# RESEARCHERS CHALLENGE

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## THEME 2:

# Teachers' Readiness for Remote Teaching during the COVID-19 Emergency in selected SADC countries

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# Acronyms

| | |
|---|---|
| ADEA | Association for the Development of Education in Africa |
| AU | African Union |
| CESA | Continental Education Strategy for Africa 2016 – 2025 |
| DBE | (South African) Department of Basic Education |
| DHET | (South African) Department of Higher Education and Training |
| ERT | Emergency Remote Teaching (a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances |
| HEI | Higher Education Institution |
| ICT | Information and Communication Technologies |
| IT | Information Technology |
| MCDE | Malawi College of Distance Education |
| MOE | Ministry of Education |
| MOOC | Massive Open Online Course |
| MS | Microsoft |
| OUM | Open University of Mauritius |
| RSA | Republic of South Africa |
| SADC | Southern African Development Community |
| UN | Unites Nations |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNICEF | United Nations International Children's Fund |
| UN OCHA | UN Office for the Coordination of Humanitarian Affairs |

# 1 Background

On March 12, 2020, the World Health Organization officially declared the COVID-19 outbreak a pandemic. The health and economic effects of the pandemic have been most palpable around the globe and the education sector was not spared, with disruptions to learning being quite dramatic. As at May 10, 2020, UNESCO estimates showed that COVID-19 has affected some 1 268 164 088 learners (i.e. 72.4% of total enrolled learners globally), with widespread school closures across many countries. Of this total, almost 62 million account for learners affected in the SADC region.

In order to manage this situation, short-and medium-term solutions needed to be developed and implemented, possibly also for future use. The need to rethink and re-imagine education systems so that they become more resilient and adaptable to future shocks and disruptions is critical. McAleavy & Gorgen (2020) suggest that physical distancing between the teacher and learner brings considerable challenges and requires changes to *planning*, *teaching* and *assessment* practices. As such, governments and education stakeholders world over have responded swiftly to continue children's learning, using various delivery channels including digital tools, TV/radio-based teaching and take-home packages for parent or caregiver-guided education (UNICEF, 2020-10).

The main objective of the teaching response to this emergency has been to provide alternative instructional modes. The provision of 'temporary access to instruction and instructional support in a manner that is quick to set up and is reliably available during an emergency or crisis' is referred to as Emergency Remote Teaching (ERT) according to Hodges, Moore, et al (2020). The authors state that ERT is the use of fully remote teaching solutions for education which would otherwise be delivered face to face. Such courses are not necessarily created as long-term solutions but as a temporary solution to an immediate problem:

> *Thus, the distinction is important between the normal, everyday type of effective online instruction and that which we are doing in a hurry with bare minimum resources and scant time: emergency remote teaching (p6).*

The massive scale of school closures caused by COVID-19 has laid bare the uneven distribution of technology needed to facilitate remote learning. Questions of equitable access to remote teaching platforms for both teachers and learners remain a source of concern given the digital divide (Save The Children, 2018). Beyond that, ERT has highlighted the lack of preparedness and low resilience of systems to support teachers, facilitators and parents or caregivers in the successful and safe use of technology for learning (UNICEF, 2020-10). Amidst such advocacy for continuity of learning during the COVID-19 crisis, there is scarcity of empirical data in SADC countries with regards to teachers' readiness to facilitate remote teaching using delivery modes, methods and instructional resources that speak to rapidly changing demands. It is not clear how governments are ensuring adequate training and support for pre- and in-service teachers to deliver effective remote instruction and all that it involves. In the quest to provide empirical information on preparedness and resilience of education systems, this study explores teachers' readiness for remote teaching during the COVID-19 emergency in selected SADC countries.

# 2 Research Objectives

The study seeks to address the following objectives:

- explore pre- and in-service training preparation of teachers for remote teaching in SADC countries;
- describe the remote teaching practices teachers used during this crisis in SADC countries; and
- highlight the opportunities, successes and challenges teachers experienced in implementing remote teaching in SADC countries.

# 3 Situational Analysis, Context and Literature

An estimated 63 million primary and secondary school teachers have been affected by the COVID-19 pandemic (UNICEF, 2020). Educators have had to deal with disruptions to teaching patterns and systems (UNESCO, 2020) and are on the frontlines of educational responses to this challenge, trying to ensure continuity in the education system (International Task Force on Teachers for Education 2030, 2020). A report by the Southern African Development Community (SADC) notes that there is great concern for learners set to write their final regional or international exams at the end of 2020 and how teachers will ensure that these learners are ready for these assessments should they take place (SADC Regional Response to COVID-19 Pandemic, 2020).

All of this comes against a backdrop of numerous regional and international statements affirming the need to support the education sector even in the midst of crisis. The 1948 Universal Declaration on Human Rights, the Salamanca Statement, the African Agenda 2063 and the Continental Education Strategy for Africa (CESA-16-25) all commit to education provision (AU, 2015; AU 2016; United Nations, 1948). The SADC protocol on Education and Training mandates member states to formulate national policies on distance education so as to develop a regional framework for cooperation on distance education (SADC, 2012). The political will to provide education under any circumstance exists at least on paper. Translating this into action has proved problematic in normal times. How can teachers therefore be expected to deliver education for all where the free movement of teachers and learners has been curtailed?

All 16 SADC member states (Angola, Botswana, Comoros, Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe) implemented school closures in response to the COVID-19 pandemic, albeit to varying degrees (UN OCHA, 2020). Governments have taken initiatives to support learners to continue their education remotely using different methodologies. In SADC countries, 42% have opted for television broadcasting of classes, for both primary and secondary level, whilst 21% are using radio channels to broadcast classes. Twenty-five percent of countries which have implemented online learning platforms are also broadcasting primary and secondary level classes on TV (UNESCO, 2020). Some have even made resources available online for teachers, learners and parents on e-learning but readiness of teachers to use ICT tools to teach needs to be assessed. Teacher Unions, Parent Teacher Associations, International and Non-Governmental Organisations have and are playing a critical role at this time. To

illustrate, the SADC Secretariat and UNESCO have developed an action plan on education which aims to 'support teachers and teacher educators through access and capacity building to use relevant technologies to facilitate and support distance learning, among other interventions' (SADC, 2020). In countries such as the Democratic Republic of the Congo, South Africa and Zambia, consortia have been working together to respond to the educational crisis in different ways (ADEA, 2020; Reliefweb, 2020). What is not clear is how much teachers' input and involvement there is in the planning and delivery of the educational programmes, whether on TV, radio or on an e-learning platform.

Hodges, Moore, et al (2020) propose the term 'emergency remote teaching' (ERT) to define this new situation characterised by forced and hurried teaching from a distance using the various tools and technologies at the disposal of teachers. Emergency remote teaching is described as a temporary shift of instructional delivery to an alternate delivery mode due to crisis circumstances. The argument is made further that this kind of delivery involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses. Given the abrupt nature of school closures in response to declaration of the COVID-19 pandemic, it is understood that being a stop gap measure, ERT will likely not meet robust education standards and suggests the need for new solutions to intractable problems. Ultimately, emergency remote teaching is concerned with thinking around how to deliver education in the face of changing needs and limitations and varying contexts.

## 3.1 National Responses to Covid-19

The general picture would seem to indicate a mass movement towards Information and Communication Technologies (ICT) for distance education. However, in Sub-Saharan African countries, 216 million learners do not have access to a computer; 199 million learners do not have internet and 26 million are not covered by mobile networks (UNESCO, 2020). The e-resources being made accessible by governments are not necessarily accessible to all teachers and students. Furthermore, the computer literacy of students, teachers and parents of learners is not guaranteed, adding another layer of complexity to the question of remote learning (Monotoya, Silvia & Barbosa, 2020). Rural areas already present challenging contexts for education delivery even in the absence of COVID-19 and insufficient government funding, under-qualified teachers, and multi-grade teaching are pervasive where poverty levels are high (Du Plessis & Mestry, 2019).

Where the technologies exist, objective data on which types of distance learning tools educators are using to reach out to their students and their capacity to do so is severely limited. Anecdotal evidence suggests that where available educators have continued teaching using high end technology tools such as video conferencing and live classes using Skype/Zoom/WhatsApp and social media platforms. Early research on the use of ICT for education suggests that where teachers are less confident in the use of ICTs they collaborate with parents to use lower end technology practices (Russel & Bradley, 1997), such as taking photographs of homework and sending these using their cell phones. Disparities in education delivery also cut across education sub-sectors. Tertiary education has traditionally seen a wider uptake in the use of ICT to deliver education. Extensive research has been dedicated to distance learning in higher education using e-learning platforms in Sub-Saharan African countries but it would seem far less digital learning takes place in the primary and secondary education sector as most learning is classroom

based (Monotoya, Silvia & Barbosa, 2020). It is worth mentioning that, clearly, there are inherent challenges in the provision of education using online and virtual models in the SADC region. The cost of internet provision is higher for some students in the region. Bandwidth and connectivity issues are also a challenge in some SADC countries, especially rural areas. There are also issues related to poor TV and radio signal especially in remote areas of some SADC countries. Coupled with the above challenges, there has been a power deficit coupled by prolonged load shedding in countries including South Africa, Zambia and Zimbabwe which have heavily impacted on ERT.

However, it must be noted that the benefits of online learning are realised where there is careful instructional design and planning, using a systematic model for design and development (Branch & Dousay, 2015). Educators must not only plan carefully for online learning but must also identify the content to be covered and how to support the type of interactions that are important to the learning process according to the Higher Education Learning and Teaching Association of Southern Africa (heltasa, 2020) It is also important to consider the psychological impact on both teachers and students of these new learning arrangements.

In many African homes, women tend to have a more active role in the operations of the home, meaning that female teachers and learners may have trouble finding time to prepare work for students and for studying, respectively (black-caucus-UCT, 2020). Educators have also indicated that they are aware that the move to online learning will be more demanding and time consuming than face-to-face teaching. Educators emphasise the need to put 'pedagogy before technology' to be able to be reflexive and socially conscious when designing teaching for online delivery so that learners facing unfavourable conditions are not disadvantaged by the adoption of a blanket approach to teaching. Educators globally, the SADC region included, continue to face the question of how to scale emergency remote teaching to all learning levels quickly and contextually, especially given the absence of data on teacher readiness to provide distance learning.

# 4 Study design

Nine SADC countries participated in the study to determine the readiness of teachers to participate in emergency remote teaching during the COVID-19 pandemic. Sixteen researchers from the participating countries collected data on ERT and teacher readiness by reviewing various government policy documents on teacher education and training, official ministry circulars on COVID-19 aimed at guiding instruction at school and tertiary levels during the lockdown period, the availability of learning materials, access to remote learning platforms, accessibility of equipment and infrastructure needed for ERT in an effort to establish teachers' readiness for remote teaching. Interviews were held with high school learners, teacher educators, and teachers from both primary and secondary schools, students from colleges of education and university faculties of education to determine what remote teaching and learning activities and experiences they were involved in during this lockdown phase. An online survey targeting the same group of participants was also conducted to establish the levels of participation in ERT of the various groups of participants, the challenges they were experiencing as well as the successes and opportunities they identified.

The study employed a mixed methods approach to address the purpose. This approach allowed for exploration of the phenomenon of 'teacher readiness for remote learning provision during times of major disruptions'. The research employed a one-phase research design using both qualitative and quantitative data collection. This methodology offered a comprehensive set of evidence which assisted in exploring the issue of teacher readiness in emergency remote teaching situations. The philosophical underpinnings of this research design were pragmatic in nature as it aims at supporting interventions that will improve the practice. It is also transformative in its perspective as it aims to change people's understanding and create new ways of practice, especially for those who are often excluded from the mainstream due to their socio-economic or geographic situations, or other such discriminatory practices.

The stratified sample for this study across SADC countries was drawn from Ministry of Education officials in charge of in-service teacher training, teacher educators, tertiary education students, secondary school teachers as well as secondary school learners. Seventy-one (71) respondents participated in the interviews while 224 participated in the online survey. Purposive sampling was used to select the participants from the mentioned groups due to the prevailing situation of lockdown and social distancing at the time of the study.

The analysis of the interview data was kept separate from the survey data, but interpreted together in the final results interpretation. The usage of comparative and analytical categories to describe and explain the situation of teacher preparedness in the COVID-19 emergency was used for qualitative undertaking. The analytical process involved grouping and categorising data that has similar units in meaning, continuously refining and generating new categories at each phase related to the research objectives. The survey data was analysed using frequency tables and graphs, and were described in narrative text. This information provided a broader understanding and validation of the findings around the research objectives, namely the training of teachers in ERT, how they practiced remote teaching, what their challenges were and the successes and opportunities they identified. This study design offered a comprehensive set of evidence for studying the research problem.

## 4.1 Ethical Considerations

The study was conducted in accordance with the requirements of ethical research process. Since this study dealt with human subjects, care was taken to ensure that the participants were protected from harm considering the prevailing situation of COVID-19 (interviews were conducted telephonically and surveys were completed online). The purpose and objectives of the study were explained to the participants so that they could participate as informed volunteers.

All the information shared between the researchers and the participants was treated as confidential and the information provided by the participants is used for research purposes only. Therefore, this report does not mention the names of the research study participants. Those participants who agreed to take part in this study were provided with a consent form. Only the participants who gave consent, were interviewed or could continue with the online survey.

