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The Effects of Covid-19 on Rural School Communities in Guyana: New Directions or Old Methods Retooled



Charmaine Bissessar

Abstract The true effect of the pandemic will not be felt for many years. However, the present effect of the pandemic has resulted in a digital canyon between the haves and have nots concerning accessibility to devices and Internet connectivity. Rural school communities are feeling the effects of the pandemic. This qualitative methodology, based on the descriptive phenomenology approach, examined the views of a purposive sampling of 12 secondary school teachers who are teaching in rural Guyana (hinterland) regions, in order to understand some of the issues they and their students are facing. The issues were learning loss, the COVID slide, and digital divide. In order to mitigate these effects the teachers have been using first- and second-generation media (community boards, radio, and supermarket distribution sites). Their resilience and grit are evidenced as they continue the education process. Rural communities have galvanized into action to provide spaces for sharing worksheets and to ensure that no child is left behind.

1 Introduction

The pandemic has altered the teaching and learning processes with schools opting to conduct classes remotely. As emergency remote education (Hodges et al., 2020) takes precedence and the pandemic lingers, rural students have become one of the populations most vulnerable to education attrition. Rural communities are marginalized due to location and lack of resources. In fact, the Inter-American Development Bank (2020) reported that continued closure of educational institutions will result in severe repercussions for “poor, marginalized and vulnerable school-goers as well as indigenous students, migrants, and children with special needs” (p.3).

With this in mind, the purpose of this qualitative phenomenological study was to determine the mechanisms that were implemented successfully to mitigate learning

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loss in rural school communities in Guyana. This study poses the question: “According to Guyanese teachers, what are the mechanisms they are successfully implementing to ensure that students are not experiencing learning loss?” This chapter examines how COVID-19 has affected the educational environment in rural Guyana and shows how old methods of disseminating information are re-tooled to create avenues for connection with students and parents. The response is innovative thinking in the use of first- and second-generation media in meeting rural students’ needs.

2 Literature Review

Remote teaching and learning have become the sine quibus non of the education system during the pandemic. In these unprecedented times, educators have the herculean challenge of grappling with the new normal and charting uncharted territories. Many are using first- and second-generation media to mitigate learning loss, the COVID slide, and the digital divide.

2.1 *First-and Second-Generation Media*

UNICEF LACRO’s (2020) report indicated that the emergency remote initiatives being implemented by Latin America and the Caribbean are “characterized by a combination of first-generation (printed material, radio and television) and second-generation media (digital platforms and learning management systems) to deliver content and maintain some degree of interaction between schools and students” (para.3). In rural areas in India, according to Reddy and Ramesh (2020), there is the need for the use of more first- and second-generation media in the form of interactive radio and TV to teach during the pandemic.

2.1.1 Learning Loss

The Glossary of Education Reform (2013) defined learning loss as “any specific or general loss of knowledge and skills or reversals in academic progress, most commonly due to extended gaps or discontinuities in a student’s education” (para.1). The Glossary of Education Reform indicated that learning loss could manifest in several ways. However, for the context of this study, learning loss will be considered in terms of “*interrupted formal*” learning (para. 3).

Learning Loss: First- and Second-Generation Media

Developing countries will be hit the hardest economically, socially, and educationally due to the economic and learning losses caused by the pandemic. Therefore, it is critical that such countries ensure that emergency remote teaching, leading, and learning continue. Huong and Jatturas (2020) stated that two-thirds of the world's population continues to experience disruption during the pandemic. They proposed that schools, systems and leaders should provide alternative means of connectivity to constrained students. As if in response, the Inter-American Development Bank (IADB, 2020) loaned the Government of Guyana 30.4 million United States dollars to provide, educational television and radio channels, textbooks, worksheets, and to offer student loans. With this money, the Guyanese Government (as cited by Smith-Thomas, 2021) expanded its provision of teaching via two interactive radio channels to include six new learning channels aimed at the rural (hinterland) population. Education Minister Manickchand (cited by Smith-Thomas, 2021) indicated that there have been changes in the learning channel and delivery of the curriculum via radio to accommodate students in the hinterland.

Globally, other countries have been providing education via TV and radio. For example, the South African government, according to McKane (2020), decreed, "Any web-based educational or health resource which helps to meet challenges created by the pandemic may apply to be zero-rated" (para. 7). Congruently, The New Zealand Government has connected 45,000 students with hard-packed materials. The New Zealand government also created and implemented two TV channels, one in English and one in Maori (Ward, 2020). In Turkey, mobile operators were willing to give students 8 gigabytes of data (Vidal, 2020).

