Reconfiguring Rural Education in the Aftermath of COVID 19: Imperatives for Rural Schools in Zimbabwe and Namibia

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Abstract: The COVID-19 pandemic has had a devastating impact across all areas of human endeavor worldwide by disrupting educational and socio-economic activities. In light of this, this study set out to investigate the impacts of the COVID-19 pandemic on rural schools in both Namibia and Zimbabwe with the purpose of developing tools that may be used in post-COVID-19 reconstructions of rural schooling. Qualitative survey methodologies were used to collect data from twelve participants in Namibia and Zimbabwe. More specifically, open-ended questionnaires, telephone interviews and document analysis were the main tools used to collect the data to address the problem. The study used Hall and Hord (1987)'s Intervention Taxonomy as a theoretical and interpretive guide to the study. The results of the study reveal several schooling imperatives for rural schooling in the post-COVID-19 period. Firstly, there is need for governments to craft multi-sectorial policy frameworks that will harmonize health, education and economic activities in rural areas. Secondly, infrastructural development of rural areas focusing on the provision of remote learning technologies and internet access constitute a major imperative. Thirdly, reconfiguration of teacher education curriculum constitutes another key priority. Teachers urgently need new skills and knowledge to manage and produce distance/remote learning materials. Rural schools now exist in academic wastelands, whereby learning has ground to a halt. Rural teachers and pupils have virtually ground to a halt during the disruptive phase of the pandemic. Health and safety wise, no mitigatory measures or plans have been adopted to mitigate the spread of the pandemic among pupils and the rural populace particularly at household level. However, the study reveals that various measures have been mooted in preparation of the reopening of schools but these measures may be belated. In view of the above, several interventions emerge as imperatives not only for rural schooling but the survival of the rural populace. Firstly, the study reveals that it is imperative for multi-sectoral policy interventions to transform rural health and schooling. These interventions would entail the coordination of community development strategies, health and rural education policies and poverty alleviation strategies. Secondly, the results of the study point to the need for the development of affordable distance learning packages as the only realistic strategy and lever for enhancing and upgrading the quality of rural schooling. Thirdly, but most importantly, emergence measures to provide personal protective clothing for rural populations should be declared a national priority, otherwise protecting one sector of the society is not sustainable. In light of these findings, this study recommends that policy formulators in the Ministry of Primary and Secondary Education (MOPSE) should create a forum or mechanism where they formulate a common framework for engaging rural schools in a coherent and coordinated manner. Similarly, the ministry responsible for teacher education should reconfigure teacher training policies and practices to ensure that rural teachers are equipped with the knowledge, skills and competences to develop distance education learning materials and to manage composite classes. Such interventions and strategies would undoubtedly lead to the provision and transformation of rural schooling.

Key words: Imperatives; post-COVID-19 era, rural schooling; Namibia and Zimbabwe.

I. INTRODUCTION

The COVID-19 pandemic has arguably had one of the most disruptive and devastating impacts in human history. Worldwide, human social institutions have been disabled and rendered useless. The COVID-19 pandemic outbreak has given impetus to the quest for humanity to re-strategize and look for new alternative and sustainable solutions to survive the pandemic. Barack Obama, the former President of the USA has challenged young people to stand up to the challenge posed by the corona virus. Similarly, Fullan and associates (2020) have made a clarion call to educational leaders to rethink of new ways of ensuring continued learning in the light of constraints imposed by COVID-19 such as physical and social distancing and also home learning. However, the negative impacts of the COVID-19 pandemic have been further compounded by grinding rural poverty in most African countries.

Akpomuvie (2010: 90) aptly characterizes rural poverty as follows,":...pervasive and endemic poverty, manifested by widespread hunger, malnutrition, poor health, general lack of access to formal education, livable housing and various forms of social and political solutions compared to their urban counterparts". In view of this, coming up with effective and sustainable solutions to mitigate the disruptive effects of the COVID-19 outbreak break would require the deployment of advanced intellectual and social skills. In particular, rural satellite schools in the Southern African countries have been the worst affected by the corona virus outbreak. In Zimbabwe, rural satellite schools arguably occupy the lowest rung in the education system. Rural satellite schools are a by-product of the radical Land Reform Programme of 2000 in Zimbabwe.

