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Accessibility of distance teaching and learning platforms used as catch up strategies amidst COVID-19 pandemic in rural areas

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Abstract

The study explored accessibility of distance learning platforms used as catch up strategies amidst COVID-19 pandemic in rural areas at two selected secondary schools in Isoka district of Zambia. This study attempted to answer the research question 'How accessible are the distance learning platforms used as catch up strategies amidst COVID-19 to learners in rural areas like those in Isoka district? The study employed a descriptive case study design following a qualitative approach. The study population comprised of grade 12 learners at Isoka boys' and Muchinga secondary schools in Isoka district. Fifty (50) grade 12 leaners were purposively sampled to take part in the study. Qualitative data were collected using open-ended questionnaires and analysed thematically. Major findings of the study were that: (i) There was limited access to distance learning platforms used as catch up strategies during COVID-19 by some learners at the two secondary schools due to reasons such as; lack of technological devices and gadgets like smartphones, laptops, television sets and radio, unstable internet access, and insufficient power supply; (ii) There was no access to distance learning platforms at all, by some learners who literally had no gadgets and technological devices to use to access the online and broadcasted lessons. As a result, most of the learners experienced little or no learning through distance learning platforms used amidst COVID-19 pandemic. This study recommends that government in partnership with cooperating partners and other stakeholders should improve the internet access in rural areas. There is also need for the government through the ministry of education to find a way of providing rural schools with technological devices such as tablets, smartphones, laptops, and television sets so that learners can use them to access lessons through distance learning in case of predicaments such as COVID-19 pandemic.

Keywords: Accessibility; Distance learning; Platforms; COVID-19; Rural areas.

1. Introduction

Corona virus disease (COVID-19) was first reported in Wuhan, China in December, 2019. The disease continued to spread across the world at an alarming rate and became recognized by World Health Organisation (WHO) as a pandemic on 11th March, 2020 [13]. The deadly pandemic subsequently spread worldwide and claimed thousands of lives. Consequently, many countries of the world decided to close schools and universities as one of the measures to minimise the spread of the pandemic through mass gatherings. The Global Education Coalition which was launched by United Nations Educational, Scientific, and Cultural Organization (UNESCO), indicated that over 186 countries worldwide faced nationwide or partial closures of educational institutions including schools, colleges, and universities. It was estimated that more than 1.6 billion learners, representing about 80% of the world's student population in primary and secondary schools were affected by the school closures [12].

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The school closures led to challenges that included interrupted learning, lack of proper nutrition among some learners, higher dropout rates, and lowered academic achievement levels of learners, among other challenges [1][8][10][12]. The closure of schools motivated many education systems world over to adopt distant teaching and learning. According to [9], distance teaching and learning provides an opportunity for learners and teachers to remain connected and engaged with the content while working from their respective homes. In the context of this study, all forms of learning that learners used during the COVID-19 imposed school closures are referred to as distance learning platforms.

In Zambia, the first case of the pandemic was reported on 18th March, 2020 in a couple who travelled to France and were subjected to port of entry surveillance and subsequent remote monitoring of travelers with a history of international travel for 14 days after arrival [4]. Immediately the education for school going children got disrupted, as the first closure of schools due to COVID-19 was on Friday 20th March, 2020. The schools remained closed until 1st July, 2020 when the COVID-19 cases reduced. This was the time when the examination classes re-opened and non-examination classes remained closed until September 2020. The second wave of the pandemic disrupted the school calendar again as the schools were forced to close on 17th June, 2021 due to escalating numbers of COVID-19 cases and deaths in the country and world over.

These unplanned closures affected the coverage of the syllabi. Learners were forced to remain home for longer periods making it difficult for them to develop and progress academically. The loss in learning hours prompted many countries to employ distance learning platforms and modes such as e-learning, WhatsApp, notes master, television, radio, zoom and many others to teach the learners during the COVID-19 imposed school closures. Likewise, the government of the Republic of Zambia developed an Education Contingency plan to respond and mitigate the impact of COVID-19 on learners. Some of the measures devised include adopting distance learning mechanisms such as opening the fourth national television channel (TV4) on Digital Satellite Television (DSTv) to strictly offer lessons to learners, in order to mitigate short-term and long-term effects of school closures on learners. Therefore, from the Zambian experience, notable distance learning platforms included the following: learners' self-study using both electronic and hard copy learning materials, online learning (for example, e-learning portals, and social media), lessons broadcasted on radio and television, and private tuitions provided by teachers [7].

