

Rural Education and Online Teaching in Wrestling with the Covid-19 Pandemic

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Received: May 24, 2022 Accepted: June 29, 2022 Published: July 16, 2022

doi:10.5296/ijssr.v10i2.19892 URL: <https://doi.org/10.5296/ijssr.v10i2.19892>

Abstract

Education is wise, hopeful, and respectful cultivation of learning and change is undertaken in the belief that we all shall have the chance to share in life. Education is necessary for each and everyone in order to improve knowledge, way of living as well as social and economic status in life. It also plays a fundamental role in our career growth as well as in personal growth. However, despite the fact that education is important for human development, rural education receives less attention from the government in its reform agenda. This may be

because the education Ministry is usually located in urban areas. This lack of attention from the government has produced several setbacks to the development of rural education, starting from poor infrastructures, lack of qualified teachers to inadequate laboratories and libraries. Based on these problems, it can be said that rural students may not be able to compete with their counterparts in urban schools.

Keywords: rural education, online learning, challenges to learning, Covid-19

1. Introduction

Education is an important method in changing society towards a better platform for sustainable development (Doost, Sanusi, Fariddudin, & Jegatesan, 2011; Fielding & Head, 2012; Foo, 2013). It's a continuous, slow, and secure process of learning to acquire knowledge, paving innumerable ways to professional success through skills and values in our today's society (Oyen & Schweinle, 2020; Hanifah et al., 2014). This simply means that education is paramount because of the belief that, it is the only key to prosper in personal and professional life (Fabunmi, 2010; Ekong, 2000). Because of this reason, from the time formal education was introduced especially in a developing country, several attempts have been made across different nations to promote basic education in both urban and rural areas. However, significant gap coverage still remains the same (Oyen & Schweinle, 2020).

Empirical evidence from the existing studies disclosed several setbacks to educational development in the rural community even before the arrival of Covid-19 (Haruna, 2011). These impediments have hindered the development of education in rural areas (Lind & Olof, 2015).

1.1 Methodology of the Literature Review

To write this review paper, a strict systematic review process was used to collect the articles to access the topic of this study (Dziopa & Ahern, 2011). The researchers followed proper strategies, standards, and guidelines to ensure that this review paper is accurate, precise, and trustworthy.

First, the researchers conducted an electronic search for relevant literature based on the topic of this study in the right scholarly database such as Scopus, Google Scholar, JSTOR, or Science Direct (Snyder, 2019). In this context, literature means any academic sources like books and journal articles. The researcher searched using keywords with the Boolean operator to filter and refine the search results on rural education in the face of Covid-19 (Oyen & Schweinle, 2020).

After the initial selection of journal articles, we check their current reference lists for additional literature. A publication from the reference list was included in this review paper. The researchers paid attention to the citation count on google scholar. If the count is high, the sources are probably important and should be included in this study (Strohmaier et al., 2020).

We tried to remove bias in this systematic review at each and every stage of the research by applying the inclusion and exclusion method (Visentin et al., 2020). This means that we unbiasedly selected top-ranking relevant papers from 2010 to 2021. We excluded papers that are not relevant and any sources from 2009 downward as those sources are no longer current. We also excluded any sources from opinion papers, Wikipedia, and any other data from social media such as Facebook, Twitter, and Instagram in this review paper.

Secondly, the researcher evaluates and selects sources. The researcher read the abstract from the sources selected in step one to scan whether the article is relevant to the topic of this review paper.

Thirdly, the researchers identified themes, debates, and gaps as the researchers read different articles and pay attention to the connection between different sources. By doing so, the researchers were able to organize this review argument based on four standard structures of literature review. These structures include chronological, thematic, methodological, and theoretical.

Chronological means from old to more current literature. Thematic simply means organizing the review paper around several key themes. Methodological means comparing different research methods being used across past studies. Theoretical was used to discuss opposing theories or models.

Based on this method, the researcher began writing this review paper with the introduction, and the main body of the paper which includes summarizing and synthesizing the source and drawing a conclusion. Not reporting important information in this review paper because is not found in the past studies is not considered a good research paper (Dekker et al., 2020). For this reason, however, the researchers contacted the authors of relevant sources by email for additional information such as the number of participants and criteria of the selection of participants which are not included in the previous studies

1.2 Factors Affecting Rural Educational Learning

A close inspection of empirical studies uncovers a complex finding on key issues affecting the successful operation of education in rural communities. According to Aini and Laily (2010); Busari (2014); Mukuna and Aloka (2020), overcrowd-classroom is one of the problems affecting quality teaching and learning among rural students in Malaysia. Based on these scholars, an enormous number of children in one classroom does not create a cozy situation for learning. The reason is that an overpopulated classroom increases the risk of lack of concentration, conflict, and other destructive behaviors among students. These attitudes are capable of destabilizing teaching and learning between teachers and students (Birks & Mills, 2011). Other researchers affirmed that students in overcrowding classrooms are at high risk of transmission of diseases such as hepatitis, salmonella, and tuberculosis (Oyen & Schweinle, 2020; Hanifah et al., 2014).