Rural satellite schools were set up as a temporary measure to address the educational needs of the children of resettled peasant farmers. Ndlovu and Mswazie (2018) describe satellite schools as follows "... the infrastructure is a nightmare, old farm houses, tobacco barns, stables and sties were converted into classrooms. The schools are not registered and are headed by Teachers in Charge (TIC). For instance, in Makwe cluster in Gwanda District, the schools are not registered and are headed by Teachers in Charge (TICs)". In Zimbabwe, satellite schools were established in former commercial farming areas in order to grant the newly resettled populace an opportunity to acquire an education. Langa (2012) claims that the birth of satellite schools in Zimbabwe was a stop gap measure since these schools do not meet the expected standards of conventional schools. The schools are just makeshifts they were not meant to be schools. The schools have at most three teachers, this means that teachers teach combined classes because the enrolments are too low in the satellite schools especially in Gwanda District.

According to the report of Thematic Committee on Millennium Development Goals on the provision of education in resettled areas, the government of Zimbabwe has left funding and construction of satellite schools to the communities (Parliament of Zimbabwe, 2012). While, there was an apparent need for funds to build classrooms, toilets and teacher's accommodation at the budding schools, efforts were being hampered by lack of resources across the satellite schools. Despite offering new tranches of funding to the education sector donors are not supporting the resettlement areas and UNICEF which has a global responsibility for children seems unable to respond without the blessing of the donors (UNESCO, 2011). Teaching and learning under such conditions are far from ideal and there is no equipment and resources in the absence of donors and government support. The report indicates that classrooms in most satellite schools are roughly constructed and overcrowding is common.

In Burkina Faso, satellite schools are made for those children who are too small to walk three to four kilometers to go to school and also for those who failed to attend the regular school at form four (UNESCO,2009). Most of the schools were built in the poorest area of the country's 14 provinces where the school attendance rate was very low at the request of the population themselves. The satellite schools bring schools nearer to the marginalized communities. Satellite schools may mean different things to different people in different parts of the world. In California satellite schools operate as public schools on business worksites. Toldson (2008) states that, the host contribute land, building space and some operating expenses. This has saved the public millions of dollars in schools infrastructure. The school district supply everything else teachers, curriculum and administration. Satellite schools offer a readily available solution to school overcrowding at minimal cost relative to other options.

Against the above backdrop, the research literature indicates that the use of Information and Communication Technology (ICT) in teaching and learning has the potential to enhance student learning outcomes and stimulate their motivation (Pugalee and Robinson, 1998). Furthermore, it has been argued that the application of ICT can provide a more student-centred approach, which would encourage students to take some responsibility for their learning and, through this greater autonomy, would lead to the acquisition of skills that would enhance their lifelong learning (Lage, Platt, and Tregalia, 2000).

Jebeile and Abeysekera, (2010), citing Holt, Boyce, Carnegie, Lourens, and Bigelow (1995), noted that the use of computer-assisted learning in education will substantially contribute to the development of technical competencies and, furthermore, will allow greater emphasis to be placed upon accounting concepts, issues, and ideas within the classroom. Holt, Boyce, Carnegie, Lourens, and Bigelow (1995) argued that when employed effectively, computer-assisted learning enables additional student contact time to be directed towards accounting case study deliberations and similar discussions, thereby assisting in fostering a learning environment that would promote the development of crucial competencies such as communication, interpersonal skills, and critical and analytical thinking skills.

Holt (1995) argues that to be effective, computer-assisted learning software should exhibit the following characteristics: skill development orientation, being holistic/integrative, allowance for customization, being interactive and user/event driven, providing multi-layered feedback, and making use of hypertext content-related systems.

It was premised in this study, that the use of a battery of tools that include the use of appropriate distance learning technologies and other policy interventions would go a long way in mitigating the effects of the COVID-19 outbreak in rural schooling. Uplifting rural education has not only become an educational challenge but a moral imperative in terms of social equity and justice. Below are the specific objectives of the study.

Aims and objectives of the study

Viewed against the above, the main purpose of this study, is to develop a conceptual tool that may assist in reconstituting rural schools in the post-COVID-19 period. More specifically the objectives of the study are as follows:

- Ascertain the major educational challenges of rural schools in the aftermath of the COVID-19 outbreak.
- Establish policies required for the prevailing conditions and realities of rural schooling in Zimbabwe,
- Determine educational technological interventions most realistic for use in rural schooling.

Research questions.

The following questions were regarded as constituting the main problem to be investigated:

- What are the major educational challenges of rural schools in the aftermath of the COVID-19 outbreak?
- Which policies are required for sustainable educational provision in rural schools?
- What distance educational technological interventions are the most realistic for use in rural schooling?

