

Online Teaching of Rural Multi-Grade Classes in the Context of COVID-19: Proposing a Holistic Approach

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ABSTRACT

This study addresses the educational challenges faced by students in rural multi-grade classes in the context of the global epidemic of Covid 19. Rural students in this course face unprecedented challenges in trying to adapt to a new way of life and learning. This study was conducted with the aim of creating a better future for these students and in line with critical research of the current situation. In order to collect data, participatory action research method was used. A total of 12 students from elementary multi-grade classes (fourth, fifth and sixth grades) and 6 teachers participated in this study. This study answers two key questions: What are the learning challenges for rural learners during Covid 19? How can their teaching and learning be enhanced? The results showed that while our education decision-making system promoted online learning as the only alternative at the time, many rural students were deprived of teaching and learning. This is due to reasons such as lack of hardware resources for Internet connection, lack of Internet network coverage in many villages, poor learning management system, economic poverty, heavy financial cost of Internet use, weakness or lack of necessary technological knowledge in some Rural teachers, the lack of Internet cafes in rural areas, the lack of fixed ADSL Internet in rural areas, has not been able to meet the educational needs of rural students.

KEYWORDS

Multi-Grade Classes; Rural Schools; Covid 19; Online Instruction

INTRODUCTION

In early 2020, the coronavirus (Covid-19), which originated in Wuhan in China's Hubei Province, spread and then began to spread worldwide. As a result of the increase in confirmed mortality (Liu et al., 2020), the importance of the disease became more apparent. The importance of this disease becomes even more apparent when we know that researchers at Imperial College London estimate that the global impact of the disease in 2020 will be between 20 million deaths, with effective drug interventions, and 40 million deaths without such interventions (Walker and Et al., 2020). In response to the disease, by the end of March 2020, more than 180 countries had closed their schools, affecting 87.4% of learners (just over 1.5 billion students worldwide), (Weiner et al., 2020; David, 2020). The spread of these closures was related to the results of studies in the literature which showed that although children are strangely resistant to infections caused by this disease, they can become a source for its spread (Abdul Amir et al., 2020). In Iran, as a global practice, schools were closed to the public from the beginning of March 2017, and by mid-May 2016, all schools were closed and then semi-closed, and education was followed online.

The importance of school closures was due to the fact that existing studies, including Cakir et al. (2020) using mathematical modeling, showed that if the precautionary measures are not followed or reduced, the trend of Covid-19 disease may change greatly. Quickly show in a negative direction and therefore social isolation should be used. The study by Majumder et al. (2020) also shows that infection due to contact with an infected person is the most important option for the spread of this disease. Aware of these arguments, researchers confirm that the predominant action against the spread of the disease is to ensure social distance, self-quarantine, and to prevent people from gathering in different places (Krishnakumar & Rana, 2020).

We all know that the need to close schools in order to deal with this epidemic will inevitably have psychological, physical and educational consequences. Studying at home was not only a great shock to parents, but would also affect children's social life and learning (Burgess et al., 2020; Van Lanker and Parolin, 2020). And will create gaps in math and literacy skills and overall inequality in educational outcomes between rich and poor children (Alexander et al., 2007). Prolonged school closures and confinement at home may have negative effects on children's physical and mental health (Brazendale et al., 2017). Or lead to dropouts, loss of self-confidence, self-esteem and a decline in the quality of education and learning (David, 2020). Hence the psychological impact of quarantine is widespread and significant and can be lasting (Brooks et al., 2020). Therefore, the educational system of each country must implement programs to keep students away from the negative consequences of such diseases, and at the same time in order to implement its educational programs. One of the programs and at the same time the best alternative program for face-to-face training at the moment is online teaching and learning that can be offered in various electronic platforms.

Although online education is a good alternative to the face-to-face education system in critical situations such as the current situation, but due to the sudden occurrence and rapid spread of the disease, many countries have not been able to adapt their education. As various studies have shown, although there have been examples of plans for distance learning and online learning in many countries during the epidemic, most have been limited in scope and size. Is not a global crisis. As with the Covid-19 epidemic, countries with limited technology faced limitations in their schools to fully implement online education and failed to do so (Sintema et al., 2020). An important part of the schools that suffered serious damage in this way was related to rural schools and multi-grade classrooms. The students of these schools lacked the least experience of online education in the past and suddenly faced a phenomenon that was frightening for many of them. The fact is that in times of crisis, education will not be normal and technology alone cannot fill the gap created in learning. Especially in places such as rural areas where students face many restrictions on access to the same technologies (David et al., 2020). Teaching is moving online on an unprecedented scale. The important thing is that these events will not be just a short-term issue. Rather, it can have long-term consequences for affected groups and, most importantly, rural students who lack the facilities to access online education and are likely to increase inequalities (Burgess et al., 2020).