Notwithstanding that the distance learning platforms were put in place, a number of learners, especially those in rural areas encountered problems in learning due to many reasons. It is important to note that learners in rural areas like Isoka district learn well through the contact time they have with teachers, as most of them cannot easily access the distance learning platforms such as radio, television, notes master, and online learning. Children's routine is also not the same, resulting in unprecedented stress among many [3].

World Vision was concerned that children who still lacked access to distance learning, particularly those in rural communities and most vulnerable would continue to lag behind in education, a situation that would ultimately widen the socioeconomic gap among children, with the less susceptible placed at an advantage. World Vision was also concerned with the risk of high school dropouts among children that had no access to learning opportunities, as some parents even lost interest in supporting children's education. The risk of child marriage was also high among girls that sat idle at home with limited access to learning opportunities. Moreover, schools have always provided a safe place and a referral pathway for children. Continued closures compromised safety and denied children a platform to be heard [11] [14].

A study in India by [2] looked at the phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. The study revealed the following: there was poor to no internet access, financial constraints, lack of technological devices, and affective or emotional support. The findings further showed that learning remotely during COVID-19 was challenging because aside from the existing problems on access and affordability, the emerging concerns on financial stability and affective support contributed to interrupted learning engagement. Another study in Ethiopia by [3] explored COVID-19, in light of distance learning and educational inequality in rural Ethiopia, and established that there were multiple inequalities of rural students that put them in a disadvantaged position compared to urban students. Another study was conducted in South Africa by [5] who looked at rural online learning in the context of COVID-19 in South Africa. The study established that, while the South African government was promoting online learning as the only alternative in the context of COVID-19, this mode excluded many rural learners from teaching and learning, due to a lack of resources to connect to the internet, the learning management system, and low-tech software. Based on the findings of the study, the researcher argued that rural learners are critical stakeholders in education and in the fight against COVID-19, and as such they should not be left behind in efforts to fight the pandemic. Values such as social justice and the rights of rural learners should not be foregone in the fight against COVID-19 pandemic.

Moreover, a study by [7] investigated students' experiences with remote learning during COVID-19 school closures with implications for mathematics education. *The study* findings showed that more than 56% of the respondents did not have sufficient access to Information and Communication Technologies (ICT), electricity, and internet services. Most of these respondents also held a belief that mathematics is a subject that is best learned with face-to-face interactions between the teacher and students, and among students. Another study done by [6], authors from higher learning institutions in Botswana, South Africa and Zambia explored the influence of COVID-19 on students' learning, access and participation in higher education in South Africa. They established that most of the students used the traditional part of blended learning, depending on the print, postal service, and face-to-face. These students' access and participation in learning during COVID-19 were negatively affected. Using Digital Equity as a framework, the researchers explored the influence of COVID-19 on students' access and participation in online learning. They observed that there were significant disparities in access and participation in high-quality technologies and that there were severe educational inequities. This digital inequality impact calls for civic awareness in digital literacy among the citizenry if the gap between the rural and urban, have and have not digital immigrants and digital natives are to be bridged.

Looking at the findings of the above studies and many other studies not outlined here, on the challenges of distance learning platforms used amidst COVID-19, it became necessary to conduct a study looking at accessibility of distance learning platforms used as catch up strategies amidst COVID-19 in rural areas of Zambia in order to see if the challenges were the same as elsewhere or if they were idiosyncratic to Isoka district. This study therefore, looked at accessibility of distance learning platforms used for teaching and learning amidst COVID-19 pandemic to learners in rural areas, by conducting a study at two secondary schools in Isoka district of Muchinga province, Zambia.

2. Material and methods

A descriptive case study design was used to explore the accessibility of distance teaching and learning platforms used as catch up strategies amidst Covid-19 pandemic to learners in rural areas, at two selected secondary schools in Isoka district, Zambia.

2.1. Population of the study

The study population was all grade 12 learners at the two selected secondary schools in Isoka district.

2.2. Study Sample

A total of fifty (50) grade 12 learners were purposively sampled to take part in the study. That is twenty-five (25) from each of the two selected secondary schools in Isoka district.

2.3. Research instruments

Qualitative data were collected using open-ended questionnaires.

2.4. Data analysis

Qualitative data were analysed thematically. First data were coded and categorized according to research questions, and then naming of themes was done.