COVID Slide

These initiatives may help ensure that the COVID slide and digital divide are somewhat less disruptive. According to Kuhfeld and Tarasawa (2020), research conducted by the NWEA (North West Evaluation Association) suggested that when students finally return to classes, they would have forgotten 70% of what they had learned in reading and mathematics. The learning losses were predicted to be more pronounced in the lower grades. Indeed, Jaume and Willen (2019) concluded that the earning potential of children who lose 80–90 days of school could be affected negatively far into the future, potentially into their 30s.

2.2 *Digital Divide*

During the pandemic, according to Fore (as cited by Thompson, 2020), the "lack of internet access is costing the next generation their futures" (para. 5). In fact, Thompson (2020) reported, "Two-thirds of the world's school-age children-or 1.3

billion children aged 3–17 years old-do not have internet connection in their homes” (para. 2). She concluded that it is no longer a “digital gap but a digital canyon” (para.3).

Predictably, the pandemic has exacerbated the inequalities that already exist (Thompson, 2020). In a study conducted in the United States of America, Stelitano et al. (2020) found that students in more affluent areas had more and better access to technology than students in rural areas where poverty is greater. Indeed, in the Guyanese context, there has always been an issue of digital divide between the haves and have-nots and between the rural and urban populace.

Solomon and Clancy (2021) defined the hinterlands in Guyana as the remote areas in which the indigenous populations live. These are along the borders of Brazil, Suriname, and Venezuela. The census taken in 2012 indicated that 10.51% of the Guyanese population live in the hinterland areas (Inter-American Development Bank, 2019). According to the report conducted by the IADB, the hinterland areas “are characterized by few economic opportunities, poor environmental and health conditions, a lack of adequate infrastructure, and access to mostly rudimentary, low-quality social services” (p.4). This is also reflected in the Multidimensional Poverty Index for Guyana’s hinterland, which is seen at .017% (Oxford Poverty and Human Development Initiative, 2017). In areas that are considered deep hinterland, the MPI is 0.0095 (Cuyuni Mazaroni), 0.006 (Mahaica Berbice), and 0.145 (Upper Takutu-Upper Essequibo). This suggests that these populations are without access to electricity, proper sanitation, cooking fuel, and proper nutrition. They are also prone to higher levels of child mortality. Additionally, school attendance and years of schooling are less in the hinterland areas. This survey was conducted before the pandemic.

Depicting what is presently taking place with education in the hinterland, Solomon and Clancy (2021) gave anecdotal and empirical evidence of education in Aishalton, an indigenous community in Guyana. They followed one parent as she collected worksheets and information from the teacher. As a parent, Immaculata adopted the role of teacher. She obtained guidance from her daughter’s class teacher in English, Mathematics, Science, and Social Studies. Immaculata said, “Parents have to work with their children and try to see how best they can educate their children” (Solomon & Clancy, 2021, para. 3). Here, she underscored the pivotal and critical role parents play in their children’s education. She further said, “Well the teachers have been doing a fantastic job in my village especially the primary school teachers, they have been finding ways and means of how to engage children through their parents” (Solomon & Clancy, para. 5).

In order to bridge the digital divide, the Guyana-Jamaica Friendship Association donated 30 laptops and 5 computers to a primary school in rural/hinterland Guyana. Guyana Times (2021) stated that the organization decided to adopt a primary school in Guyana and in Jamaica. Mashabo Primary School was chosen and laptops given. The president of the association stated that they did this in order to “bridge the digital divide between the affluent and not so affluent in society” (Guyana Times, 2021, para. 2). Thus far, emergency remote education for this school consists of dissemination of worksheets, collecting, correcting, and returning them. With these new computers, teachers and students will have access to online teaching.

3 Methodology

This qualitative phenomenological study based on the interpretivist paradigm examined the responses of 12 Guyanese teachers working in rural communities regarding the mechanisms they are successfully implementing to ensure that students are not experiencing learning loss. The sampling method was purposive since the instrument was emailed to teachers who taught in rural (hinterland) communities in Guyana. Two males and ten females, ages 35–50 participated in the study. The University of Guyana’s personnel granted permission to conduct this study and respondents were assured anonymity and confidentiality. Participants gave informed consent and were reminded that their participation was voluntary and that they could withdraw at any time. They were also informed that the data would be reported cumulatively and anonymously. The questionnaire was emailed to the participants in February 2021 after they consented to participate. Participants were asked, “What coping mechanisms did you successfully implement in your classroom to cope with disruption? Give an example of this mechanism.”