Based on what has been raised, and given the concerns about the persistence of disease and school closures, it is necessary to examine the challenges of e-learning as the only alternative available to students and teachers, and to identify the challenges identified. , Be thoughtful. To this end, this study also seeks to answer the question, what are the main challenges of online learning that rural multi-grade students face? And how can online learning be enhanced in the context of Covid-19 disease?

RESEARCH METHODS

This qualitative study has been selected and implemented in the framework of transformational models. Participatory action research (PAR) was used to collect data in this study. This method was chosen because it is an approach that encourages the active participation of victims to build their new identity. The basic philosophy of this method is that people with problems can provide effective solutions to their problems. Another reason for using the participatory action research method for this study is that it "evaluates real activities about learning in specific situations, not abstract matters" (Kemmis et al., 2007: 277). It also identifies and determines what the researcher is concerned about and helps the researcher to openly challenge the conditions of injustice (Loewenson et al., 2014). It also avoids one-sided research representations and expresses different perspectives. The statistical population of this study included students of multi-grade rural education classes in Mahidasht region in primary school and teachers of these classes in the second half of the 2009-2010 academic year who faced difficulties in online education and learning. In order to collect data according to the conditions of disease spread, school closures and distance, a WhatsApp group was formed with 18 participants including 12 rural students in multi-grade classes from fourth to sixth grades and 6 teachers in multi-grade classes. The sampling method was "targeted" and the "snowball" method was used to attract participants. After selecting the first individuals, they were asked to identify and introduce other potential participants who could provide useful data for the study.

The participation of the members of this group was guided by two research questions:

- 1) What are the main challenges of online learning that students in rural multi-grade classes face?
- 2) How can online learning be enhanced in the context of Covid-19 disease?

The characteristics of the participating teachers are given in the table below in terms of age, degree and general location of their schools and the number of students in different grades. In order to preserve personal information, numbers have been used to introduce the participants.

Table 1. Details of people participating in the study

Participants	Age	Location of rural schools	Degree of education
(Teacher) 1	40	Mahidasht	M.A
(Teacher) 2	35	Mahidasht	M.A
(Teacher) 3	38	Mahidasht	M.A
(Teacher) 4	32	Mahidasht	M.A
(Teacher) 5	26	Mahidasht	B.A
(Teacher) 6	30	Mahidasht	M.A
Fourth grade student (4 Individuals)	10	Mahidasht	Fourth
Fifth grade student (4 Individuals)	11	Mahidasht	Fifth
Sixth grade student (4 Individuals)	12	Mahidash	Sixth

In order to ensure ethical considerations, participants were assured that their details would not be published anywhere and that no one was required to participate in the study and that they could leave the study at their discretion. WhatsApp topics were collected in three weeks in three stages with an interval of 15 days between each stage. This means that participants participated in discussions for one week during their working days and the group was not active for 15 days. The choice of this method was from the perspective that the learning challenges in this course would be better reflected.

The data collected through participatory action research were initially analyzed using the "thematic approach" proposed by Lows et al. (2003: 395). This approach includes the following steps:

- Step 1) Read and re-read all the collected data: The text of all the discussions was read over and over again to identify important comments and points by the participants.
- Step 2) Prepare an initial list of data-driven topics: Important topics and their contexts were identified and adjusted according to the two basic research questions.
- Step 3) Re-read the data: The content and the resulting data were re-read to ensure that what the participants were saying did not show up and whether the resulting data was relevant to the research questions.
- Step 4) Correspondence of the obtained data with scientific views: In this stage, the obtained data were matched with the existing scientific views and their relationship was determined.
- Step 5) Categorize the topics to interpret them: The resulting data were categorized.
- Step 6) Interpretation of data and semantics of findings: In this step, research findings were highlighted and sorted based on research questions.

In order to ensure the validity of the findings, the "member review" method was used. In this process, the analyzed data were provided to the participants and they were asked to confirm whether the data responded to their lived experiences in the context of Covid-19 disease.

RESULTS AND DISCUSSION

The first part of the findings addresses Question 1, namely, what challenges do rural learners and teachers in multi-grade classes face in using online education and learning as an alternative to routine face-to-face education during Covid-19?

Lack of network access in schools and rural areas and lack of high speed fixed internet in villages

During the research, it was found that despite the fact that online learning seems to be one of the best ways to learn in the Covid-19 period, lack of access to network connectivity hinders this innovation. And most rural students have experienced network problems. Clearly, while the Covid-19 arrangement is fair, it is unique in nature and excludes many students in disadvantaged communities. Lack of access to the network in rural areas prevents students in these areas from accessing information.