## 4.2 Limitations

Restricted face-to-face interaction with respondents limited the survey and interviews to only those participants having access to internet and ICT devices. Given the tight timeframe of the study (six weeks), the number of participants had to be limited in order to make data collection manageable. Moreover, the fact that the study was conducted in a short period of time also limited the depth of data analysis possible.

# 5 Data Presentation and Analysis

Country reports received from the nine participating SADC countries, indicate that all opted for early lockdown to curtail the spread of the COVID-19 pandemic. Namibia reportedly closed all schools on 16 March 2020 while Mauritius did the same on 19 March. Zimbabwe reported its first COVID-19 case on 20 March and closed schools and universities three days later. Mozambique reported their first COVID-19 case on 22 March and announced the 'suspension of classes in all public and private schools, from pre-school to university education' on 30 March 2020. South African schools closed on 18 March 2020 while researchers reported that Zambia 'shut down all educational institutions with effect from the 20 March 2020' Eswatini went into lockdown on 27 April 2020 and Tanzania, despite not going into full lockdown, closed schools on 17 March 2020. Malawi reported that the closure of all schools in the country only happened on 20 April, about one month later than when the first schools in SADC countries started to close.

***'A brave new world' versus 'Navigating in the jungle'***

The effect on teaching and learning brought about by the sudden school closures in March 2020 due to the COVID-19 pandemic reads like a tale of two cities in many of the SADC countries. How well teachers, lecturers, and learners were coping with ERT seemed to depend on their geographical location as well as their socio-economic status. For those with access to technology, who resided mostly in urban areas and could afford the data bundles, it was 'a brave new world'. For those all others, it was like 'navigating in the jungle'. These were the words of two teachers coming from these two very different realities.

## 5.1 Desk Review Results

The researchers reviewed relevant documents related to ERT and the COVID-19 pandemic which were described in individual country reports. The information was separated according to the three main research objectives namely ERT training, ERT practices and the challenges, successes, opportunities in ERT.

### 5.1.1 ERT Training per country

In order to establish what kinds of teacher training the study participants had received during pre- or in-service, information was collected by analysing relevant country policy documents, i.e. national ICT policy, teacher education and training curriculum, government/Ministry of Education circulars, or any

other country specific documents referring to ERT training of teachers and teacher educators. Table 1 below provides the information related to teacher training in the selected SADC countries.

**Table 1: Training in Remote Teaching per country**

| COUNTRY | ICT in Education Policy | ICT Integration in Teacher Education programmes | Specific training on ERT in teacher education programmes (including the use of TV, radio broadcasts, developing print materials, social media sites) *Explain* | In-service training provided during COVID-19 *Explain* |
|---|---|---|---|---|
| | ✓ | ✓ | No, but integration of ICTs in teaching and learning form part of the teacher education curriculum at under-graduate level. | The Ministry of Education is currently working on a strategy to train more teachers and lecturers. A number of selected in-service teachers had been trained to deliver lessons on radio broadcasts and social media before Covid-19. These are the teachers currently delivering lessons on radio, print and electronic media. |
| | ✓ | ✓ | This component is currently missing in teacher training programmes. | Some teachers received training on the following:<br>design of content and lessons to upload on the MOE website.<br>Facilitating lessons on radio and television.<br>The Ministry of Education gave this training only to selected teachers.<br>However Malawi received a GPE grant in May 2020 in part to support remote teaching[1] |

[1] https://www.globalpartnership.org/news/global-partnership-education-provides-68-million-grants-education-response-covid-19

| COUNTRY | ICT in Education Policy | ICT Integration in Teacher Education programmes | Specific training on ERT in teacher education programmes (including the use of TV, radio broadcasts, developing print materials, social media sites) *Explain* | In-service training provided during COVID-19 *Explain* |
|---|---|---|---|---|
| **Mauritius** | ✓ | ✓ | No specific training on emergency remote teaching.<br>Teachers associated with Open University are trained for such remote teaching. | No direct in-service training as country was on the lockdown, and since not all teachers had internet access, in-service training was problematic.<br>TV and radio broadcasts of educational classes for primary and lower secondary level learners were made in collaboration with Open University of Mauritius which provided their recording studio facility and teachers who were already trained in doing such educational programmes.<br>For online classes on Zoom and Microsoft 365[2], a step by step document was drafted for teachers on how to use these platforms[3].<br>Online resources for educational materials were provided by Mauritius Institute of Education[4]<br>Primary and secondary school teachers had prior experience of using Moodle and Microsoft Teams as most of their in-service and pre-service training courses were done using these platforms. |

[2] http://www.govmu.org/English/News/Pages/Covid-19-Special-arrangements-for-students-and-for-motor-vehicle-owners.aspx;

[3] http://ministry-education.govmu.org/English/Pages/online-guidelines.aspx

[4] http://portal.mie.ac.mu/school-of-science-and-mathematics/online-resources/ ; http://portal.mie.ac.mu/curriculum.html ;

| COUNTRY | ICT in Education Policy | ICT Integration in Teacher Education programmes | Specific training on ERT in teacher education programmes (including the use of TV, radio broadcasts, developing print materials, social media sites) *Explain* | In-service training provided during COVID-19 *Explain* |
|---|---|---|---|---|
| **Namibia** | ✓ | ✓ | No ERT training. Teacher education programmes offer Integrated Media and Technology modules, but not how to teach in distance, remote or online learning environments. Programmes availed their materials to be used by learners and teachers in grades 11-12 | (1) The ministry motivated teachers to register on KOPANA, an online learning platform to build teachers' capacity in school subject content.<br>(2) NAMCOL offered training to teachers on ICDL.<br>(3) Training of teacher educators on Moodle.<br>(4) Namibia Media Holding (NMH) partnered with the Ministry through sponsorship from UNICEF to engage teachers into some materials development as an intervention for pre-primary - grade 7.<br>(5) NAMCOL offers notes and materials to Grades 11–12 developed by high school teachers. |
| **Tanzania** | ✓ | ✓ | Not really. The teacher trainees only receive pre-service training in computer literacy as part of their degree programme. In some institutions, such as the Dar es Salaam University College of Education short-courses in ICT are offered, however, the course is not intended for teacher trainees. | Based on the findings of this research, there was no in-service training on ERT provided to the teachers/teacher trainees during COVID-19. |
| **South Africa** | ✓ | ✓ | Most universities offered training for their staff. For schools there was no offered training on ERT for teachers, the lessons delivered on radio were mostly done by subject advisers and people who have been teaching the subject for a number of years. | In-service training usually takes place in a school environment, so the abrupt move to ERT means the training for teaching was focused on the teachers as the in-service teachers could no longer continue with their practicals due to school closure. |

| COUNTRY | ICT in Education Policy | ICT Integration in Teacher Education programmes | Specific training on ERT in teacher education programmes (including the use of TV, radio broadcasts, developing print materials, social media sites) *Explain* | In-service training provided during COVID-19 *Explain* |
|---|---|---|---|---|
| **Zambia** | ✓ | ✓ | No specific training in ERT in teacher education programmes per se but through in–service training, teachers and teacher educators are trained (at different levels) in the integration of ICT in their teaching. Worth noting is the fact that most of such training has to do with the integration of ICT into classroom teaching and less on using ICT tools/platforms to facilitate distance learning.<br>For TV and radio, teachers are just called to teach while being captured on camera or voice recorder without necessarily being trained. | Training in ERT was mainly institution-based and mainly aimed at equipping teacher educators to reach out to students on distance learning programmes whose residential sessions were cancelled because of COVID-19.<br>However, Zambia received a grant from the GPE in May 2020 in part to build teacher capacity to support distance learning[5] |
| **Zimbabwe** | ✓ | ✓ | Government has a COVID-19 Education Sector Response in place through the Ministry of Primary and Secondary Education, which includes radio and television lessons in the plan. Has also received a grant from GPE to train teachers and develop learning materials. There is a site called the Internet of Good Things which provides learning resources and is an initiative of one of the country's Mobile Service Providers | Private schools provide training on an individual school basis. Government has plans to train teachers through the Education Sector COVID Response Plan. |

The information in Table 1 indicates that all the participating SADC countries had a national ICT policy and that ICTs were integrated into teacher education programmes. However, most of the countries did not have remote teaching as part of their teacher education programmes. Mauritius reported offering of teacher training programmes via their Open University where trainee teachers are trained in

[5] https://www.globalpartnership.org/news/global-partnership-education-provides-68-million-grants-education-response-covid-19

remote/distance teaching. However, training in remote teaching was generally not featured as part of teacher training programmes.

Some countries reported that their teacher educators received training through their universities on how to facilitate online teaching as part of capacity building. Zambia reports that this training was mostly institutionally based and aimed at equipping staff to reach out to students enrolled on distance learning programmes. In some instances, teachers were trained to offer radio and television lessons. These are often selected teachers who have excellent subject content knowledge. Teachers and teacher educators from SADC countries who received some form of in-service remote teaching training, were usually trained on Moodle, Microsoft 365, ICDL, delivering lessons on radio and television, and developing learning materials for use at home.

In summary, it appears that teacher educators have more access to ERT training through the use of on-line platforms such as Moodle, Microsoft Teams, Zoom, Panopto, Skype, Google Meet and other lesser known platforms. Teachers' training for ERT was limited to selected teachers who have excellent subject content knowledge, and are trained to develop and deliver lessons on radio, television, with hardcopy materials. Namibia has an online learning platform for teachers hosted at the University of Namibia called KOPANO. However, the platform is used to build teachers' school subject content knowledge, and not specifically aimed at ERT. Nonetheless, the skills learned to access the learning content are transferable to ERT. There are also reports of governments working closely with international partners such as UNICEF, UNESCO, GPE, the World Bank and local business and NGO partners to train teachers in developing learning materials. The training appears to be focused mostly on ensuring that teacher educators and teachers are ready to use the technological equipment and software, and to develop learning content. Countries such as Zambia, Zimbabwe and Malawi received training grants from the GPE in May 2020 to build teachers' capacity to support distance and ERT training. It should be noted that most of the training reported in the country reports does not seem to cater for the psycho-social readiness of those involved in ERT, including learners and their parents.

### 5.1.2 National level efforts to support teaching and learning through ERT practices per country

In response to the impact of the pandemic on African nation states, many SADC countries established inter-sectoral presidential taskforces composed of leading scientists and practitioners. The main aim of these taskforces was to harness local knowledge and expertise to guide the national response to the pandemic. Although the main focus of the response was on the health crisis, the taskforces also made use of their inter-agency to address the learning crisis resulting from school closures.

Desk research in Namibia reveals that the national television and radio services were called upon to avail timeslots for broadcasting lessons to learners. IT companies such as Telecom and MTC were enlisted to supply internet devices and data bundles at reduced costs to students and teachers. UNICEF, the Ministry of Education, Arts and Culture and a private on-line education service provider, developed teaching materials that were distributed via daily newspapers as supplements to learning. The Namibian College for Open Learning (NAMCOL) availed their on-line learning materials for all grades 11-12 learners. Private sector education providers such as Edugate Academy broadcast free on-line lessons on a local television station.

One of the researcher's Mauritius country report reveals that the Ministry of Education amended their Education Act in order 'to narrow the digital divide … of access to online learning by providing tablets to students who come from underprivileged backgrounds'.

Desk research for Zambia shows that a survey conducted by UNICEF in consultation with relevant stakeholders revealed the existence of interactive radio programmes for Early Childhood Education in three of the seven local languages. These programmes were revived for broadcasting. In addition, the Ministry of General Education in Zambia (through the Department of Open and Distance Learning) introduced teaching via TV and radio through the Education Broadcasting Services. The TV lessons were first broadcast on national television and eventually aired on pay television stations (DSTV and GOTV).

Zimbabwe reviewed how they had previously managed to provide teaching and learning during times of crisis. The lessons learned from the time of the Chimurenga war, the cholera outbreak in 2018 and the impact of the Cyclone Idai, could provide guidance on how to tackle remote teaching and learning during the COVID-19 lockdown period. Zimbabwe has long traditions of distance education particularly in the teacher education sector, and the authorities could rely on these educators to provide learning materials and remote learning competencies for continuing education. The GPE has allocated USD 7 million in COVID-19 grant support to Zimbabwe to assist with the training of teachers in open and distance learning modalities, preparing of schools for safe reopening, and to develop teacher kits with protective equipment (GPE, 2020).

In their efforts to mitigate the negative impact of the COVID-19 pandemic on the education sector, different sectors in SADC countries discovered the power of coming together to pool existing resources (sometimes completely forgotten resources), and to create new instructional materials and modes of delivery. Almost all SADC countries responded swiftly to continue with remote teaching and learning, using various delivery channels including digital tools, TV/radio-based teaching and take-home packages for parents or caregiver-guided education (UNICEF, 2020-10; SADC, 2020). Advocacy for continuity of learning during the COVID-19 crisis, required teachers to facilitate remote teaching using delivery modes, methods and instructional resources that speak to rapidly changing demands. However, this depended on the availability of learning materials, access to remote learning platforms, and the competencies of teachers and teacher educators to facilitate such learning.

In summary, country reports reveal ERT revolved around television and radio lessons broadcast by national broadcasting services. National Open Learning institutions availed learning materials for use by teachers and learners, and Ministries of Education were assisted by global partners such as UNICEF, UNESCO, GPE to train teachers in developing remote learning materials that were distributed to learners via local media. In some countries, IT service providers assisted with making available internet devices and data bundles at reduced costs to students, teachers and learners. Countries such as Zimbabwe and Zambia reverted to their knowledge and practices of distance learning during emergency situations to address their learning crises.