3.1 Data Analysis

Creswell’s (2012) six-step data analysis framework was used to analyse the data. These steps entail: become familiar with the data; generate initial codes; search for themes; review the themes; define themes; and wrap up. The researcher used the inductive approach to code and she identified recurring words and phrases both latently and semantically. Based on Saldaña’s (2013) list of coding processes specific to exploratory epistemological research questions, the researcher implemented the “theming data approach” where phrases or sentences were used to describe or capture the meaning of an aspect of the data (p. 64).

In order to ensure credibility and consistency of themes, the researcher re-examined the data. The researcher used the code/re-code process in order to ensure dependability. She coded and reduced the data to themes, left it for 2 weeks, and re-coded the data in order to ensure consistency. There were no evident threats to external and internal consistency of the data. Moreover, the researcher conducted an intra-class correlation coefficient (ICC) reliability test after coding and re-coding the data 2 weeks later. The ICC had a reliability of .916, which is a good level according to Cicchetti (1994). Intra-rater reliability was based on Shrout and Fleiss’ (1979) convention of the third model of ICC (3.1) where the researcher was the only rater of interest to assess the data. For the purpose of this study, each data set was assessed and the reliability was calculated from a single measurement- the code/recode process. It is always difficult to eliminate subjectivity in qualitative research, especially in this case where the researcher is teaching individuals who are experiencing the pandemic and suffering learning loss.

4 Findings

This section presents themes identified from the data after analysis was conducted manually and using NVIVO. When a frequency word count was conducted with the responses to the question, the following word cloud was obtained. The larger the words the higher the number of times they were mentioned (Fig. 8.1). However, this was semantic coding.

Latent coding entailed coding the data in the context in which they occur (see Table 8.1).

4.1 Learning Loss and First- and Second-Generation Media

The following quotes are taken from some of the participants in the study to illustrate examples of different ways teachers were able to connect with students:

- “Drop boxes were left at the guard booth for drop off and pick up.” (Participant 1)
- “We use community bulletin boards to get the message to parents and students.” (Participant 2)
- “We have radio stations that broadcast sessions and the students listen to them.” (Participant 4)
- “Hard copy of worksheets were also distributed to students so that they can use for those without a device and internet services.” (Participant 11)

These responses underscore the importance of finding ways to reach the students and stymie learning loss. Participant 10 explained, “I print worksheets and take them to the parents.” In this way, he is going the extra mile to ensure that his

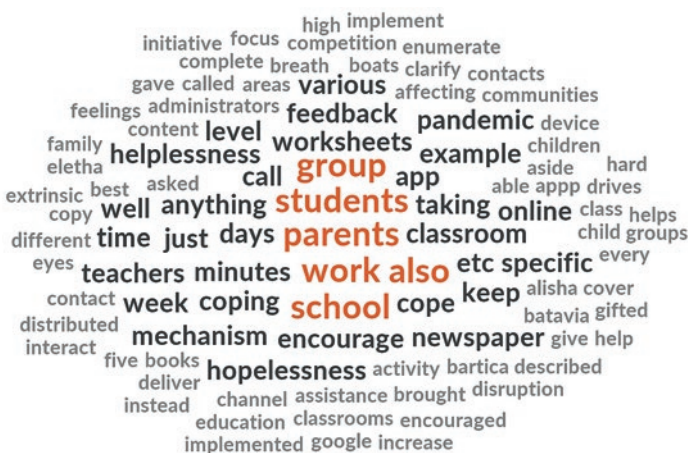


Fig. 8.1 Word frequency

Table 8.1 Frequency count of latent analysis

Ideas	Recurring words and phrases	Frequency count
Learning Loss and First-Generation Tools	“Drop boxes were left at the guard booth for drop off and pick up.” “we use community bulletin boards to get the message to parents and students.” “we leave worksheets in the village supermarkets and the parents pick them up when they come to shop and return them.”	10
Digital Divide	“Nonattendance by learners was basically because of lack of gadgets and internet access.” “children who did not have access to the internet were at a tremendous disadvantage.”	11

students are not at a disadvantage. These responses exemplify the extra contributions educators are making in ensuring that their students are not marginalized more than they are already. In one instance, Participant 6 indicated that submission of worksheets was not good so they collaborated with the radio station to highlight the top performers and students started submitting their assignments. The quality of their work also improved.

4.1.1 COVID Slide

Participant 11 indicated that she is a head of department and very busy preparing Forms 4 and 5 for the Caribbean Secondary Examination Certificate, which means she is unable to work with her own children. She now has the added fiscal burden of paying a tutor to teach her children. This exemplifies how one parent is fighting the COVID slide. What happens to the other parents who are unable to afford tuition? Where does that leave them? Participant 1 shared: “I gave my parents the option to visit me at the school during the week to clarify anything they do not understand in terms of school work and also they can call or text me privately.” Therefore, she ensured that she was accessible to her parents. It also shows that she is providing learning opportunities to the parents as well.