Whereas some studies reported a lack of professional teachers as another problem that affects the progress of education in rural communities. The problem associated with a shortage of qualified or well-trained teachers in rural schools is that most teachers are not interested in teaching in a rural province where there is little development and modern technology. This problem continues to threaten students' performances, causing dissatisfaction among parents in the rural community (Dekker et al., 2020).

In the same way, several studies (Piyaman, Hallinger, & Viseshsiri, 2017; Klongklaew, 2012; Kwakman, 2003) reported the lack of teacher's engagement in professional training as another factor that influences the development of rural education. According to these authors, when teachers do not have the opportunity to participate in any form of training, they may encounter challenges in delivering quality teaching for students' comprehensive understanding. This drastically affects students learning and eventually, class performance

(Adbulwasiu, Alkandu, & Nayaya, 2013; Haruna, 2011). These scholars suggest that equal opportunities and reward structures should be given to urban and rural teachers. This is to retain qualified and well-trained teachers in both rural and urban schools to avoid educational imbalance between urban and rural students.

Conversely, empirical investigations reported a lack of constant electricity supply as another provoking factor that incapacitates students' performances in a rural community. The reason is that most rural areas do not enjoy 24 hours electricity supply or a regular supply of diesel to run their generators. Because of this, rural students may face difficulties in completing their homework or reading for their examinations at night (Birks & Mills, 2011; Meuret, 2002; Mehan, 1992; Hutmacher, Cochrane, & Bottani, 2001).

The ramification of the marginalization between urban and rural education is that a sizable number of students in the rural regions are subjected to a lack of motivation, leading to a substantial school drop (de Wal et al., 2014). Another repercussion is that rural schools are at risk of producing unqualified graduates with just a little or no professional training skills to survive in the competitive labor market. This is in contrast to urban schools with sufficient training skills. This further increases the level of poverty in the rural areas since rural graduates do not have access to gainful employment and another service because of the perception that they do not have marketable skills to complete organizational tasks (Nordin, 2011; Adelabu, 2008; Mehan, 1992; Hutmacher, Cochrane, & Bottani, 2001).

Moving further, some studies, reported a lack of laboratories with modern technology as another challenging factor that undermines the development of rural education. This creates a situation where rural students cannot discover their potential due to the outdated nature of laboratories (Hallinger & Lu, 2014; Fang & Sakellariou, 2013; Hallinger & Lee, 2011). This is contrary to urban schools with advanced and well-equipped laboratories. These differences between urban and rural education may be because educational policymakers divert their attention to the development of urban education where rapid economic development began. For this reason, schools were well equipped and manned with little priority given to educational development in several rural areas (Froiland, Peterson, & Davison, 2012; Gay, 2000; Deming, 1992).

1.3 Online Learning Experience in Rural Global Education

The universal distraction by COVID-19 discovered by World Health Organization (WHO), in 2019 has badly tempered the economy of every country, and the educational sector is not exceptional (Azionya & Nhedzi, 2021). The ramifications of the coronavirus Pandemic on the educational sector, border closure, social distancing, isolation measures, and travel restrictions are undeniable (QS, 2020).

The temporary measures to contain the pandemic have affected roughly 23.4 million students and 1.4 million teachers globally (UNESCO IESALC, 2020). This simply means that when the Pandemic moved in and turned the world upside down, education especially in the rural communities began to deteriorate at a very high gear (Pam, 2020; UNESCO IESALC, 2020). The decision made by policymakers to dismantle large gatherings was to reduce the risk of

spreading the coronavirus disease. Education from universities to primary schools was compelled to shut down and switch to online learning methods (Dhawan, 2020). This means that the use of devices such as tablets, mobile phones, computers, and also access to a strong internet connection became the only glue that held teachers and students together in online classes. With these devices, students connect with their teachers regardless of their locations (Singh & Thurman, 2019; Algahtani, 2011).