### 5.1.3 ERT Challenges, successes and opportunities

Researchers in the study analysed local country documents, conducted interviews and compiled their data into country reports that were collated into overall reports on the various themes. ERT has emerged as a quick alternative response to traditional face-to-face teaching during this COVID-19

lockdown period (UNICEF, 2020-10). Mafenya (2013) states that the success or failure of the shift from traditional teaching and learning classroom methods and e-learning, is dependent on psychological readiness, sociological readiness, environmental readiness, human resources readiness, technological readiness, content readiness, and equipment readiness.

SADC country responses to the COVID-19 remote teaching challenge vary from country to country, depending on their degree of preparedness. The researcher's *Mauritius* country report reveals that broadcasting of lessons for grades 1-9 started in collaboration with the Mauritius Institute of Education, the Open University of Mauritius, the Mahatma Ghandi Institute and teachers. The Ministry of Education also created two e-learning platforms (Zoom and Microsoft 365) for grade 12-13 teachers to conduct online classes and upload lessons. Websites were created by the Ministry of Education to provide psycho-social support and deliver regular ministerial communiques.

In contrast, the report compiled by the researchers on *South Africa* describes the COVID-19 experience as suffering from the legacy of the apartheid era with issues of poor service delivery, limited infrastructure and resources, shortage of teachers and textbooks, and the majority of black children and teachers coming from disadvantaged schools, communities and homes. The Department of Higher Education and Training (DHET) and Basic Education (DBE) worked on finding ways to save the academic year. However, socio-economic factors provided different possibilities for teaching and learning via ERT. This was evident in a consolidated document by Universities South Africa (USAf) showing readiness of 26 public universities for ERT. The DBE and the public broadcaster South African Broadcasting Corporation (SABC) aired programmes for Grade 10-12 and for Early Childhood Development (ECD). This was important because most disadvantaged schools could not continue with teaching and learning remotely. DBE was already faced with challenges such as limited infrastructure and resources, shortage of teachers and textbooks which are a result of the apartheid legacy and the continued lack of service delivery by the democratic government. These said challenges meant that many of the possible tools or strategies to create schooling space for learners outside the traditional sense have limited chances of succeeding. The SA Minister of Higher Education Dr Blade Nzimande was quoted as follows:

> *We are constrained by the very same challenges we seek to address, poverty, inequality and unemployment. The very problems we seek to solve are the obstacles standing in our way* (Nzimande, 2020).

In ***Tanzania*** very little remote learning was reported to have taken place in-spite of government efforts 'to use ICT to improve delivery of education and training in all areas including distance learning as well as to enhance the quality of the learning experience itself'. The Tanzania Institute of Education collaborated with mass media such as TBC and STAR TV to develop radio and TV lessons for broadcasting to primary and secondary school learners. However not all learners have access to electricity or to television sets at home, and this was especially true for learners in rural areas. Public universities did not engage in any structured on-line learning throughout the lockdown period according to the author.

The majority of the population of ***Zimbabwe***, at 68%, resides in rural areas, where access to electricity is around 20%, and about less than 30% were thought to use the Internet (Trading Economics, 2020). This situation presents immense challenges to the provision of remote teaching to the majority of learners. However, Zimbabwe commenced with presentation of radio lesson broadcasts on 15 June 2020.

Emergency learning materials, television lessons and e-learning materials have been placed on the Ministry's website and other e-learning platforms. Parents and guardians are advised on how to assist their children (Zimbabwe Voice, 2020). Teachers have also contributed to the development of radio lessons and production of hardcopy lessons and other learning materials for learners who are unable to access radio or television (The Herald, 2020). Econet, a mobile telephone service, developed a webpage which provides information on a broad range of topics and educational resources (UNICEF, 2020).

No solid plans for remote teaching were evident to researchers in ***Eswatini***. Whatever plans the Ministry of Education has made are being thwarted by ongoing debates on whether the schools should open or not. However the government started to offer lessons to learners via the national radio broadcaster, television and newspapers. University students are still without any teaching as lecturers and students refused to take teaching and learning on-line.

In ***Namibia*** many private and well-resourced public schools migrated to on-line learning using Zoom, Google Classroom, and other e-learning platforms. However, the majority of Namibian learners did not have access to such e-learning platforms. Many private companies approached the Ministry to offer e-learning solutions and other learning materials and resources. This was not necessarily turned away, but the Ministry has the responsibility to ensure the materials were of good quality and appropriate for the Namibian child. Ministerial curriculum experts are tasked with the evaluation of these materials and this obviously takes time. In the meantime, the Ministry in partnership with UNICEF and other private companies has developed materials that are distributed to learners via newspapers, on radio and television. When teachers returned to schools on 3 June 2020, they were tasked with developing learning materials for their learners which they and their parents could fetch from the school and return the homework a week later.

The ***Zambian*** Ministry of General Education adapted interventions to mitigate school closures. However, it was not clear what exactly the intervention strategies are. One tangible example appears to be the discovery of radio lessons for Early Childhood Education (ECE) in three local languages. These are now re-broadcast on radio.

In summary, the majority of countries participating in the research successfully developed and broadcast lessons for learners using radio and television. Others made materials available through local newspapers. Some Ministries of Education made e-learning materials available on their websites. However, reports on all participating SADC countries described a severe lack of access to ERT due to limited electricity supply in rural areas, limited access to IT infrastructure and connectivity, limited learning resources such as textbooks and other learning materials. In some countries both teachers and learners refused to participate in online teaching and learning due to the unequal access. They felt that ERT would widen the quality education gap between 'the haves and the have nots'. It is interesting to note that almost all countries reported on issues of readiness as it relates to human resources readiness, technological readiness, content readiness, and equipment readiness, but only Mauritius and Namibia mentioned issues related to psychological readiness, sociological readiness, and environmental readiness. Mafenya (2013) regards readiness in all these spheres as critical to the success of shifting from traditional teaching and learning to ERT.

## 5.2 Interview Data Results

Telephonic interviews were conducted with 71 participants. They included teacher educators, teachers, and students from HEIs and learners from high schools in eight SADC countries. The countries included in the interviews were Eswatini, Malawi, Mauritius, Namibia, Swaziland, South Africa, Zambia and Zimbabwe.

**Table 2: Eswatini Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 40 – 50 | N/A |
| | Male | 50 – above | N/A |
| Teacher Educator | Male | 40 – 50 | University |
| | Male | 25 – 30 | College |
| Teacher | Female | 30 – 35 | Secondary |
| | Female | 25-30 | Primary |
| Student (HEIs) | Female | 20 – 30 | University |
| | Female | 20 – 25 | University |
| | Female | 20 – 25 | College |
| | Female | 20 – 25 | University |
| | Male | 20 – 25 | College |
| | Female | 20 – 25 | University |
| Learner | Male | 15 – 20 | Grade 12 |
| | Male | 15 – 20 | Grade 11 |

In Eswatini, two teachers were interviewed, one taught in an urban area and another in a rural area. Two learners were also interviewed, one attended a government school and the other attended a private school. Six HEI students were interviewed, two were college students and four were university students. University students currently use Moodle, WhatsApp and emails to access their study work. College students on the other hand also use emails, WhatsApp, e-learning and through posted hardcopies.

They preferred Zoom learning instead of emails. The emailed questions slowed down communication between students and lecturers. Some stated they would like to receive hardcopies of their assignments.

Learners battled with concentration during the lessons delivered via radio and television broadcasts. They would prefer meeting on a platform where they are able to interact and participate freely.

A teacher from a rural school expressed concerns about learners in the rural areas as sometimes it was difficult to get cell phone reception and they cannot tune into the radio broadcasts in their area.

**Table 3: Malawi Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 41 – 50 | University |
| Teacher Educator | Male | 31 – 40 | College |
| | Female | 41 – 50 | College |
| Teacher | Male | 31 – 40 | Secondary |
| | Male | 31 – 40 | Secondary |
| Student (HEIs) | Male | 20 – 30 | University |
| | Female | 20 – 30 | College |
| Learner | Female | 15 – 20 | Grade 12 |
| | Female | 15 – 20 | Grade 10 |

Nine Malawian participants contributed to the interview data: one male Ministry official, two teacher educators (male and female respectively), two male teachers, two HEI students and two learners. Two teacher educators indicated their involvement in remote teaching despite not receiving any training in this regard. They used WhatsApp as a learning platform. Lectures were sent in audio format while assignments were sent through WhatsApp messages or word documents.

Both teacher educators and teachers corroborated that the few students that were involved in the programme were very motivated, active and in most cases attempted all the given assignments. On the contrary, they indicated that very few students participated on-line and this limited access to learning. Teacher educators and teachers failed to adhere strictly to agreed schedules with students due to lack of internet bundles and unstable internet connection. Teachers were not ready and willing to bring forth other initiatives to accommodate learners with various levels of learning disabilities. Teachers felt they should be rewarded for the extra effort that they would apply to assist students with learning disabilities.

Of the four students who participated in the interviews only one indicated participation in remote learning at her school using the internet. All respondents pointed out that the Ministry of Education introduced online lessons through its website but this was only for junior secondary school level. Students indicated that one merit of the remote learning programme was that it kept them in school mood. However, the programme faced some challenges. Most secondary school students in rural areas did not have smart phones or laptops to participate in the lessons. Students reported that they did not have adequate skills and knowledge in remote learning and that they did not receive any training.

Since the declaration of COVID-19 as a world pandemic, schools in Malawi have been closed for more than two months. The Ministry of Education (MOE) has carried out several initiatives to ensure that learning is still taking place irrespective of COVID-19 restrictions. The Ministry officials revealed that it is using radio, MOE website and printed modules to reach out to primary and secondary school students. The MOE interacted with some teachers through Skype and WebEx to drill them on the remote teaching programmes.

Ministry officials reported that printed modules from Malawi College of Distance Education (MCDE) are being distributed to some secondary school students. The MOE teaching website has been implemented

in collaboration with two mobile companies (Airtel Malawi and Telecom Networks Malawi). This platform reaches out to junior secondary school students only. The radio programme coordinated by MCDE is largely used for basic education but it also targets junior secondary school students on occasion.

Remote teaching programmes have strengthened the existing bond between Ministry of Education and development partners such as UNICEF, World Bank and mobile companies. The COVID-19 pandemic has led to an extension of the mandate and modification of the content in the curriculum on the part of MCDE, Malawi Institute of Education (MIE) and Directorate of Inspection and Advisory Services (DIAS). This will enhance quality and relevance of education.

The participants revealed that plans are currently underway in the Ministry of Education to construct MCDE satellite centres in all districts in Malawi to promote access to remote learning. The MOE has also secured funding to digitise all content in the secondary school curriculum and load it onto the digital platforms. As this is not enough, there is an opportunity in the Ministry to upgrade MCDE centres by equipping them with radio and television stations.

**Table 4: Mauritius Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 50 – above | PhD |
| | Male | 50 – above | PhD |
| Teacher Educator | Female | 31 – 40 | Currently doing her PhD Teaching at university level |
| | | | |
| Teacher | Female | 31 – 40 | Secondary/BSc and MSc |
| | Male | 21 – 30 | Secondary/BA in Mathematics |
| | Male | 21 – 30 | TVET/ICT qualifications |
| Student (HEIs) | N/A | N/A | N/A |
| | N/A | N/A | N/A |
| Learner | Male | 15 – 20 | Grade 9 |
| | Female | 15 – 20 | Grade 13 |

Eight Mauritian participants were involved in the interviews. Two were Ministry officials, one was a teacher educator, three were teachers, and two were learners. In the wake of the COVID-19 pandemic, the Vice Prime Minister, and Minister of Education of Mauritius believe that the education system of Mauritius should move towards using blended learning, which combines classroom learning with online learning, and building education which is more inclusive and resilient to meet future crises. Recent amendments in the Education Act aim to narrow the digital divide in terms of access to online learning by providing tablets to students who come from underprivileged backgrounds (Ministry of Education, Mauritius, 2020e).

Ministry officials indicated that since 2012 the Open University of Mauritius had offered a blend of online and distance learning, allowing students to 'get exceptional learning experiences in their own time, at home, work or wherever they choose' (Open University of Mauritius, 2020). Furthermore,

during the COVID-19 pandemic, it developed, in collaboration with the Commonwealth of Learning (Canada), a Massive Open Online Course (MOOC) on the introduction of sustainable development in business. With its extensive experience in distance education, the Ministry had sought OUM's advice and consultation in designing guidelines for remote teaching of secondary students during the lockdown period. Teachers were also provided with support and online training on how to use digital platforms such as Microsoft 365 and Zoom for remote teaching.

Furthermore, most courses on teachers' education, including those on pre-primary, primary and secondary education, equipped teachers with ICT skills to be used for instructional purposes within the classroom but not necessarily in remote teaching situations. Both resource persons working in close partnerships with the Ministry of Education agreed that the transition to implementing digital learning solutions had been smooth, as the learning content was already digitalised for classes up to grade 9 in the context of the implementation of the nine years of basic education in 2017. Moreover, they also observed that teachers were generally receptive to implementing digital learning solutions for their students.

Both teachers working at different secondary institutions feel unready for remote teaching and it took them a few weeks to get used to the online platforms they chose to use initially, which were felt to be easy to manipulate.