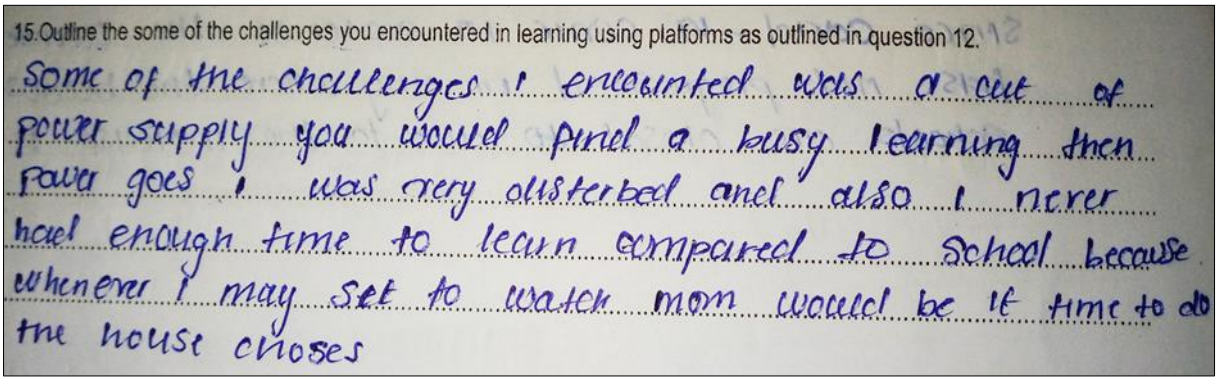
3. Results and discussion

The major findings of the study were that: (i) There was limited access to distance learning platforms used as catch up strategies amidst Covid-19 pandemic by learners at the two selected secondary schools in Isoka district, mainly due to lack of gadgets and technological devices like television sets, smartphones, laptops, tablets; services like power supply, poor network system, and (ii) that there was no access to these distance learning platforms at all.

3.1. Limited access to distance learning platforms amidst Covid-19 pandemic

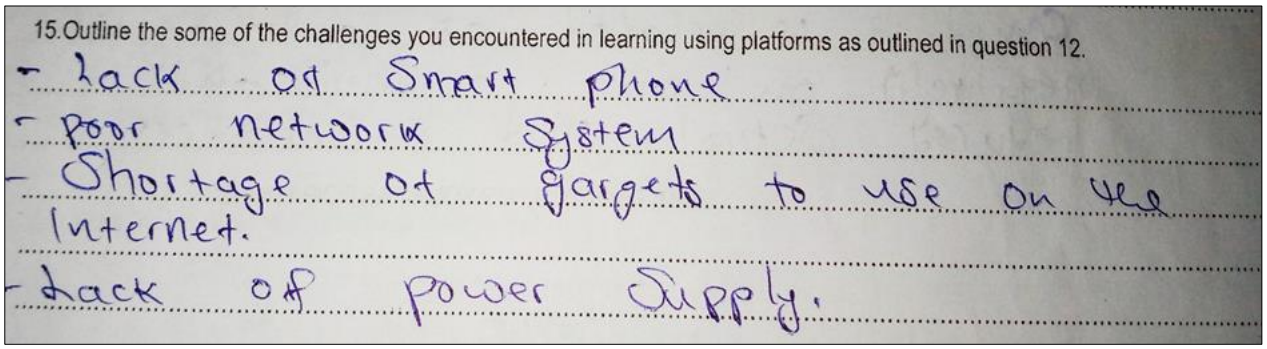
The findings revealed that there was limited access to distance learning platforms such as learning through radio, television, notes master and online learning due to many factors. Some of the reasons highlighted were: lack of gadgets and technological devices such as smartphones, laptops, tablets, television sets and radio by leaners; poor network system in many places of the district, making online learning such as through WhatsApp and notes master difficult to access; insufficient power supply and in some areas no electricity supply at all, leaving learners depending highly on solar and other cheap sources of energy which are not as reliable and developed in Zambia as hydroelectricity power.

Figures 1 and 2 show snapshots of the answers to the question on the open-ended questionnaire, by participants 29 and 48 which provide evidence to this:


15.Outline the some of the challenges you encountered in learning using platforms as outlined in question 12.