Lack or lack of necessary hardware for online learning

Another challenge posed by research participants was the lack of connectivity devices for online learning. The devices mentioned by the participants included smartphones, computers, laptops and tablets compatible with the training programs. Some students said that after the principal called to start online education, the issue was confusing for them due to lack of access to the necessary hardware. Teachers have also suggested that many students simply do not have access to devices to support online learning.

Lack of Internet cafes in villages

The lack of Internet cafes in the village, on the one hand, and the requirement to close Internet cafes, on the other hand, have prevented students from accessing these environments for online learning.

Weakness or lack of computer skills of some rural teachers

In addition to issues related to the lack of Internet facilities and connectivity, survey participants also reported that many rural teachers were unable to use online learning programs. According to the points raised by the participants, it is clear that the effectiveness of any curriculum implementation will be related to the competencies of the user system. So if teacher training in these areas is ignored, it is clear that it translates into incompetence in the implementation of the curriculum. Schwartz (2006: 450) states in this regard: Curriculum authors collect curricula for pre-conceived purposes that are intended only for students, while not paying attention to this issue at all. They do not say that teachers are not ready for these innovations.

Heavy costs of buying data internet packages

Participants reported that one of their challenges was buying internet packages that were beyond their means. Due to the coronation situation and the weakening of businesses and financial poverty in many villages, many students had difficulty purchasing data internet. Although education eventually offered a free internet package to address this issue, it was not timely and the package could not meet all the needs of students and teachers.

The second part of the findings addresses question 2, how can online learning be enhanced in the context of Covid-19 disease?

Inclusive social learning approach

Many participants discussed the need for a comprehensive approach to online teaching and learning. We see the holistic approach as "quality in the distribution of an education system." Although Iran's education tried to provide the necessary conditions to create this approach by launching a network called "Shad" network, but the lack of challenges in this platform, the ability to use this platform from many deprived rural students.

Enabling equal access to learning resources

Among the participants' suggestions was to provide equal access to online education and learning resources for all students. In this regard, education can provide the necessary hardware such as smartphones or tablets to rural students or provide them with free internet, provide the necessary conditions for them to benefit from these resources.

Training teachers without the ability to use new computer technologies

The issue of teachers' inability to benefit from online learning was one of the challenges discussed in this study. Education can solve this challenge by holding online or face-to-face training workshops (if the necessary conditions are met).

CONCLUSION

The results of this study in examining the challenges of rural schools in the context of Covid-19 disease, showed that students in these schools face challenges to benefit from the online education platforms provided by the education system and their teachers. For example, digital sharing does not mean equal access to the Internet and mobile networks everywhere. Online learning is easier for people with access to and a large proportion of students, especially in rural areas, are deprived of it. Many students in rural areas may not have electricity, some have radios at home but no televisions. Others have cell phones with basic features, but no smartphones. Others do not have access to high-bandwidth Internet. Many students use their parents' smartphones to teach and learn. This can be a problem for parents

when they are away from home and taking their cell phones with them. Another challenge is the difference in teachers' ability to adapt to online education programs. While some teachers are fluent in technology and can easily hold audio and video conferences, they can easily communicate with their students on social media or messengers and produce educational content, while others are They still use the old generation of mobile phones and do not know any of the capabilities of social networks and messengers and cannot use their capacity for education. This limitation is one of the issues that cannot be overcome quickly.

The fact is that this disease has had many negative effects on education. This issue is more severe in villages and in multi-grade classes. However, it should be noted that although Covid-19 disease has widened or widened the gap between rich and poor, or urban and rural learners, education, despite its geographical location, should not violate the rights of learners. This demand is in line with the suggestion of Meg, Sinfield and Burns (2017) who state that "inclusive education is a child's right and not a privilege". However, rural learners and teachers have problems with how to approach online learning when Covid-19 is sick. This widens the gap between what is available and what is available. The paper argues that while the spread of the disease has made online learning inevitable and that online learning has become a viable alternative to traditional education, there is a need for a comprehensive approach that incorporates the realities of rural learners' lives. Thus, as Nkoane (2010) has argued that "I oppose any classroom that undermines the rights of rural learners," knowing this argument, I agree with Du Plessis and Mestry (2019) that to improve the working conditions of teachers. And teaching in rural schools and to improve the progress of students in these areas, new solutions are needed. Because the solutions implemented so far do not meet the needs of rural students and we need more diverse solutions.

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