**Table 5: Namibia Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 41 – 50 | N/A |
| | Female | 50 – above | N/A |
| Teacher Educator | Male | 50 – above | University |
| | Male | 31 – 40 | University |
| Teacher | Female | 41 – 50 | Secondary |
| | Female | 50 – above | Secondary |
| Student (HEIs) | Female | 21 – 30 | University |
| | Female | 21 – 30 | University |
| Learner | Female | 15 – 20 | Grade 11 |
| | Male | 15 – 20 | Grade 12 |

Ten participants participated in the interviews in Namibia. Two were Ministry officials (male and female), two were teacher educators (both males), two teachers (both females), two students (both females) and two learners (male and female). Fifty per cent of each group were based in rural areas and 50% in urban areas. Namibia reported that COVID-19 challenged the teachers to 'navigate and survive in the jungle' of e-learning platforms. Teachers and learners remained engaged in learning activities during lockdown. Some used WhatsApp, others reported using their institution's student portal, and some used Moodle, Google Classroom, Edmodo, Zoom. Participants expressed going through fear and frustration to the point of giving up:

> *I blocked that possibility of e-learning in my mind because I learn better through interactions with people so, since it was stripped from me, I did not even want to continue with my studies,*

*just to discover there are different many other ways that supplement face-to-face learning, so I overcome that fear. I discovered the free Zoom app which was useful for group discussions. I could meet my fellow students on screen, write notes, share ideas in the chatroom and could also meet with our lecturers when we did not understand, and could still hear their tone of voice and see body language through video.*

A teacher educator described her experience in this way:

*I have asked the students to create a WhatsApp group. I have a large group of students of about 521. Students created three WhatsApp groups. I have to audio record my teaching, and post it to the groups. The only challenge I faced with these videos is that there was minimal engagement with the students. My idea was then after the students listened to these recordings, I was expecting students to come up with either questions or seek some clarifications. The engagement was not really encouraging.*

Another teacher lamented her frustration by saying the following:

*You cannot do anything with your smartphone if you do not have electricity. You cannot do anything with your smartphone if you do not have internet connectivity, if you do not have network coverage. That is somehow beyond the power of the teacher or the power of the school.*

In spite of the challenges, participants felt that the pandemic made people realise that education can be disrupted at any time. This situation presented numerous opportunities for the education fraternity to think 'out of the box' and move away from the traditional way of doing things. It was also 'a wakeup call for government to urgently address basic amenities such as provision of electricity, internet and water supply to schools'. One learner commented on the strong bond that was created between parents and their children when it came to their learning. She stated that she believed that if that was the learning culture, learners would pass with flying colours.

Government officials also commented on the challenges they encountered by having to cut the curriculum to 70% of the most critical themes as well as rationalising the assessment activities. They found that most partners were genuine in their offers of assistance to the government, but many had seen this as an opportunity to profit from the emergency:

Everyone thought that they have a solution for e-learning and therefore it was an opportunity for everyone to approach the Ministry through submitting materials to be evaluated even those that were already checked and not at all aligned to the curriculum. Evaluation of the materials is very stressful as well as compiling the report on the outcome of the evaluation. The outbreak became an opportunity for many to make money.

**Table 6: South Africa Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | N/A | N/A | N/A |
| | N/A | N/A | N/A |
| Teacher Educator | Male | 20 – 30 | College |

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| | N/A | N/A | N/A |
| Teacher | Female | 31 – 40 | Secondary |
| | Male | 21 – 30 | Secondary |
| | | | |
| Student (HEIs) | Female | 20 – 30 | University |
| | Female | 20 – 30 | University |
| Learner | Female | 15 – 20 | Grade 11 |
| | Male | 15 – 20 | Grade 12 |

Seven people participated in the interviews in South Africa. No Ministry of Education officials joined and only one teacher educator (male) participated. Teachers and learners from the disadvantaged schools in the rural areas that were interviewed, indicated that teaching and learning stopped for them when schools closed. The teacher said that as much as they desired to continue with teaching, the reality of their learners was that they did not have gadgets to enable access of the education content and those that had gadgets had data struggles. Due to 'no learner should be left behind' they had to stop teaching altogether, as continuing would have left some learners behind.

The learners from the rural schools explained that the lessons delivered on the radio and TV were the only platforms for their learning and that they are now anxious about final exams as they feel that they are at a disadvantage compared to those who could be taught by teachers online. They also expressed frustration at the extension of the lockdown, as they shared textbooks amongst themselves. They said they found themselves breaking the lockdown regulations by travelling to other villages to get the shared textbooks.

A teacher that was able to facilitate teaching and learning during this time said that WhatsApp (voice notes, pictures and texting) was his only tool and it had limitations, however it did at least allow for some engagement and fortunately the school has fewer learners and they were able to provide data where there was an indicated need. In terms of being trained and ready, his response follows:

> *We did not receive specific training but rather we discussed among ourselves as the teachers what methods we would use. We have also kept in constant communication throughout the period and offered each other support and assistance with the use of technology and strategies of how to teach remotely. I was feeling ready in terms of the practical use of technology and devices, but not very confident in terms of how to do remote teaching and ensure that it works well (teaching methods).*

A learner from an affluent school said the school sent work on a daily basis and had assignments and home tests to submit online. She said that she would love for her school to also use tools where they could see each other and all join in and be virtually in the same space:

> *Honestly I see a very tricky future with remote learning for high school learners, as we are used to the classroom environment. For example when in a classroom one asks a question and the answer they get could also help others that also didn't understand but didn't find a way to ask. With remote learning the teacher doesn't know if we all understand.*

Tools that the interviewed students and learners said they used are Blackboard, WhatsApp, Zoom, Telegram and RUconnected. One of the students that used Blackboard said that they had challenges with logging in, courses not appearing and connectivity struggles. Another highlighted the biggest challenge being with turning her 'relaxing space', which is the home environment, into a working environment and having a routine and sticking to it as the school routine is already set, and only needs to be followed. Yet another respondent struggled with home having a lot of activity and people which distracts her from learning. One of the students said:

> *The future for online learning is quite promising taking into account the inequalities, but in terms of what it does for a student it promotes independent learning. It is actually quite useful as in the real world we need to learn to manage our time and be able to work in difficult circumstances/ environments, we still need to be able to produce quality work as we won't always be working under the best circumstances. So it helps us to prepare for the possible challenges in the work place...*

The frustration with not being able to see the other learners in order to measure not only their understanding but also their engagement with the content was another concern. The learners often cited data as a reason for non-responsiveness but there is no way to determine the truth of this.

All the interviewed participants highlighted that their parents had been doing all they possibly could, taking into account their limitations with engaging with the education content. They offered data support and gave learners space in the home to carry on with their school work as well as limited their home chores.

**Table 7: Tanzania Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | N/A | N/A | N/A |
| | N/A | N/A | N/A |
| Teacher Educator | N/A | N/A | N/A |
| | Male | 31 – 40 | University |
| Teacher | Male | 40 – 49 | Secondary |
| | Female | 31 – 40 | Secondary |
| Student (HEIs) | N/A | N/A | N/A |
| | Female | 20 – 30 | University |
| Learner | Male | 15 – 20 | Grade 12 |
| | Male | 15 – 20 | Grade 11 |

Six participants joined in the interviews in Tanzania. The researcher was involved in an accident and could not engage with all the participants in time for the report. Due to this unfortunate situation, no Ministry of Education officials participated, only one teacher educator was interviewed and only one HEI student was interviewed. Two teachers and two learners were interviewed. Based on the findings from the interviews with secondary school teachers and teacher educators, it was found that the teachers

have been exposed to pre-service training in ICT, they have partial knowledge on emergency remote teaching as they admitted to having computer literacy at only a basic level.

> *I have never attended any training concerning the so called COVID-19, the lockdown, etc. The formulation of whatsup (sic) groups could have been relevant if some teachers have been trained and we were shocked when we were told that we need to provide some materials online while we don't know on how to do it. Not all teachers are aware of the computer us' (Secondary school teacher, June, 2020).*

The Tanzania country report reveals that the interviewed teachers stated they lack in-service training on remote learning and that is why for many government schools during the COVID-19 lockdown, there has been no teaching taking place ever since the schools were closed. The same participants reported that there were no in-service programmes that were designed to build teachers' capacities to continue facilitating learning during lockdown. There was a need for the Ministry of Education to design short-course training programmes for capacity building of teachers on how to conduct remote teaching using various platforms such as Zoom.

For those schools which engaged in remote teaching during the lockdown period, particularly private primary and secondary schools, teaching was done in the form of normal presentations through online sessions based on the prepared schemes of work. The type of assessment used has been oral, through questions and answers, and by posting written assignments through the established WhatsApp groups. One of the teachers had the following to say:

> *...I normally send the questions through whatsup (sic) group and when we meet during Zoom meetings we can solve them together (Secondary school Teacher, June, 2020).*

**Table 8: Zambia Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 40 – 50 | N/A |
| | Male | 50 – above | N/A |
| Teacher Educator | Male | 40 – 50 | College |
| | Male | 31 – 40 | University |
| Teacher | Female | 40 – 49 | Secondary |
| | Female | 31 – 40 | Secondary |
| Student (HEIs) | Male | 41 – 50 | University |
| | Female | 20 – 30 | College |
| Learner | Male | 15 – 20 | Grade 12 |
| | Male | 15 - 20 | Grade 11 |

The above table summarises the biographical data of the 10 interviewees from Zambia. Of the teacher educators interviewed in Zambia, one reported that he was trained in remote teaching while the other was not. Both teachers indicated that they had no training in remote teaching, but they all felt ready to conduct remote teaching.

According to the interviewer, teachers and teacher educators mostly sent notes to their students or created slides which they shared via WhatsApp. They also made use of video-conferencing and Zoom where this was possible. Interviewed students also reported that they participated through WhatsApp and Zoom. One of the students did not participate in any remote learning at all. He also indicated that he could not access the radio and television lessons broadcast by the Ministry of Education.

Participants identified the lack of internet connectivity especially in rural areas, expensive data bundles, intermittent supply of electricity and the non-availability of electronic equipment as the most pertinent challenges when it comes to remote teaching. One Zambian teacher who indicated participating in remote learning, stated 'that the continuity of teaching/learning virtually leading to coverage of the course content was a major success. Remote teaching bridged the gap created by the shutting down of school'. One opportunity identified during the pandemic is the possibility of increased access to learning in the rural context through improved mobile networks to these areas. Other opportunities identified during this COVID-19 pandemic are that ERT 'also cuts down on travel costs for learners and we can take advantage of parents who have knowledge of operating mobile gadgets. This would make remote learning thrive' (Zambian teacher, June 2020).

**Table 9: Zimbabwe Demographic Details of Interview Respondents**

| Category of Respondent | Gender | Age | Level of Teaching/Schooling |
|---|---|---|---|
| Ministry Official | Male | 40 – 50 | N/A |
| | Male | 50 – above | N/A |
| Teacher Educator | Female | 40 – 50 | University |
| | Female | 60 – 70 | University |
| Teacher | Male | 40 – 49 | Secondary |
| | Male | 40 – 49 | Secondary |
| Student (HEIs) | Male | 30 – 40 | University |
| | Female | 20 – 30 | University |
| Learner | Female | 15 – 20 | Grade 12 |
| | Female | 13 – 15 | Grade 9 |

Interviews were conducted with 10 Zimbabwean participants. Two were female teacher educators, one is a retired principal of a teacher training institute, and the other continues to work in a local HEI. Two male teachers were interviewed, one from a rural school area and the other from an urban school. A female and a male student were interviewed, both hail from urban HEIs. Finally, two learners were interviewed as well, one from a rural and one from an urban school.

The interview data revealed that teachers in Zimbabwe have different degrees of readiness for emergency remote learning. Some teachers were not prepared at all, neither did they receive any capacity building. Others used the platforms available to them and innovated by using low cost and readily available platforms such as WhatsApp to deliver their lessons. A third group of teachers used high end applications to deliver education and have received some training and support to allow them to do this.

The rural teacher indicated that he found it hard to continue with remote teaching as he felt unprepared and had not received any training. In contrast, the urban teacher reported that parents and learners participated well in the online teaching and counted it as a success. However both reported 'a lack of access to technological tools as a challenge'. Although the students indicated their acceptance of the remote delivery of courses, they bemoaned the poor state of internet access in Zimbabwe. They also had to get used to the idea of studying from home, although they found the support of their parents very comforting.

Both learners interviewed reported being comfortable with the new way of learning, the rural based learner noting that it reduces movement and that the turnaround time on receiving feedback on work submitted was very fast. She, however mentioned experiencing financial and network challenges as well as time constraints due to having to do home chores. She also mentioned challenges related to access to electricity but noted that solar power could address this. She suggested that mobile service providers expand the reach of their networks as a means of mitigating against lack of accessibility. The other learner responded by indicating that she initially struggled with online learning as she found it difficult to concentrate and had some difficulty learning how to use the e-learning platforms. She also noted that Microsoft (MS) Teams proved to be user friendly and allowed for greater engagement with teachers on a more regular basis. Both learners noted that their parents provided financial and moral support while being given time off from chores. One received technical support from her parents who helped her use the platforms, as well as assistance with doing her assignments and homework.