Below we examine the literature that provided the conceptual and interpretative framework for the study.

II. THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

This section presents the theoretical framework and literature that guided the study. The review is structured around three themes, namely (1) challenging conditions and realities of rural schools in Zimbabwe; (2) policy interventions available to governing authorities to support home learning, and (3) appropriate distance technologies for rural schooling.

Challenging conditions and the realities in rural satellite schools

In Zimbabwe, the Teacher-in- Charge (TIC) is the most senior teacher and leader of a satellite school, responsible for the education of all pupils, management of staff and for school policy making. According to Dube (2012) TICs are ultimately responsible for the smooth running of a satellite school, the academic achievement of its pupils and the management of its staff. Although they are usually teachers with many years' experience, the emphasis of their role is to provide educational vision and direction rather than teaching in classrooms. Kabayanjiri (2012) says that, TICs are supposed to lead, motivate and manage staff by delegating responsibility, setting expectations and targets and evaluating staff performance against them. It is a job which requires TICs to have a strong presence around a school and in some cases the local community as well as a certain amount of desk work. Chifamba (2014) purports that, TICs know that they are in remote areas and District officials hardly visit them. Seemingly TICs are reluctant to carry out their duties diligently. It is therefore important that TICs lead a way that is appropriate to the school culture and context and that they be given opportunities for management support training and that their performance be appraised by school inspectors or other bodies that provide oversight on school management. Most satellite schools are largely administered by Teachers-in-Charge (TICs). TICs are responsible for the overall management control and maintenance of standards in the satellite schools as specified in the Education Act. TICs are therefore accountable for all that happens in the school. He / she has a charge over a community of teachers and students and it is to him / her that they look for guidance. Marongwe (2008) argues that, the TICs at most of the satellite schools were newly qualified and they headed the so-called amnesty teachers who had a wealth of experience behind them. Kabayanjira (2012) echoes that, supervision at the satellite schools becomes laissez faire as the TICs normally opt for a lukewarm approach in dealing with the one who is more often than not, senior to him / her. Supervision has always been an integral future of any educational program in all countries and key factor to ensure the good functioning of the primary education. A satellite school cannot function effectively without financial resources to back up its operational and capital development programmes. It is therefore necessary to collect revenue to purchase items such as textbooks, stationery, sport and games and equipment as well as to conduct educational tours and finance sporting fixtures among other costs. Mutenga (2012) avers that the TIC must ensure that all moneys received are banked intact into the school account, regularly as prescribed to reduce the risk of loss, through theft or other calamities. The Cash Book is the main book of accounts at the school and all transactions relating to money received, banked and paid out must be entered into this book. Aggarwal (1997) says that the TIC prepares the budget, secure revenue for the school and also use the fund at his disposal judiciously. He must also provide a proper accounting system for the money collected in the school. At the end of the first term of the following year, the TIC may be required to present all books of accounts for inspection and produce a financial statement to be forwarded to the accountant of the Ministry. According to Ndlovu (2012) at the end of the financial year every satellite school shall prepare statements of its financial affairs for that financial year and shall present the statement the next annual general meeting of parents. The TIC of the school concerned shall forward to the District Schools Inspector every statement so prepared.

Policy interventions supporting rural development

Hall & Hord (1984), WHO (2006) and FAO and UNESCO (2020) have reported on effective policy interventions that maybe used to manage change and transform rural communities.

Hord & Hall (1984)'s Intervention Taxonomy or concept of multi-level interventions provided useful insights into mechanisms and devices power elites and other state level actors use to adopt, initiate and implement educational policy change and innovation. Hord & Hall (1984: 283) define an intervention thus: "An intervention is an action or event or set of actions or events that influences use of an innovation".

Hord & Hall (1984: 283 – 293) identify six different levels of interventions in relation to the implementation and management of an innovation and these are, namely, policy, game plan component, strategy, tactic and incident. Three of the interventions levels identified by Hord & Hall (1984) namely, policy, strategy and tactic were found to be useful in analyzing the roles of different actors in responding to the COVID-19 outbreak in Namibia and Zimbabwe. We review and analyze the three intervention levels below.

Policy level interventions constitute the broadest and most encompassing of policies (Hord & Hall, 1984). They are articulated in legislative acts, mandates, curriculum frameworks, policy directives *etc.* (Elmore & Fuhrman, 1994).