Some of the challenges I encounted was a cut of power supply you would find a busy learning then power goes I was very disterbed and also I never hael enough time to learn compared to school because whenever I may set to watch mom would be if time to do the house choses

Figure 1 Answer by participant 29

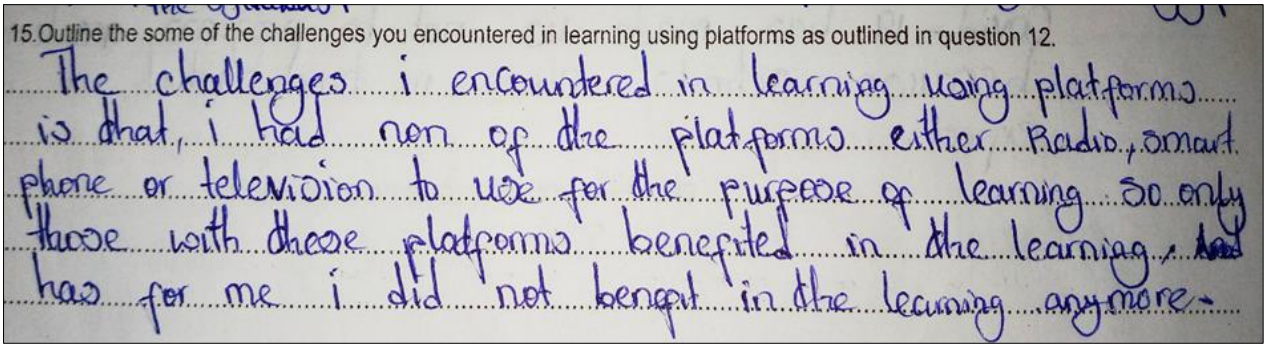

15.Outline the some of the challenges you encountered in learning using platforms as outlined in question 12.

- lack of Smart phone
- poor network System
- Shortage of gargets to use on the Internet.
- lack of power Supply.

Figure 2 Answer by participant 48

3.2. No access to distance learning platforms at all

Some learners did not have access to the distance learning platforms used as catch up strategies amidst Covid-19 at all. These learners did not learn anything through the said distance learning platforms as they did not have the gadgets or technological devices needed for them to learn. Figures 3 and 4 show snapshots of responses to a question on the open-ended questionnaire by participants 43 and 49 which act as typical examples of what some learners stated:


15.Outline the some of the challenges you encountered in learning using platforms as outlined in question 12.

The challenges i encountered in learning using platforms is that, i had non of the platforms either Radio, smart phone or television to use for the purpose of learning so only those with these platforms benefited in the learning, this has for me i did not benefit in the learning anymore.

Figure 3 Response to a question by participant 43

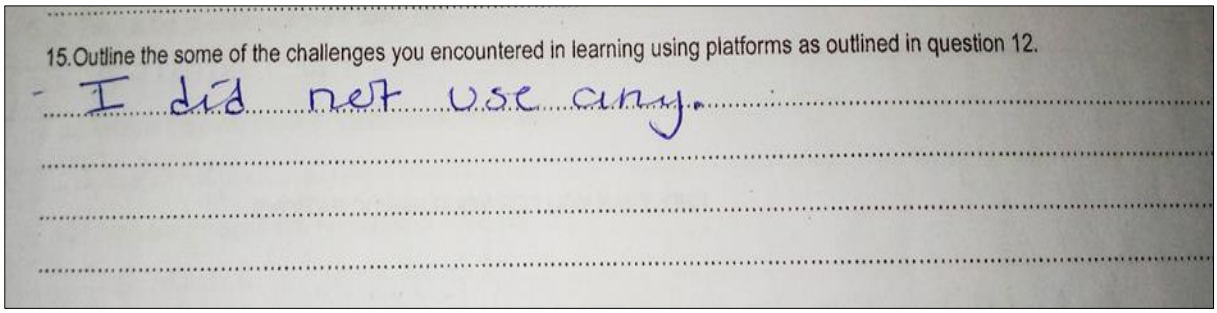


Figure 4 Response to a question by participant 49

4. Conclusion

In a nutshell, there was limited access to distance teaching and learning platforms used as catch up strategies amidst COVID-19 by learners at the two selected secondary schools in Isoka district. Some of them did not even access these distance learning platforms at all, due to many reasons such as lack of technological devices like smartphones, laptops, tablets to use for online and social media lessons, television sets and radio to use for broadcasted lessons. Moreover, there was poor internet in many places of the district. Therefore, it was clear that most of the learners at the two secondary schools experienced little or no learning through the distance teaching and learning platforms used as catch up strategies amidst COVID-19 pandemic.

Recommendations

In view of the findings of this study, it was recommended that government in partnership with cooperating partners and other stakeholders should improve the internet access in rural areas. There is also need for the government through the ministry of education to find a way of providing rural schools with technological devices such as laptops, tablets and smartphones so that learners can use them to access education through distance learning in case of predicaments such as COVID-19 pandemic.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that they have no competing interest.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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