Both participants from the Ministry of Education noted that engaging with teachers has been hard and strenuous especially given the uncertainties surrounding the pandemic, the resistance to the 'back to school campaign' (teacher unions have taken the matter to court and have laid down strict conditions for teacher safety before schools can reopen). They noted that some training of teachers for remote teaching was upset by a failure of some teachers to attend due to fear. The two respondents however, pointed out that the Ministry recorded some successes which included new ministry recruits getting to take part in the COVID-19 response, a strategic plan, a framework for the reopening of schools, and the setting up of a COVID-19 committee which has been at work since the beginning of the lockdown. Similarly, both respondents noted resource challenges such as funding, the fear of the disease and at the same time a failure to take it seriously in some sectors. In terms of opportunities, it was felt that this could bring e-learning to the fore and assist it to reach vulnerable populations. Many partners have come on board to support the Education Sector COVID-19 response and this can result in future partnerships. E-learning materials need to be aligned to the national curriculum and existing syllabi, and to move away from adopting materials from other countries without review.

Overall however, the overwhelming recommendation is to provide more training to educators to allow them to be able to deliver quality education and help them feel more motivated to teach. Such training can be embedded during the teacher training process as the policy environment in Zimbabwe is conducive for this. Government and its partners must put aside the necessary funds and infrastructure to allow this training to take place and these new skills to be utilised no matter where. Training may include materials development, assessment of student work, and understanding the challenges that different groups of students face, particularly women and girls, those in rural areas and those with disabilities.

## 5.3 Online survey results

Four separate online surveys were conducted with 224 participants from nine SACD countries namely: Eswatini, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. The participants surveyed included teacher educators, teachers, students from HEIs as well as learners from high schools.

### 5.3.1 Teacher educators

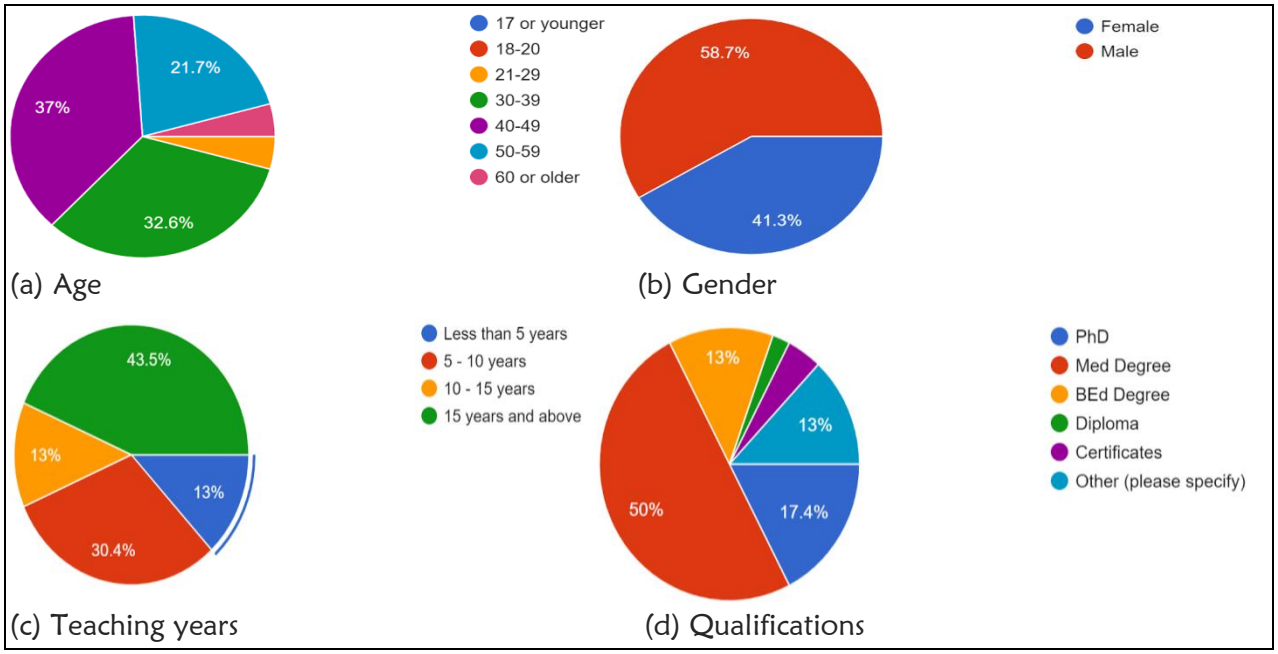



**Figure 1: Demographics of teacher educators**

Forty-five ***teacher educators*** participated in the online survey. Figure 1(b) indicates that 58.7% were male and 41.3% were female. The majority (43.5%, Fig 1(c)) of teacher educators had more than 15 years of teaching experience and have a masters degree in Education (48.9%, Fig. 1(d)).

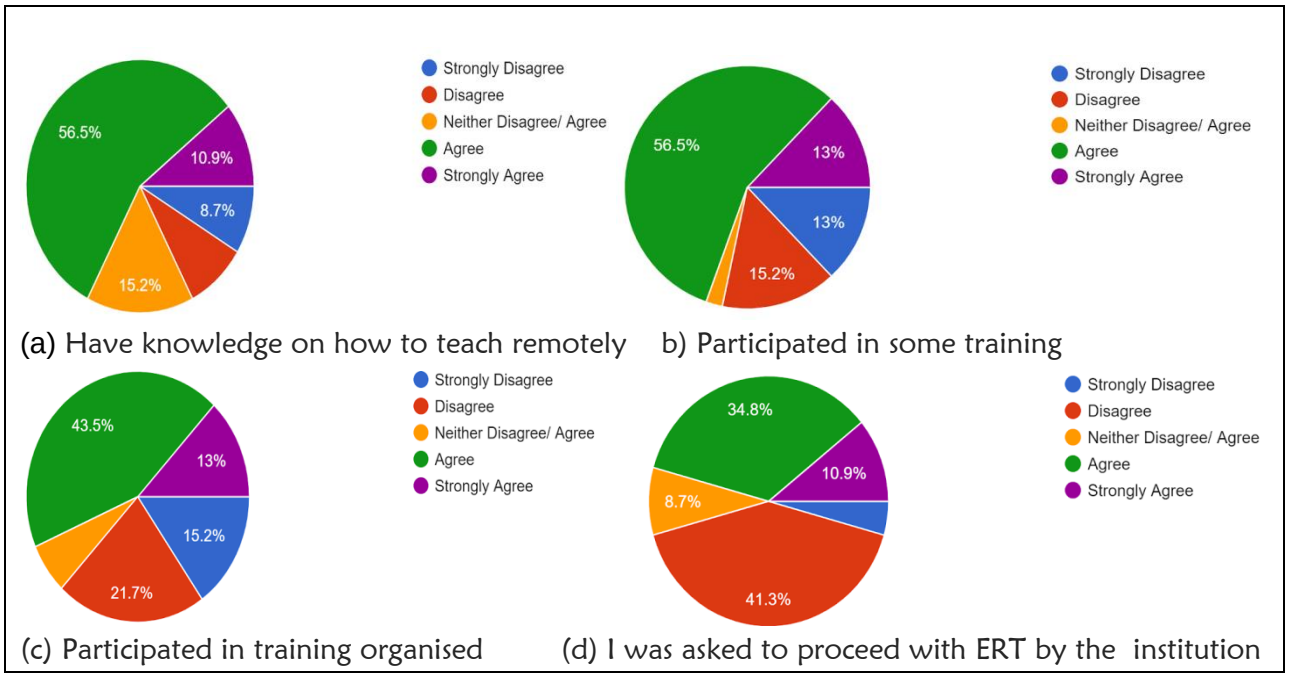



**Figure 2: Teacher educators' knowledge of remote teaching, training received and perceptions of promotion of remote teaching**

Figure 2 shows that teacher educators overwhelmingly agreed/ strongly agreed (56.5% and 10.9% respectively) that they have knowledge on how to teach remotely. A similar percentage indicated that they had participated in some training on remote teaching, and that they had participated in such training organised by their institutions. However, teacher educators were divided in their opinion whether their institutions *promote*d remote teaching (around 45.7% agreed/ strongly agreed vs 45.6% disagreed/ strongly disagreed).

Answering the question on 'proceeding with remote teaching without any capacity building' teacher educators were once again equally divided, with around 45% agreeing and 45% disagreeing. Half of the group felt they were thrown in at the deep end, while the other half felt that their capacity was strengthened before engaging in remote teaching. Teacher educators reported that they are mostly motivated to implement remote teaching, but generally disagreed that their training curriculum equipped teachers to teach remotely.

#### 5.3.1.1 ERT practices

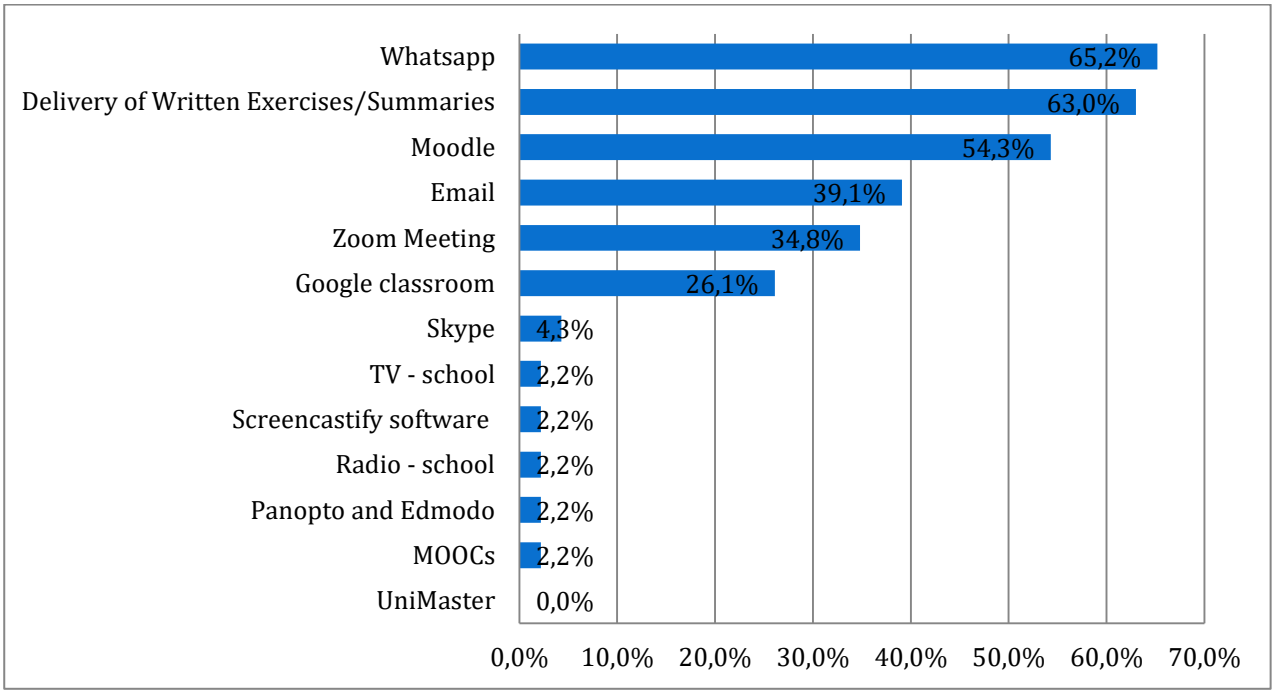



**Figure 3: ERT methods and platforms used**

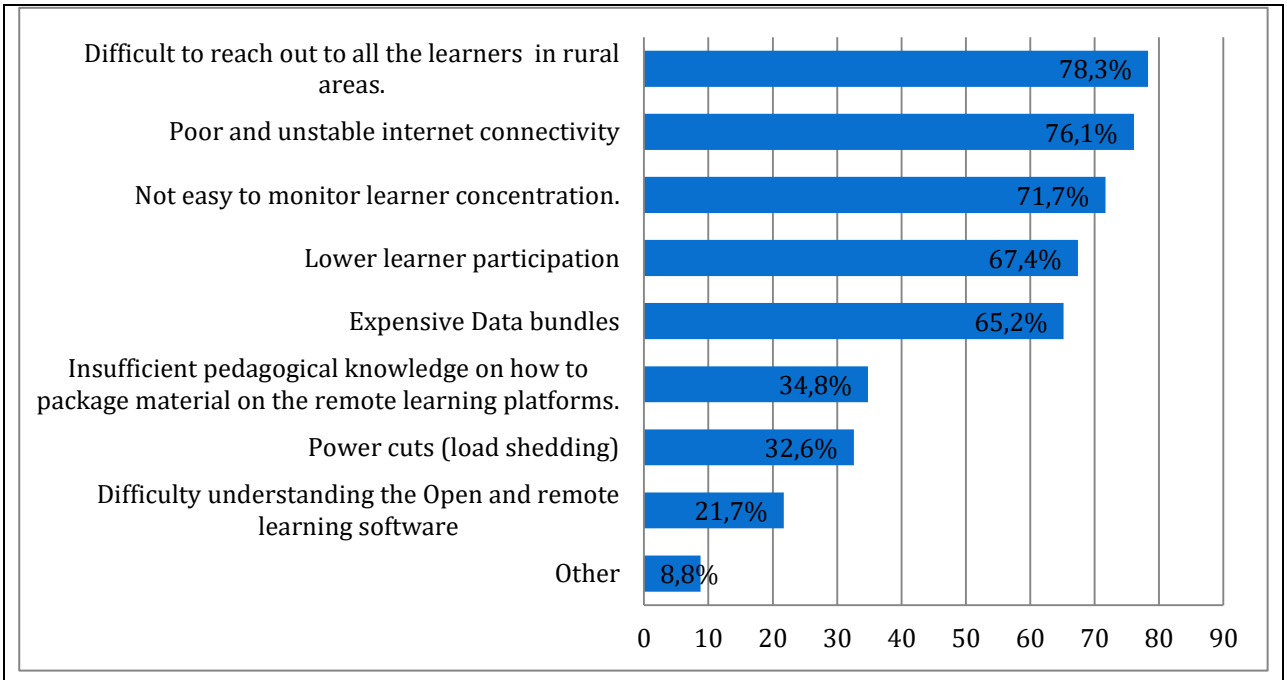
Figure 3 shows that teacher educators involved in remote teaching primarily used written exercises and summaries which they would send to their students via WhatsApp or email. Almost half (54.3%) of teacher educators also made use of the Moodle e-learning platform to engage with their students. Zoom meetings and Google Classroom were used as well but to a lesser extent. The following remote learning platforms were also used:

- Radio and television (4.4% in total)
- Skype (4.3%)
- MOOCs (2.2%)
- Screencastify software (2.2%)
- Panopto and Edmodo (2.2%)

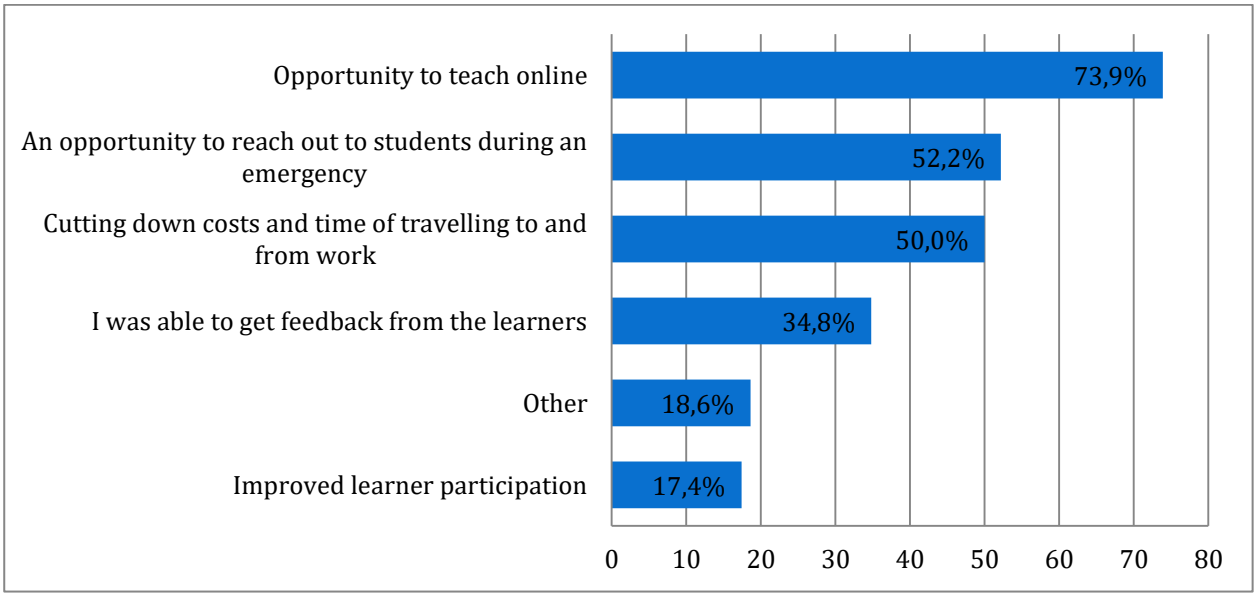
The overwhelming majority of teacher educators reported that they provided their students with teaching materials as well as written exercises (63% and 30.4% respectively). However, they claimed that they did not have easy access to resources with which to reach out to their students. Teacher educators generally felt that they were adequately skilled in offering remote teaching and could present their courses like a classroom lesson, however, they strongly agreed that remote assessments are open to plagiarism (35.6% and 31.1%). A sizeable number of teacher educators also indicated that they were not comfortable with the tools they were using to evaluate their students. However, a slight majority (at 40%) found the evaluation tools suitable for assessment of learning.

Teacher educators agreed quite strongly (68% combined) that assessments should be face-to-face because remote assessments are open to plagiarism (67.7%). Only around 16% disagreed with that statement, while 17.8% did not take a stand on the issue.

#### 5.3.1.2 ERT challenges, successes and opportunities




(a) Challenges experienced in implementing remote-teaching during the COVID-19




(b) Successes implementing remote-teaching during the COVID-19

**Figure 4: Challenges experience in remote teaching**

Figure 4(a) shows the ***challenges*** that teacher educators reported experiencing in providing remote teaching:

- Access to networks and connectivity (76.1%)
- Expensive data bundles (65.2%)
- Difficulty in reaching out to their students (73.8%)
- Learner participation (67.4%)

Although student participation was challenging, the majority of teacher educators were pleased with the feedback they received from the students on their instructional activities. Most of the feedback was received via WhatsApp (71.1%), email (37.8%), Moodle (26.7%), Zoom (22.2%) or Google Classroom (11.1%). Some also received feedback via text messaging. A small number of teacher educators (2.2%) indicated that they did not engage in remote teaching and therefore did not receive any feedback from students.

Figure 4(b) shows the ***successes*** that teacher educators reported during remote teaching:

- Opportunity to reach out to their students (52.2%)
- Opportunity to teach on-line (73.9%)
- Able to get feedback from their students (34.8%)
- Cutting cost on time of travelling to and from work (50%).

#### 5.3.1.3 Teacher educator: Opportunities (free responses)

- The pandemic has created substantial momentum to move towards online teaching and learning. University strategic plans should prioritise equal access to online teaching and assessment for all students.
- The pandemic also created an opportunity for closer collaboration with IT companies. This collaboration could help to make access to internet more widespread, especially in rural areas, and help bring down the cost of data for everyone.
- Electricity supply and load shedding must receive serious attention.
- Advancement in technology is creating a firm platform for teaching and learning to move forward.
- Good time to advocate for training in remote teaching and to educate teachers.

## 5.3.2 Teachers

### 5.3.2.1 Demographics and remote teaching preparation

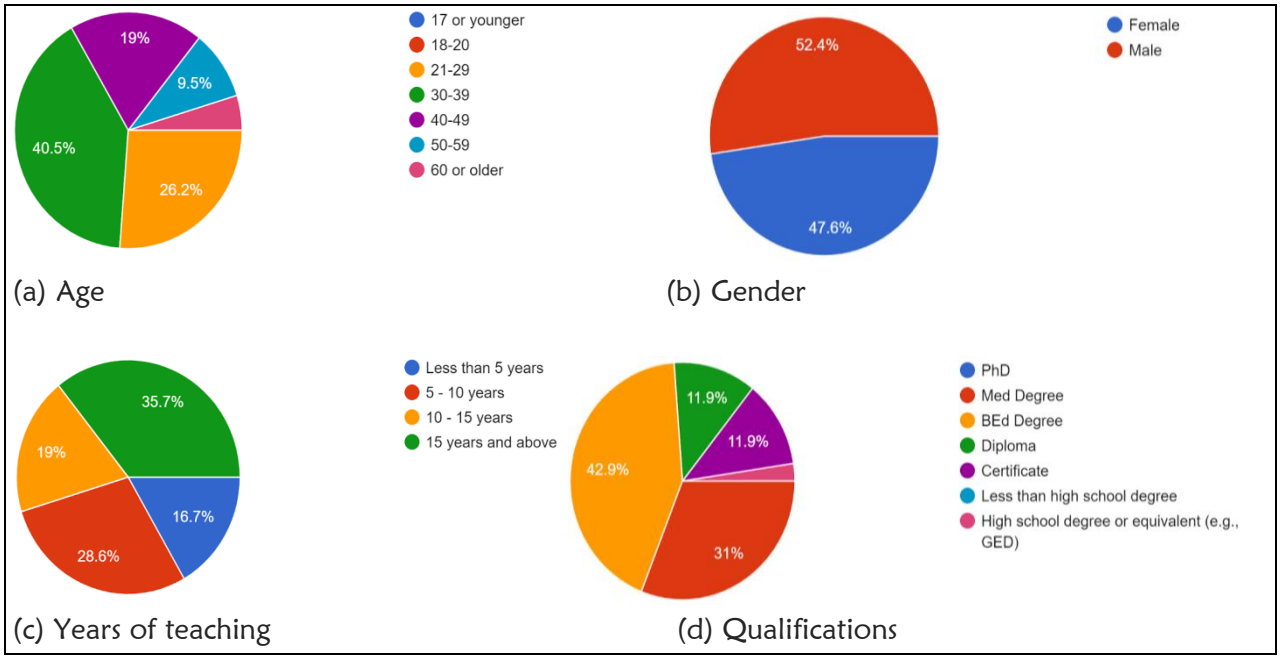



**Figure 5: Demographics of teachers**

Forty-four ***teachers*** both from primary and secondary schools participated in the online survey. Of these, Figure 5(a) shows that 40.5% were in the 30-39 age group, 26.2% were in the 21-29 age group and 19% were 40-49 years old. Only 9.5% were in the 50-59 age group and a fraction were older than 60 years. The respondents were 52.4% male and 47.6% female according to Figure 5(b). The majority were teaching at secondary school level (73.8%). Most respondents had 15 years and more teaching experience, as shown in Figure 5(c), with 28.6% between 5-10 years of experience. Nineteen percent had 10-15 years of teaching experience.

Teachers had mostly obtained a BEd degree (42.9%) with a relatively high number holding a masters degree (31%) as can be seen in Figure 5(d).

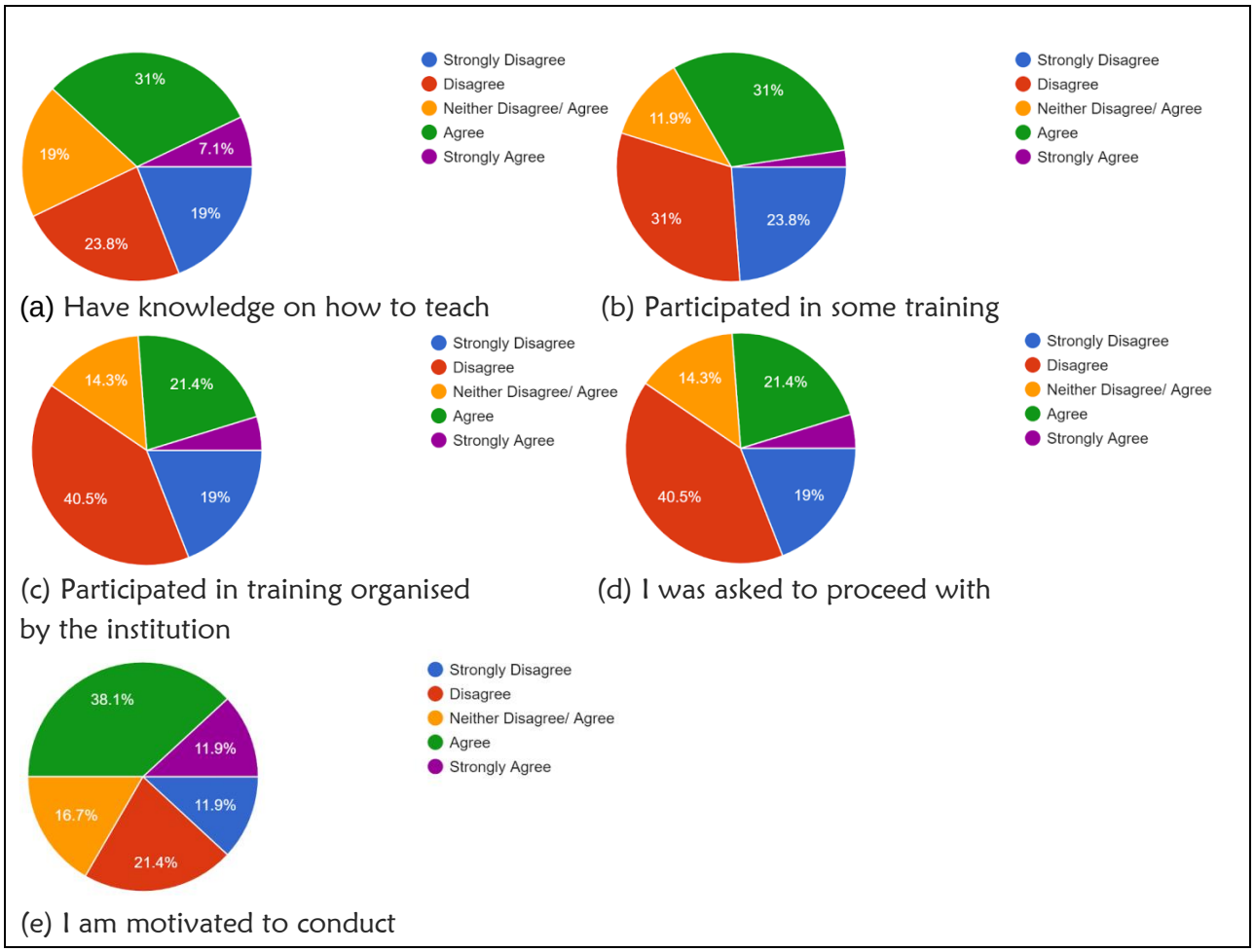



**Figure 6: Teachers' knowledge of remote teaching, training received and perceptions of promotion of remote teaching**

Figure 6(a) and (b) show that the teachers overwhelmingly agreed that they have basic knowledge of teaching remotely, but while a third had participated in some training on remote teaching and learning, more than half (54.8%) had not. From the feedback (Fig. 6c), it appears that a smaller percentage of teachers attended remote teaching preparation organised by their school (26.2%) with the vast majority indicating that their school did not provide such training (almost 60%). The respondents also did not agree that their schools promoted such training or that the teacher education curriculum equipped them with remote teaching skills and competencies. In spite of this, an overwhelming number of teachers (50%) indicated that they are motivated to conduct remote teaching as compared to those who were not (33%, (Fig.6e).

