised theory of protection motivation*. Social psychophysiology: A sourcebook, 153-176.

Schaeffer, C. E., & Konetes, G. D. (2010). Impact of learner engagement on attrition rates and student success in online learning. *International Journal of Instructional Technology & Distance Learning, 7*(5), 3-9.

Scherbina, A. D. (2020). *Determining the Optimal Duration of the COVID-19 Suppression Policy: A Cost-Benefit Analysis*. http://doi.org/10.2139/ssrn.3562053

Sharma, P., Bhardwaj, K., & Bhardwaj, D. (2017). An Easy, Smart & Intelligent Way to Learn: "Online Education". *International Journal of Advanced Research in Computer Science, 8(*9), 735-737.

Shimada, S. (2017). An effective method of collecting practical knowledge by presentation of videos and related words. *Knowledge Management & E-Learning: An International Journal, 9*(4), 468-483.

Teherani, A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A., & Varpio, L. (2015). Choosing a qualitative research approach. *J Grad Med Educ, 7*, 669–670.

Tingstad, E. B. T., (2019). *Social Withdraws and Academic Achievements: Longitudinal Relations through Ages 6, 8, and 10* (Master's thesis). Norwegian University of Science and Technology (NTNU).

Vogl, S. (2013). Telephone versus Face-to-Face Interviews: Mode Effect on Semi-Structured Interviews with Children. *Sociological Methodology, 43*(1), 133-177.

Wenham, C., Smith, J., & Morgan, R. (2020). COVID-19: The gendered impacts of the outbreak. *Lancet 395*, 846–848.

Williams, L., Rasmussen, S., Kleczkowski, A., Maharaj, S., & Cairns, N. (2015). Protection motivation theory and social distancing behaviour in response to a simulated infectious disease epidemic. *Psychology, health & medicine, 20*(7), 832-837.

Zuhairi, A., Karthikeyan, N., & Priyadarshana, S. T. (2019). Supporting students to succeed in open and distance learning in the Open University of Sri Lanka and Universitas Terbuka Indonesia. *Asian Association of Open Universities Journal, 15*(1), 13-35. https://doi.org/10.1108/AAOUJ-09-2019-0038