However, results show that online teaching is a problem for underprivileged and marginalized students such as students in rural communities who have little resources and access to online teaching. Evidence shows that rural students do not have access to high-speed internet or devices to attend online classes. It is not surprising that this lack of internet connectivity, coupled with a lack of access to computers and other devices has tremendously led to dropouts among rural students. This has brought additional longstanding disparities between urban and rural education (Pam, 2020; Bhuasiri, 2012; Randy, 2011). This lack of access to devices and the internet has crippled the interaction between rural students which is significant for strengthening their social skills (UNESCO IESALC, 2020; Sanchez-Gordon & Luján-Mora, 2014).

Some studies reported that rural students in developing countries do not have strong self-motivation or computer literacy because they have limited access to devices. This has impacted their ability to access their online teaching (Kim & Hong, 2021; Duma et al., 2021).

In the same way, studies found that rural schools face triple challenges of poor internet connection with few teachers and technical expertise, leaving rural students with the only option to stitch together and patch up solutions on how to complete their school work. This is in contrast to urban education where students have access to high-speed internet. Therefore, it can be said that the lack of qualified staff and poor internet connection has brought further educational inequities between urban and rural education (Palau et al., 2021; Azionya & Nhedzi, 2021; Lee, 2020).

Furthermore, evidence shows that the coming of the coronavirus Pandemic has made it difficult for teachers to meet the needs of their vulnerable students such as students who are English learners and students with disabilities challenge. This is because of the movement restrictions, making it harder for teachers to access their students in remote geographical location (Hove & Dube, 2021; Iqbal & Ahmad, 2010).

By contrast, empirical investigations found that online learning has a greater benefit for rural and urban students in developed countries like Australia and Korea. The reason is that students in rural and urban areas have equal opportunities for devices and internet connections with flexible time for learning. On the other hand, online learning has its own disadvantage for teachers because they need to prepare lecture notes to be delivered to their students which can be time-consuming (Padilla Rodriguez, Armellini, & Traxler, 2021). Another problem with online learning is that it can be a challenging task in assisting the students in accessing the learning materials as online learning requires less supervision (Jamil, 2021).

A study in the UK affirmed that students preferred the traditional method of face-to-face teaching despite the fact that they are computer literate. This is because it gives them more chances to mingle with friends (Orton-Johnson, 2009). A study in Malaysia reported that there are several factors that affect students online. These include computers and a strong internet connection, gender, and financial aid (Hove & Dube, 2021; Panyajamorn et al., 2018; Lau & Shaikh, 2012). Apart from that, students have a huge communication problem with their lecturers and friends. They cannot also access the laboratory which further affects their learning (Lau & Shaikh, 2012).

In the same way, a study conducted by Belay (2020) affirmed that Ethiopia just like any other country closed schools in Legg-Jack (2021).

2. Discussion

Based on data gathered from the review of past studies, (e.g., Lase, Zega, & Daeli, 2021; Ledger & Fuqua, 2021; Padala et al., 2020) it was found that rural education suffered a great setback in wrestling with Covid-19. This was because of social distancing which had shifted face-to-face classes to online classes. Evidence from the data collected from the existing literature reveals that the concept of digital teachings had caused enough challenges to the education of students in rural regions globally. The challenges to the education of rural students during the Pandemic are discussed in the following sub-headings.

2.1 Limited Availability of Technological Devices

According to the existing literature (e.g., Lase, Zega, & Daeli, 2021; Dube, 2020; Belay, 2020), one of the problems with to online education of rural students during the fight against Covid-19 is the lack of enough technology devices. Based on empirical findings from past studies, only a small number of students in rural areas have access to laptops for their online classes.

A large number of these students encounters problem using phones for their digital online learning. The reason is that phone screens are not conducive to long hours of digital online classes. Other studies affirmed that many rural students either don't have personal smartphones or they are available for a limited time (Rundel & Salemin, 2021; Padilla Rodriguez, 2021). Hence online learning during the fight against Covid-19 remains restricted to the limited availability of technological devices.

On the contrary, some empirical investigation found that online education for urban students is more convenient and successful because their parents are financially stable to afford personal laptops and smartphones for their children. This makes online learning more interesting for township students (Sosa Díaz, 2021; Rundel & Salemin, 2021).

In essence, the lack of technological devices such as phones and laptops was not the only problem that hinders the successful education of rural students in wrestling with Covid-19. Lack of familiarity with digital technology was another challenging encounter by rural students.

2.2 Lack of Familiarity with Digital Technology

Digital technologies are electronic devices such as laptops and phones. These devices play an important role in our globalized society today. This is because they make our life much easier, faster, and, more effective communication (Uleanya, Gamede, & Kutame, 2020). Technology affects the way individuals communicate, learn and think. It helps society and determines how people interact with each other on a daily basis (Mukuna & Aloka, 2020).