### 5.3.2.2 ERT practices

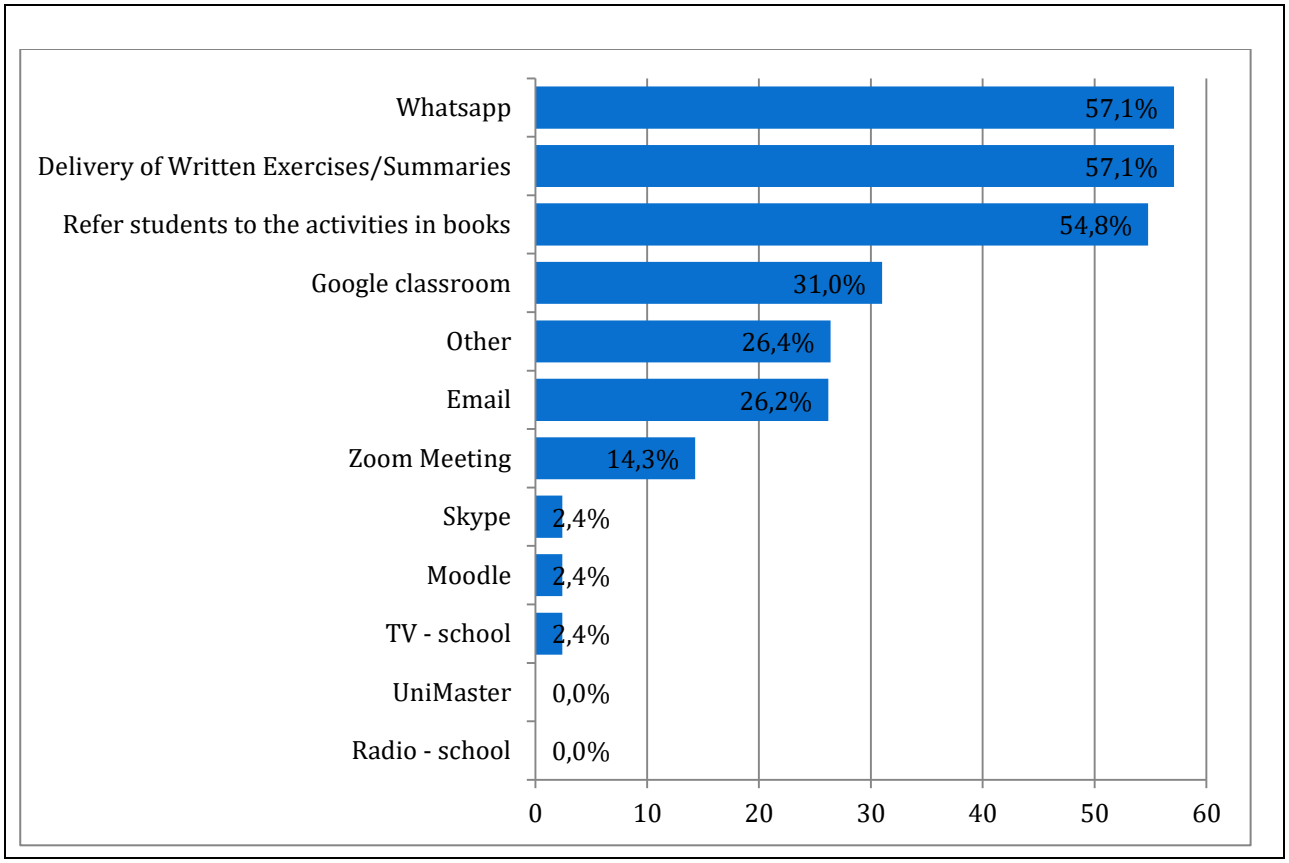



**Figure 7: Remote teaching activities, challenges and successes**

Figure 7 displays the kind of remote teaching activities, challenges and successes that teachers experienced in implementing ERT. Teachers reported that they mostly used summaries (54.8%) and written exercises (57.1%) with their learners. They also made use of WhatsApp (57.1%), Google classroom (31%), email (26.2%), Zoom (14.3%) and Moodle (2.4%). Edmodo, Google Meet and Skype were also used to a lesser extent. Some also reported the use of Siyavula Education that distributes pre-recorded lessons as YouTube videos.

Although the majority of teachers agreed that they have easy access to resources for their learners, a considerable minority (40%) did not agree with the statement. Sixty-seven per cent of teachers indicated that they provided teaching materials to support their learners, and provided them with written exercises.

The majority of teachers felt that they have adequate skills in using remote teaching resources, although a sizeable percentage (40%) did not feel that way. As with the teacher educators, teachers were not happy with the tools used for evaluation of learning and felt strongly that learning assessments should take place face-to-face. They were overwhelmingly in agreement that remote assessments are open to plagiarism.

### 5.3.2.3 ERT challenges, successes and opportunities.

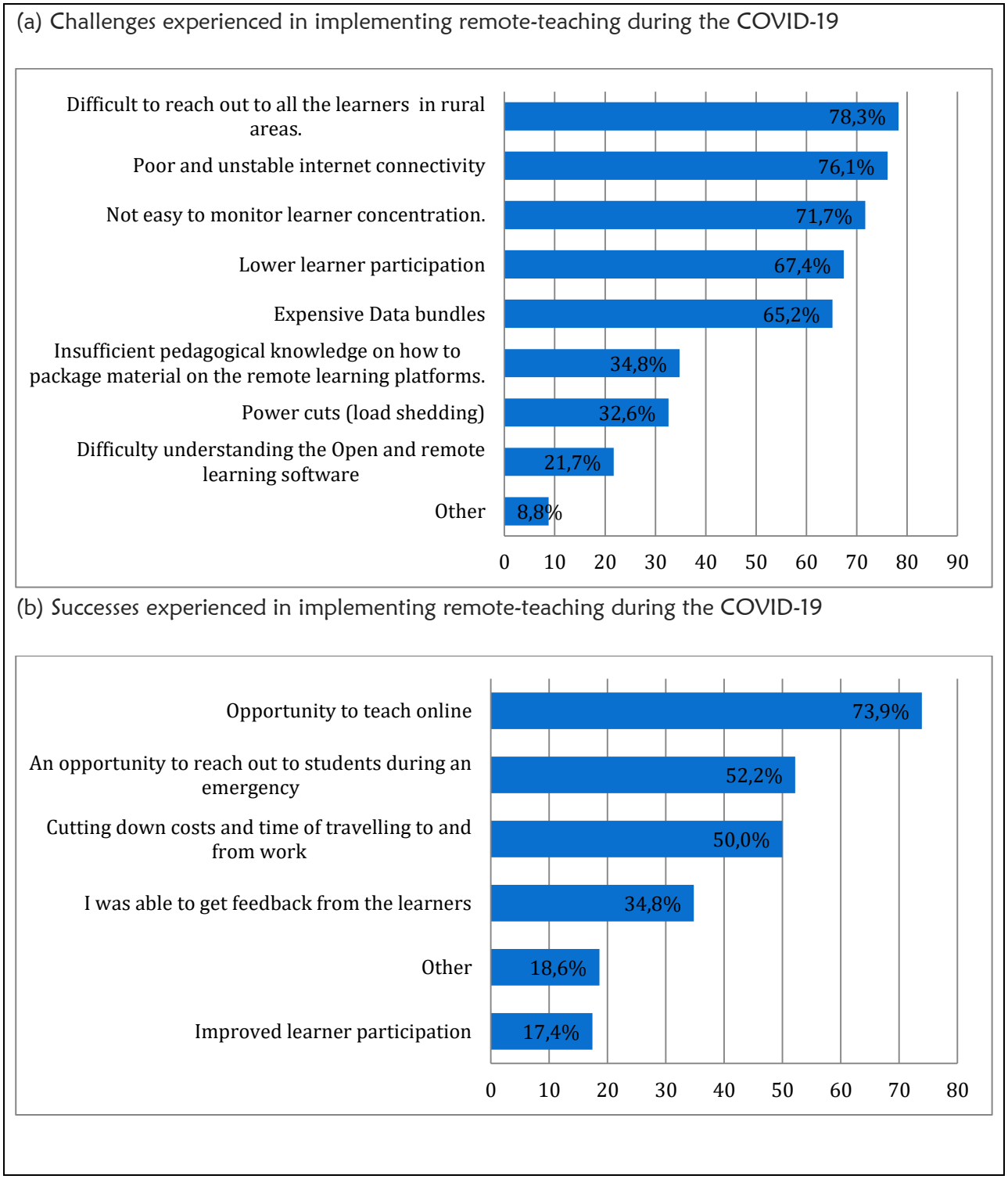



**Figure 8: Teachers' challenges and successes with ERT**

Figure 8 shows the responses from teachers on their challenges and successes with ERT.

**Challenges**

Teachers reported the following as the ***challenges*** they were experiencing:

- Poor, unstable internet connectivity (76.1%)
- Not easy to monitor learning (71.7%)
- Difficulty in reaching out to all the learners (67.4%)
- Expense of data (65.2%)
- Insufficient pedagogical knowledge on how to package material on remote learning platforms (34.8%)
- Difficulty understanding the open and remote learning resources (21.7%).

Other challenges mentioned are 'not knowing what the learners are feeling', 'assessment formats that are not reliable' and a 'lack of motivation on the part of the learners'.

Learner participation in remote teaching activities was also challenging for teachers. Only 31% agreed that learners actively participated, while 37% strongly disagreed. Less than half (47.6%) of teachers agreed that they received feedback on the teaching and learning activities given to students. They reported that they received feedback in the following ways:

- Hardcopies (19%)
- Email (23.8%)
- WhatsApp (64.3%)
- Google classroom (31%)
- Zoom meeting (11.9%)
- Google Meet (2.4%)
- Face to face (2.4%)

**Successes**

As shown in Figure 8(b) teachers reported the following as their **successes** during remote teaching:

- Opportunity to teach on-line (73.9%)
- Opportunity to reach out to their students (52.2%)
- Able to get feedback from their students (34.8%)
- Cutting cost on time of travelling to and from work (50.0%)

**Opportunities (free responses)**

In addition, teachers identified the following opportunities

- Good opportunity to advocate for online learning, provision of IT equipment, electricity at all schools, cheaper internet bundles, connectivity
- Good time to cement parental support for learners
- Remote teaching and learning training for teachers, learners and parents

- Access to relevant online resources and teaching materials appropriate to each country's curriculum.

### 5.3.3 Higher Education Institution (HEI) Students

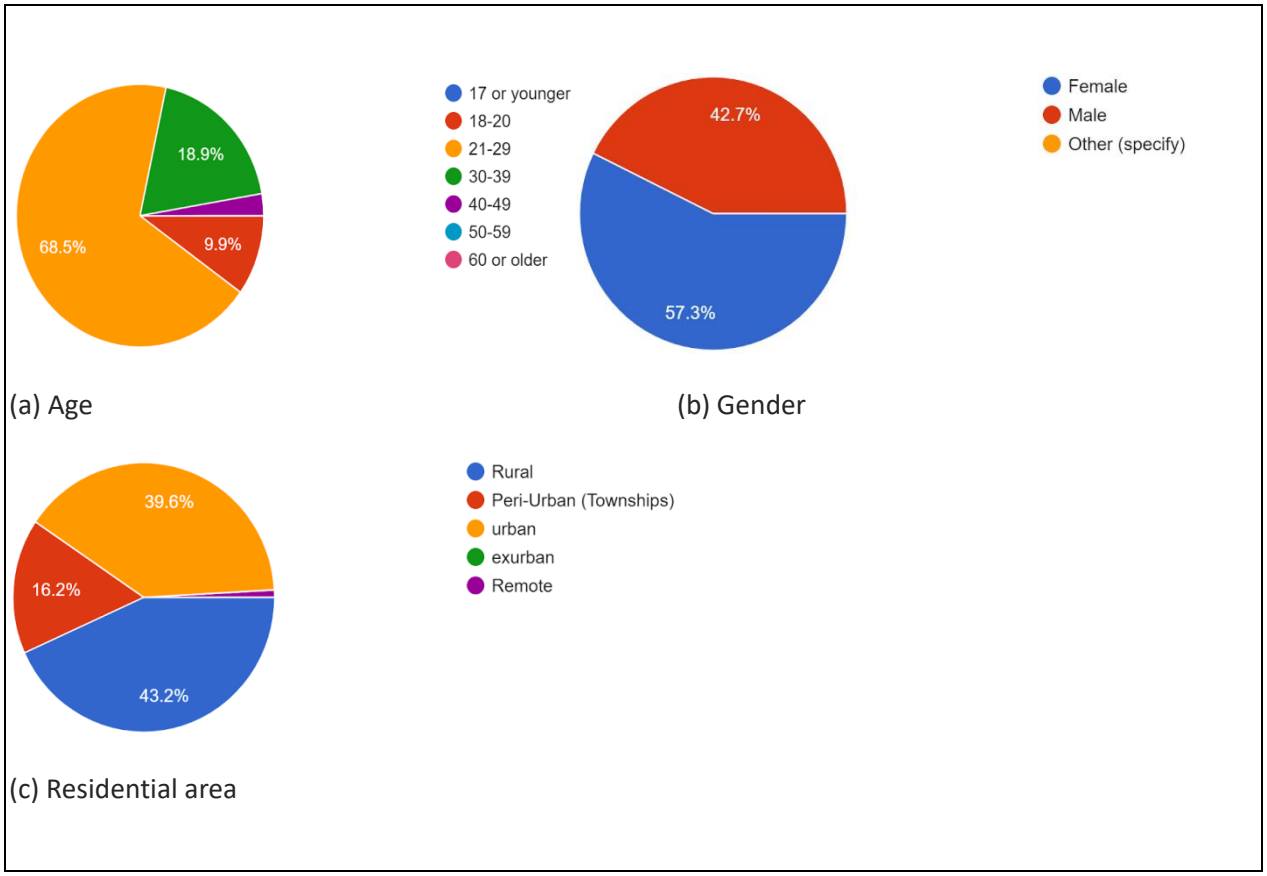



**Figure 9: Demographics of HEI students**

A total of 114 HEI students from selected SADC countries (Eswatini, RSA, Namibia, Zambia, Mozambique, Tanzania, Zimbabwe, Mauritius, Malawi and Botswana) gave their consent to participate in the study while one student refused consent. According to Figure 9, of 114 students who participated in the study, 57.3% were females while 42.7% were males. Participants' ages were between 18-20 years (9.9%); 21-29 years (68.5%) and 18.9% falling between 30-39 years of age. In terms of the residential areas of participants, 43.2% were living in rural areas, 39.6% in urban areas, and 16.2% lived in peri-urban (township) areas. The majority of students (67.6%) were studying at universities, while 32.4% were at colleges.