In relation to a change effort, they can be used to initiate, to disrupt or to advance a change (Hord & Hall, 1984: 289). In the context of this study, it was found worthwhile to investigate the extent to which state level actors or policy elites (Little, 2008) utilized policy and political tools as levers or mechanism for initiating and institutionalizing the ODLS in Zimbabwe. Such an investigation would yield information to understand the extent to which state support could be regarded as vital for the survival of the ODLS in a turbulent socio-economic environment.

Similarly, the concept of strategy level interventions provided a useful conceptual tool for understanding operational actions required to manage an innovation. Hord & Hall (1984: 291) define strategy level interventions as "…major action groups that are designed to accomplish particular change process". Various writers have identified strategies for supporting large scale innovations and these include, among others the following: creating within local schools and local districts; developing materials that are self-using; developing a turnkey trainers or program for the training of trainers; creating resource centers; developing networks of people and organizations with a shared innovation purpose; developing a comprehensive technical assistance system; developing an evaluation/monitoring/feedback system (Van den Berg (1981: 46 – 50). Hord & Hall (1984: 291) argue that strategy level interventions reflect the assumptions and philosophies of change leaders or facilitators. .

Lastly, the concept of tactic and incident level interventions in relation to innovation implementation was found useful in investigating top management support for the implementing personnel of an innovation. Tactic level interventions are user-focused. Tactic interventions are a composite of "… workshops, meetings and small-scale actions, such as a regularly published newsletter or attempts to redefine staff roles in relation to use of the innovation" whereas incident level interventions constitute "…the key building blocks around which the larger levels of tactics, strategies and game plan components have been organized" (Hord & Hall (1984: 291).

Likewise, WHO (2006)'s study has proposed policy interventions that may attract professional workers to work in rural areas. In studies conducted in Kenya, South Africa and Thailand, the following factors were found to be useful to attract nurses to work in rural areas:

- Financial rural allowances and incentives;
- Provision of better housing;
- Preferential opportunities for specialist training;
- Faster rank promotion;
- Provisions of a benefit package;
- Changing student recruitment, and
- Making it compulsory for health workers to work in underserved rural areas.

Meanwhile, the FAO and UNESCO Report (2020) has proposed interventions which policy makers may use to support continued schooling in poverty-driven rural areas in the aftermath of the corona virus outbreak. Sector Wide Approaches (SWAPs) constitute useful mechanisms for supporting not only schooling but rural development. To be effective, SWAPs should be anchored in policy and political goodwill whereby education in rural areas should be regarded as a child's right (FAO & UNESCO, 2020). The SWAPs would entail combining formal and informal educational opportunities in rural communities. More specifically, multi-sectoral policy interventions would incorporate, among other things, the following:

- Establishment of various informal educational infrastructures such as rural newspapers, libraries, youth clubs and the formations of women associations;
- Designing and running programmes in harmony with other community groups, and
- The provision of adequate teaching materials and learning packages (FAO & UNESCO, 2020: 393).

In view of the above, this study investigated multi-sectorial interventions and approaches which may be effective in supporting sustainable educational development in rural Zimbabwe. Likewise, Fullan, Quinn and Gardiner (2020) have proposed a three-phase approach for managing the fall-out from the aids out-break. This approach entails managing the now, the near and the next in the changing landscape of education (Fullan et al. 2020). The three phases are presented as follows:

PHASE 1: Disruption Zone: This phase entails managing the immediate disruptive effects of the COVID-19 pandemic. It entails shifting from face-to face tuition to distance learning. Major activities in this phase include the following:

- Ensuring the continuity of academic learning for students;
- Supporting students who lack skills for academic study;
- Ensuring continuity and integrity of the assessment of student learning;
- Ensuring support for students so that they can support student learning, and
- Ensuring the well-being of students and of teachers.

Phase 2: Transition: Reopening of Schools:

This phase involves managing the structures, processes and decisions needed to reopen schools. Three issues are implicated in this stage. They are as follows:

- Well- being which entails leaders recognizing and appreciating the different psycho-social impacts of COVID-19 on students and teachers impacts;

- Deep learning which means quality learning: Educators should reflect and assess the learning readiness and gaps which arise from the disruption, and
- Safety and operations which involves the application of contextual and emotional intelligence.

Phase 3: Reimagining Learning.

This phase entails a paradigm shift or profound educational reforms driven by educational technologies and the quest for higher quality. These reforms would be anchored around the following:

- Challenging students to have high expectations;
- Formulating goals that focus beyond the basics;
- Using engaging pedagogics;
- Building relationships and belongingness;
- Providing opportunities to contribute to the world (Fullan et al 2020: 3 – 15).