4.2 Digital Divide

Participant 2 explained, “Nonattendance by learners was basically because of lack of gadgets and internet access. However, all of our learners were able to collect worksheets most of the time.” She continued, “Children who did not have access to the internet were at a tremendous disadvantage. Approximately 39% of the children were at a disadvantage.” Participant 1 shared:

Students from the Riverine communities X and Y (names withheld) are not in a group what’s app. School boats deliver the newspaper but not all students want to cover the cost

of the newspaper. Staff described feelings of helplessness and hopelessness with regards to students that they have not been able to contact.

This emphasizes the fact that students in rural communities do not have access to basic information found in the newspaper because they are unable to afford the cost. Participant 1 continued:

I believe 6 out of 20 students which is 30% of my students do not have access to internet. They are disadvantaged because even though they get the worksheets, they are not a part of the group and do not get the voice notes. Some of them are in the mining area with their parents and others simply cannot afford to pay for internet.

Participant 3 shared that, albeit there was no significant decline in attendance, those who did not attend classes were due to “lack of gadgets.” However, in order to counteract this, worksheets were disseminated to all students. Participant 4 indicated that 75% of her students were at a disadvantage due to financial issues which resulted in lack of devices and connectivity. Participant 6 shared that 60% of her students were at a disadvantage since they did not have devices and connectivity. On the issue of the digital divide, Participant 10 explained:

I think students were disadvantaged since the Government has provided EGov internet to all the schools on the coast and exempt us in the lakes and Pomeroun school (hinterland). 100% of students are disadvantaged since there is no internet service in the community. This is so because the Government failed to establish a hub at the school.

This is critical since it shows the distinction between the coast and hinterlands in Guyana where the hinterland communities are at a disadvantage since there is no infrastructure, connectivity, and access to devices. Participant 8 reiterated this point and shared that all her students were disadvantaged because they did not have access to devices and connectivity. Participant 11 highlighted this and opined:

I strongly believe that students were at a disadvantage solely because of not having a device as well as not having internet service. As explained before, most students attending my school are living in poverty. This is the main reason why they are not owners of a device. These students are also living in squatting areas or schemes, which do not have access to the internet service. From the statistics at my school over 80% of students do not participate in online classes.

Participants 1 and 11’s discussions extend the discussion to not only rural and coastal (urban) communities but also the obvious disparity between different socio-economic groups. This apparent poverty is reflected in the (Oxford Poverty and Human Development Initiative, 2017) where deep hinterland populations do not have access to daily necessities of sanitation, drinking water, and cooking fuel etc.

5 Discussion

Despite the pandemic, teachers are finding innovative and creative ways to get their students to perform. The participants’ responses indicate that rural Guyanese teachers are doing the best they can with what they have. In fact, Immaculata views

teachers as the real heroes. She was (Solomon & Clancy, 2021) apt in describing the teachers as heroes for they have shown resilience and grit in ensuring that no child is left behind. Teachers are using first- and second-generation media to reach those students in rural (hinterland areas) in Guyana. There continues to be loss of learning among the marginalized and vulnerable student population. However, teachers in Guyana are preparing worksheets for their students as is presently done in New Zealand (Ward, 2020).

The pandemic has amplified the canyon between the haves and have-nots in Guyana where marginalized and vulnerable students in the rural communities are not being taught because they do not have access to Internet and a device. In one instance, it was indicated that students have no access to information because they are not able to afford the cost of a newspaper. In areas where the necessary infrastructure exists, parents cannot afford the cost of Internet, which places their children at a disadvantage when what's app or any form of technology is used to impart information. They have access to worksheets from their teachers but do not have access to the worksheets provided by the Ministry of Education because they do not have printers. This catch-22 situation does not augur well for rural Guyanese students especially those who will be sitting the National Grade Six exams in early August, 2021.

6 Conclusions

This study sought to determine the mechanisms that were implemented successfully to mitigate learning loss in rural school communities in Guyana. The findings indicate that teachers are resorting to first- and second-generation media to reach as many students as possible. The lack of internet access, devices, access to printers and any form of social media has created a socialization rift. However, COVID-19 has forced rural communities to unite towards ensuring that education persists despite the odds. The pandemic has fostered community resilience. Community resilience is evident in the rural communities, which are uniting and have galvanized into action to provide spaces where worksheets and drop boxes, etc. could be placed for learning loss to be diminished. Indeed, it takes a community to ensure that learning continues.

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