However, the lack of proper knowledge of how to operate digital technology by rural students causes serious a setback to their digital online learning in the struggle against Covid-19 (Usmonov, 2020; Shikalepo, 2020). According to several authors for instance (Their et al., 2021), before the arrival of the Pandemic, rural students rely heavily on traditional teaching methods for their classes and lessons. Hence, shifting from traditional pedagogical methods to the digital approach cannot happen overnight without confusion and challenges among village students. These challenges include but are not limited to access to laptops, and smartphones and how to utilize them effectively (Kormos & Wisdom, 2021; Stenman & Pettersson, 2020).

By contrast, empirical research found that digital online teaching in urban cities during the era of Covid-19 is more successful compared to rural regions. Based on these scholars, the reason is that teachers well as students in the urban cities acquired proper training and more technology user-friendly. This is because they are familiar with digital technology which makes teaching and online learning between teachers and students comfortable (Usmonov, 2020; Shikalepo, 2020).

The finding from this study is in agreement with past studies on the ground that lack of familiarity with digital technology has caused a problem to the online education of rural students during Covid-19. This is because most rural students do not know how to operate computers or sophisticated smartphones or even how to log in to Zoom. The reason is that most of them do not have their own personal smartphones and laptops for personal familiarity.

In short, evidence shows that the number of qualified and experienced teachers in urban cities is greater than the number of teachers teaching in the rural region globally (Legg-Jack, 2021).

2.3 Shortage of Teachers

A teacher is a facilitator and a mentor as well. Meaningful learning occurs when pupils are given the privilege to express unique imagination, make choices, confront real problems and even find solutions to given problems (Opoku et al., 2020). well-qualified teachers have the ability to connect with their students on a personal level. They know how each child learns best, which is an important skill for a teacher (Stenman & Pettersson, 2020).

However, past studies documented a shortage of teachers or the poor-teacher-to-student ratio in the village during the era of Corona. This poses another challenge towards making learning entirely digital in rural areas. This finding is not in agreement with the finding of this paper. The reason is that, even before the Pandemic, there has been a shortage of teachers in the rural

region. This is because highly qualified teachers prefer teaching in urban cities due to the availability of basic amenities such as roads, water, electricity, and a good health care system (Oyen & Schweinle, 2020; Li, Shi, & Xue, 2020). This paper is of the opinion that the shortage of teachers in rural schools compounded the problems of digital online learning for rural students during the Covid-19 era (Opoku et al., 2020).

In addition, this paper found a lack of infrastructural facilities such as fast internet, and uninterrupted power supply as other challenges to remote education, especially in Africa where infrastructural facilities such as stable power supply have not developed fully to become at par with what online learning requires. In short, lack of Steady flow of electricity and lack of high-speed internet still pose major problems for the rural population.

3. Solution

This study suggests that to make the digitization of education in rural areas easier, the marginalization of village education needs to be improved and a large number of skilled and well-trained teachers are required so that each and every student receives complete attention even during an online class. While the contemporary online classroom solutions are designed to facilitate engagement and intuitiveness among students towards learning, a teacher's guidance and attention remain indispensable for learners.

Another method to improve rural education is for the government to provide basic infrastructural facilities such as conducive classrooms, laboratories for science practices, and game equipment. With continuous support from the government, online learning will be made affordable and accessible in rural communities.

Another way of strengthening rural education is by promoting free education since poverty is considered one of the critical and common threats to education, especially among children from low-income families. Rural education can also be improved by promoting computer literacy among rural students and also establishing more schools

4. Limitations and Future Work

Due to time and limited resources, this paper is only limited to rural education and online teaching during the fight against Covid-19. Future studies might consider exploring the cause of marginalization of education in rural areas and how it can be resolved.

5. Conclusion

According to Article 26 of the Universal Declaration of Human Rights adopted in 1948, 'everyone has an equal right to education irrespective of religion, skin color, gender, and locations. This means school-age children in both urban and rural areas are entitled to equal opportunity for quality education like their counterparts in urban schools. This is to avoid feelings of timidness and insecurity and afraid among students in rural schools. Despite that, equal opportunity to quality education in the rural schools fell short of expectation and the gaps in the provision of education have witnessed a great setback in all aspects, ranging from lack of well-trained teachers down to poor infrastructural facilities for proper learning. These problems become even worse with the arrival of Covid-19 which puts a halt on traditional

face-to-face teaching.

Online learning has tiled a new technique to maintain regularity in teaching and learning between students and teachers. However, it is disheartening to see that rural students encounter several challenges to attend their online teaching. These problems include a lack of strong internet connection and devices, necessary for online teaching. This creates a missed opportunity for learning for rural students as they experience challenges connecting with their teachers.

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