Fullan et al (2020)" s Three Phase Model of dealing with the disruptive effects of the COVID-19 implicates three distinct but interwoven imperatives. First and foremost, is the imperative to shift the learning paradigm from face to face to distance learning? Secondly, ensuring student health and safety wherever they may be, constitutes another key imperative. Lastly, planning and developing new learning structures responsive to the demands of the new learning landscapes.

The literature has identified five technological advances which correspond to distance learning models and these are presented below in terms of their increasing complexity:

1. *The Correspondence Model:* based on print technology, this represented the basic learning package delivered through the post.
2. *The Multi-Media Model:* based on print, audio and video technologies, this model represented multi-mode support systems to the learner.
3. *The Tele-Learning Model:* based on applications of telecommunications technologies to provide opportunities for synchronous and asynchronous communication.
4. *The Flexible Learning Model:* based on the application of automated delivery of learning materials via the internet; and
5. *The Intelligent Flexible Learning Model:* based on the application of automated response systems which entail the use of software that can scan the text of an incoming electronic message and respond without human intervention (Manjuluka & Reddy, 2000; Taylor, 2000).

From the above distance learning models, it is very clear that historically, technological support infrastructure is central to successful implementation of the HM. Which version then characterizes the operations of the home learning? This question is subsumed in research question 2 which sought,

among other things, to unravel student support systems received by students in rural schools.Below we present the research design and methodology that was used to collect the data to address the research questions.

III. RESEARCH DESIGN AND METHODOLOGY

This study adopted the Interpretivist/Constructivist Paradigm (ICP) as the main design that guided data collection process and interpretation for this study. Guba & Lincoln (1994: 107) define a research paradigm as "… a basic belief system or world view that guides the investigator". Joseph Schwab in Schubert (1986) refers to the ICP as the Practical Paradigm (PP) for curriculum inquiry. Unlike the Positivist/Empirical/Analytical of educational research which is dominant in educational research the ICP/PP sees the practical researcher immersing in the problematic arena as necessary for several reasons (Schubert, 1986; Schwab, 1970). Firstly, as investigators, interaction with the disruptive effects of the COVID-19 in higher education settings provided us with deeper insights into the participants of the study who might provide useful data or information for the study. Secondly, as observed by Schwab in Schubert (1986: 173) there has been the flight of educational researchers away from actual educational situations to experts in other fields such as psychology and sociology. This has rendered research findings of little practical value in resolving practical problems encountered in educational contexts. Thirdly and more importantly, as Hammersley (2012: 22) argues "…people-unlike atoms, chemicals, or even non-humans forms of life - interpret or give meaning to their reasons environment and themselves". We found the above arguments compelling in view of the objectives of this study. Consequently, we decided to situate our study within the ICP/PP. The survey approach enabled the researchers to have an in-depth study of participants' prevailing perceptions and beliefs in respect of the countries preparedness to offer home based learning necessitated by the COVID-19 pandemic outbreak. In addition, the survey was used in respect to the countries' readiness to reopen and offer normal face-to-face schooling in rural schooling. Documentary analysis, interviews and open-ended questionnaires constituted the main methods of collecting the data to address the problem. More specifically, the data to address the research questions were obtained from purposively selected school heads and teachers in rural schools in both Zimbabwe and Namibia. These participants were readily available could be easily accessed through the phone or social media. The data to answer question one came from documents generated during the post-COVID-19 period. It was comprised of circulars and directives issued by the respective governments and their agencies. For research question 2 the data obtained came from open-ended questionnaires and interviews with rural school heads and teachers. Below we describe the sampling procedures which we made use of in the study.

Sampling procedures

In line with the qualitative nature of the study and the objectives of the study, the sample was purposively drawn from school heads and teachers working in rural areas in Namibia and Zimbabwe were selected. These had recently completed their masters degree programmes and were therefore readily accessible to the researchers. More specifically, three Namibians including a school head and two class teachers working in rural areas were sampled whereas six school heads from Zimbabwe consisting of three secondary school heads, three primary school heads and one senior teacher participated in the study.. The data collected from these was deemed adequate to address the research problem. Below we describe the instruments that were used to collect the data to address the problem.

Instrumentation

The principle of triangulation was used in the data collection processes. In this regard, three data collection instruments were used to collect the data. These were namely, documentary analysis, an open- ended survey questionnaire and an interview structure schedule which were used to collect the data. The data collected through documentary analysis together with Fullan *et al*(2020)'s proposed strategies for managing the disruptive effects of the COVID-19 were used to frame items of the questionnaire (See table 1 and 2). The structured interview was used as follow up on gaps in information arising from questionnaire feedback and also to elicit data in respect to the perceived technological interventions that would be needed in the long term to sustain and upgrade rural schooling (See table 3).n The item checklist was used to assess the preparedness and readiness of schools to reopen. However, it should be noted that in qualitative oriented researches, the investigators can also be regarded as tools for research. In this context, both of us were actively involved in refining the processes of data collection. The main focus of the data collection was on management interventions in relation to the disruptive, the transition and the future phases of the COVID-19 outbreak (Fullan *et al.* (2020).

Data analysis and Interpretation

Data analysis and interpretation in qualitative research is a seamless and cyclical process constituted of collecting, interpreting and further collection to confirm emerging themes and topics (Creswell, 1994; Flick, 2002; 2004; Luders, 2004). In this study a Data Flow Model was used to analyze data. Hence, in this study we saw itcommendable to outline the origin of the Data Flow Model. According to Schubert (1986) the qualitative research paradigm emerged in the context of evaluating Greater Society Program of the late 1960s and early 1970s in the USA. In this regard, education researchers felt the Positivist/Quantitative Paradigm was unsuitable for analyzing social and educational phenomena, hence the paradigm shift. The writings of Joseph Schwab (1969, 1970) and the Reconceptualists among others, represented a paradigm shift from Positivist/ behaviorist approach in

educational research. Both Huberman and Miles have researched extensively on curriculum development and implementation.

Historically, qualitative research can be linked to Exegesis and Hermeneutics which are approaches that were developed in Biblical Studies by German scholars. Philosophically, qualitative research has been linked to German scholarship particularly the work of the German philosopher Jurgen Habermas. In view of the above, we therefore adopted the Qualitative/ICP/PP which converged with our practical concerns-developing strategic interventions for improving rural education in particular satellite schools

More specifically, Huberman and Miles' Qualitative Flow Model (1984) was used as a construct to analyze the data. According to Miles & Huberman's (1984) Data Analysis Flow Model, qualitative data analysis is constituted of three interlocking components or phases. These are: (1) Data reduction; (2) Data display, and (3) Conclusion drawing/verification. Data reduction is the process of focusing, simplifying and summarizing field work (Huberman & Miles, 1984). In the context of this study, all the data collected by means of the three research instruments described above, namely document analysis, structured interview schedule and survey were reduced in line with the scope and focus of the three research questions. Data display is constituted of the process of "…an organized assembly of information that permits conclusion drawing and action taking" (Huberman & Miles, 1984: 21). In this study, the graphs below (See tables 1 and 2) constitute the data display and they are intended to address the research questions of the study. Lastly, conclusion drawing and verification is the process of deciding what the data displayed mean in relation to the main research questions of the study. The results and discussion sections of this study represent the two researchers' interpretation and understanding of what the data mean and reveal in respect of the problem investigated.

To sum up, Miles & Hurman (1984)'s Data Analysis Flow Model was found to be a useful and practical guide for analyzing and interpreting the data collected in this study. The results of the study are presented and discussed below.

IV. RESULTS OF THE STUDY

This study set out to investigate appropriate technological interventions which may be used to mitigate the disruptive effects of the COVID-19 on rural schooling. In this regard, three aspects of the COVID-19 impacts were investigated, namely the immediate, the present and the long term. The immediate refers to the impacts following the abrupt closure of the schools and the consequences to schooling (See Table 1). The present refers to the quality of pre-opening of schools planning (See table 2), whereas the long term refers to strategic interventions which may be required to sustain rural schooling (See table 2). The findings of the study are presented in terms of these three themes. Table 1 displays data

in respect of resource support urgently required for rural schools.

Table 1:Summary of policy intervention used for managing the disruption to learning

Type of intervention	Country A	Country B	Comments
Pro-poor policyadvocacy and leadership.	✓	✓	In both countries the heads of governments pronounced measures for mitigating the pandemic
Strategic planning (Rural infrastructure)	X	X	Documentary data does not indicate any strategic plans that have been developed
Communication (Information centre)	X	X	Communication through the media is currently focused on current contingencies.
Policy alignment (agriculture and education policy harmony)	X	X	No evidence that systemic policies have been formulated
Resource mobilization(categorical funds)	X	✓	Radio lessons commenced in country B
Policy implementation tools (Legislation)			No evidence from documentary data
Policy monitoring			No evidence of follow ups on policies.
Resource allocation	✓	X	Documentary data indicate that effort has been made in country A to support schools, Interview data indicate that in B schools have been asked to mobilize resources on their own
Rural financial incentives	X	X	No documentary evidence to this effect
Moral advocacy incentives	✓	✓	Documentary data reveal high levels of advocacy.

The data in table one indicates that the abruptness of the school closures had several impacts in both countries. Governments in both countries made decisions to close schools. These measures were mainly precautional. There were no interventions pertaining to rural schooling. No concrete resources to re-orient and empower teachers and parents to reach out to students during this phase. No evidence is available as to what teachers had to do. The data suggests that there was evidence of any interventions at household level.

Table 2: Reopening strategies

Type of intervention	Country A	Country B	Comments
Communication: Information Guidelines for opening	✓	✓	Serious attempts were made to communicate information to rural schools. However, information got to some schools late
Health guidelines	✓	✓	Health guidelines were communicated in the media.
Safety guidelines	✓	✓	Safety measures were also communicated through the media. The use of masks and the sanitization were stressed
Budgetary support	✓	✓	Very robust in A but minimal in B.
Supervision and monitoring guidelines	✓	✓	Available and detailed. No indication of personnel to do so.

The data in table 2 indicates that in both countries, a lot of activities were done in preparation of schools opening. Resources, both informational and material were mobilized although at different levels. In country A schools operating below a certain level, were supported to acquire the requisite funds.

V. DISCUSSION OF FINDINGS

From the results of the study, four mammoth tasks emerge as key imperatives for reconfiguring rural schooling in the post-COVID-19 period. They are as follows:

- Developing and harmonizing multi-sectorial rural development policies;
- Distance and remote learning infrastructure development;
- Reforming the teacher education curriculum, and
- Community/parental empowerment

Harmonizing and coordinating rural development policies

Developing and harmonizing multi-sectorial rural development policy frameworks constitute one of the greatest governments faced in combating the effects of the corona virus pandemic with specific reference to rural schooling. Currently, the ministries of health, education and economics are not configured and integrated in a harmonious manner due to tradition and government traditions and traditions. However, the COVID-19 outbreak has made it an imperative to coordinate health, education and economic activities. From the results of the study reported above, it is now evident that safety measures in the form of protective clothing (PC) and the maintenance of hygienic standards constitute first line interventions against the transmission of the corona virus. Whereas valiant efforts have been made to provide these, efforts have not been systematically coordinated among the ministries. This makes it an imperative to design a new policy framework that will bring together the activities and operations of the three ministries.

Developing distance and remote learning infrastructure

Providing efficient affordable distance remote learning infrastructure constitutes one of the greatest challenges facing the post-COVID-19.The results of the study indicate that information to rural schools does not arrive timeously. The situation in both countries is depressing and pathetic. Currently, private service providers are struggling to provide efficient and cost-effective access to their urban clients. It would be therefore be unrealistic to expect internet service

providers to venture into rural area. Distance education as technology has been found to be cost- effective and accessible (Daniel, 2008). Similarly, Mswazie & Blignaut (2019) have reported that rural teachers in Zimbabwe opted to upgrade their qualifications through distance education because it is affordable and accessible. Cost is a key consideration for the rural populace and therefore it would be imprudent and very unwise to anchor learning activities around costly technological models.

Some where the market for these services is very fickle. However, gradualist and developmental approaches policies may be adopted where with time the internet becomes available. Rural Electrification Programme provides hope that rural schools may eventually access printing services and gradually the internet. Most rural secondary schools are now electrified

Overhauling the teacher education curriculum

The post-COVID-19 period point to the imperative to overhaul teacher education curricula in several areas. First, Chabbott (2009) argues that the biggest challenge faced by teachers who serve in satellite schools is that majority of them have not been trained on how to deal with composite classes (multi-grade classes). It is obvious that a combined class of students differs a lot from the conventional type of a student class of a single grade. That means that the way the student class of the multi-grade or composite class should be taught must be different as well. Dube (2002) also claims that, many of the satellite schools are often far and isolated and sometimes far from teachers in other areas, especially in line with other professional activities or visits. This affects the motivation of teachers who would want to benefit both professionally and socially from opportunities that rise through teacher-to-teacher interactive or training. It is true that the function of the teacher in the multi-grade class is multi-dimensional or to be more accurate it is much more complicated and demanding than the role of the teacher in the mono-grade school respectively.

Bennet (2002) posits that multi-grade teachers should not be expected to adapt, the general system to their specific multi-grade circumstances alone. In most education systems mono-grade teachers are not expected to exercise such levels of adaptive professional autonomy. Why should so much more be expected from the multi-grade teacher?

Secondly, for children to learn effectively in satellite schools' environment, teachers need to be well trained, well-resourced and hold positive attitudes to multi-grade teaching. Little (2006) argues that composite class teaching in many views represents a more demanding teaching situation and special attention should be given to it. However, many teachers in satellite schools are either untrained or trained in mono-grade pedagogy, have few teachings and learning resources. In view of this, Department of Education (2006) of South Africa has identified the following as key in training rural teachers.

- Familiarizing teachers with multi-grade teaching methods and empower them to apply those methods;
- Replacing a teacher-centered mono-grade approach with one that meets the multi-grade learning needs of learners;
- Arranging and organizing instructional resources and the physical environment in order to facilitate children's learning in dependence as well as interdependence:
- Planning developing and implementing instructional strategies and routines that allow for maximum co-operation and self-directed learning, and
- Constructing a suitable time-table for the class to provide on effective teaching and learning Programme for multi-grade classes.

Thirdly, distance and remote learning pedagogies must be integrated within teacher training. More importantly, teachers must be empowered with ICT skill-sets, knowledge and competences to design, deliver and manage distance and remote learning. Jegede in Mubika & Bakaliya (2011) has identified the following as constituting basic skills teachers should possess:

- Word processing;
- Internet use;
- File navigation skills;
- Spreadsheet expertise;
- Presentation software, and
- Data base management.

Similarly, the Ministry of Higher and Tertiary Education (2015) ICT syllabus has highlighted on skill-sets which teachers should possess to effect a technological driven curriculum. . These include:

- Creating and publishing;
- Mastery of computer software;
- Safety and security,
- The worldwide web and online collaboration;
- Programming, and
- Communication and networks.

However, in the Zimbabwean context it would be unrealistic for teacher training colleges to impart advanced ICT skills. It would be more realistic and practicable to incorporate elements of   (1)*The Correspondence Model:* based on print technology, this represented the basic learning package delivered through the post; (2) *The Multi-Media Model:* based on print, audio and video technologies, this model represented multi-mode support systems to the learner and (3) *The Tele-Learning Model:* based on applications of telecommunications technologies to provide opportunities for synchronous and asynchronous communication.

Lastly, but more importantly teacher education curriculum should produce teachers capable of producing and designing distance learning materials. Participants in this study revealed

their frustrations in trying to reach out to their students during the COVID-19 induced lockdown of schools. More critically, teacher education should relook at the affective dimension of teacher preparatory programs. As Mswazie (2013) observed, most teacher preparatory programmes do not adequately prepare socially and psychological for the vagaries of rural teaching. Conditions in rural satellite schools are so intimidating to newly trained teachers to the extent that most do not last (Ndlovu & Mswazie, 2017).

Transforming households into learning centers: Towards home-based –learning

The COVID-19 induced lockdown of schools worldwide has forced the household to become the new centre of schooling. Many parents who had previously looked down upon the teaching profession soon realized that creating an orderly learning environment and monitoring children learning at home is a demanding task. In view of this, there is need to generate guidelines for home learning. These guidelines should assist parents or guardians to produce learning schedules, apply appropriate teaching pedagogies and methods, assess students work and provide extension and remedial work. The Home–Based Care Model pioneered by the Ministry of Health and Child Welfare in Zimbabwe provides a prototype model to be adapted by MOPSE in general and households in particular. Parents and guardians have been compelled by the COVID-19 to become teachers of their children at home. This would entail reconfiguration of the home setup, transforming the home into a schooling and study centre. However, it would be of utmost importance for government and teachers' college to find strategies for parents and guardians to be integrated into students' tutors. In addition, incentive and motivational regimes should be provided to teachers who commit to work in rural schools after graduating from college.

To sum up, this study set out to investigate the impacts of COVID-19 on rural schooling for the purpose of identifying tools that may assist in the construction of new modes of learning at a distance in rural schools. Interventions anchored on four imperatives have been identified and these are namely (1) developing and implementing multi-sectorial policies in rural development; (2) building distance and remote learning infrastructure; (3) reforming the teacher education curriculum and (4) empowering households (parents and guardians) with teaching methodologies and pedagogies.

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