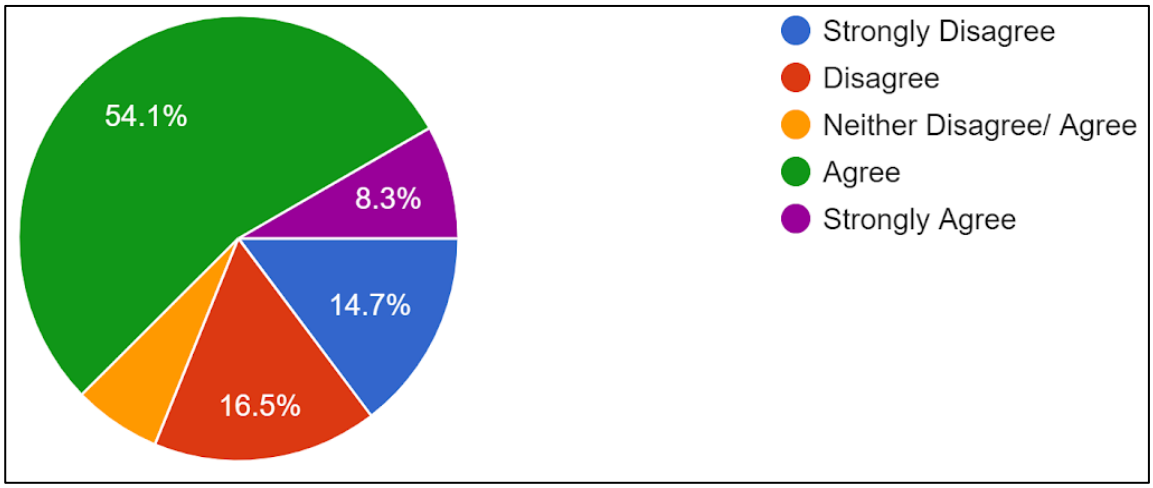



**Figure 10: Learning support received**

Figure 10 shows that 62.4% of students agreed that they received learning support from their institutions during the COVID-19 disruption, 14.7% strongly disagreed and 16.5% disagreed. Zoom, WhatsApp, Moodle and Google Classroom were the top three platforms used for remote learning at selected SADC universities and colleges.

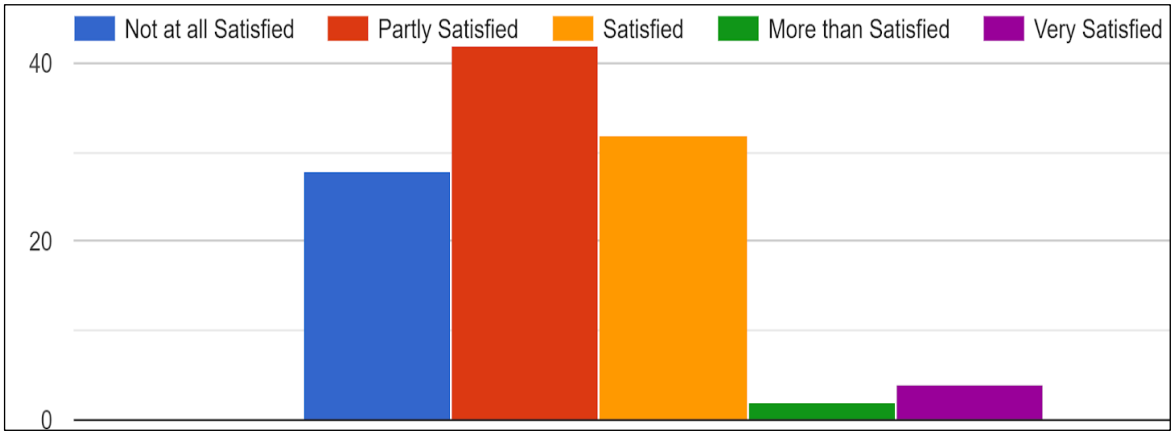



**Figure 11: Level of Interaction with lecturers**

The majority of students were partly satisfied with the level of interaction with their lecturers using the various platforms, as indicated in Figure 11.

When students were asked if they find it easy to access the remote learning platforms which their university or college was using, 42.3% agreed, 8.1% strongly agreed, 29.7% disagreed and 18% neither disagreed nor agreed. Surprisingly, when asked how often they participate in remote learning activities, 82% said they took part sometimes, while 11.7% indicated that they did not participate at all. Further evidence on how students received feedback from their lecturers during remote learning indicated that WhatsApp, Email, Zoom Meeting and Moodle were the most popular tools used in providing the feedback as shown in Figure 12.

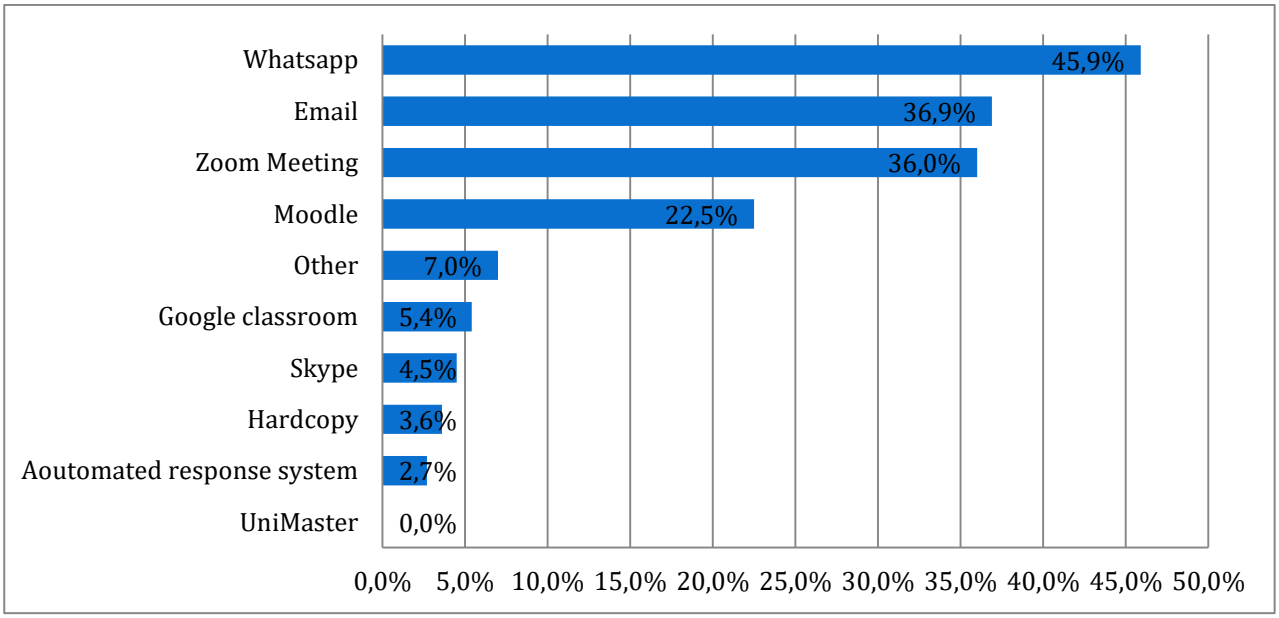



**Figure 12: Tools for feedback**

Finally, only 38.7% of the students who participated indicated that they were motivated to participate in remote learning.

### 5.3.4 High School Learners

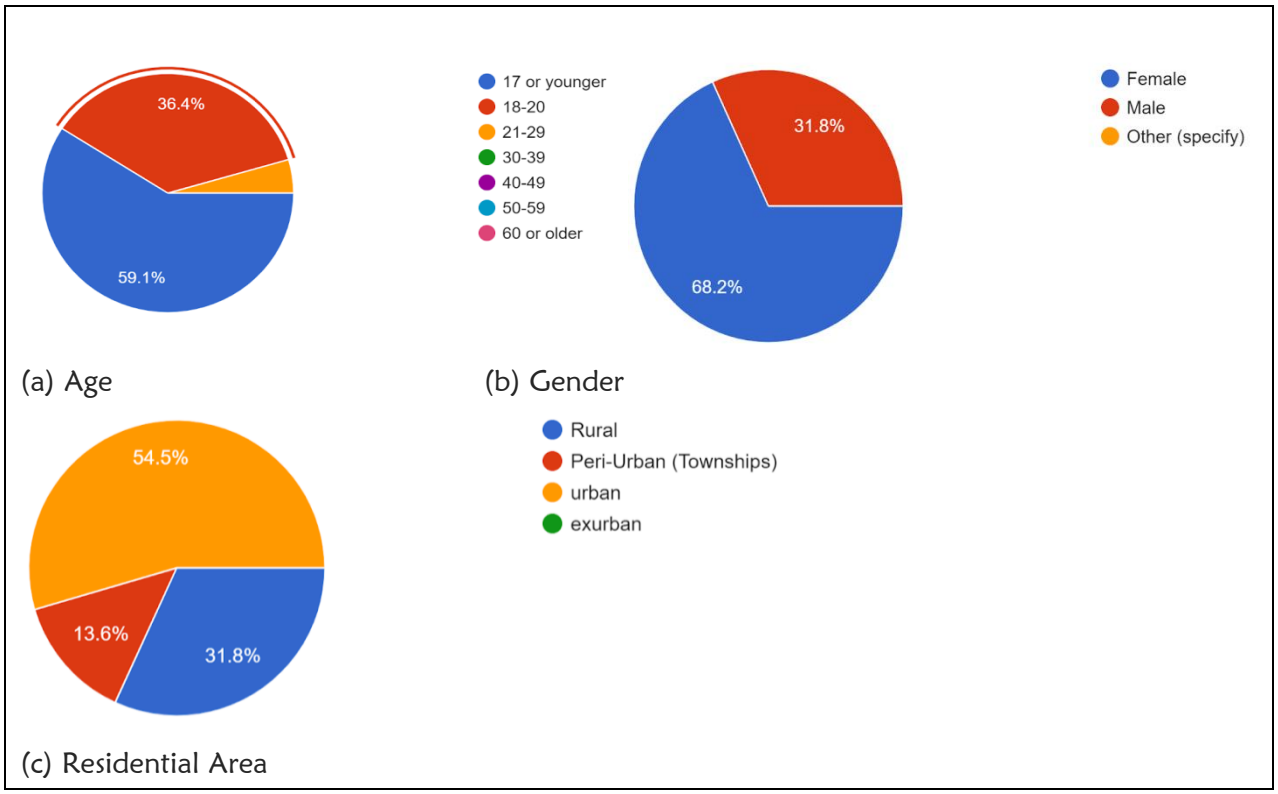



**Figure 13: Demographics of high school learners**

A total of 22 learners in grades 10-12 from selected SADC countries (Eswatini, RSA, Namibia, Zambia, Mozambique, Tanzania, Zimbabwe, Mauritius, Malawi and Botswana) participated in the study. Figure 13 shows that of the 22 learners who participated in the study, 68.2% were female while 31.8% were male. Participants aged 17 or younger constituted 59.1% of the sample, while 36.4% were between 18-20 years old. In terms of residential areas of participants, 54.5% came from urban areas, 31.8% were living in rural areas and 13.6% lived in peri-urban (township) areas.

The majority of learners (45.5%) agreed that they have received learning support from their school during the COVID-19 disruption, while 31.8% disagreed and 18.2% could neither disagree or agree. WhatsApp, Google Classroom, and Zoom were the top three methods of remote learning used at selected schools. Overall, the majority of learners were not satisfied with the level of interaction with their teachers on the various platforms, as shown in Figure 14.

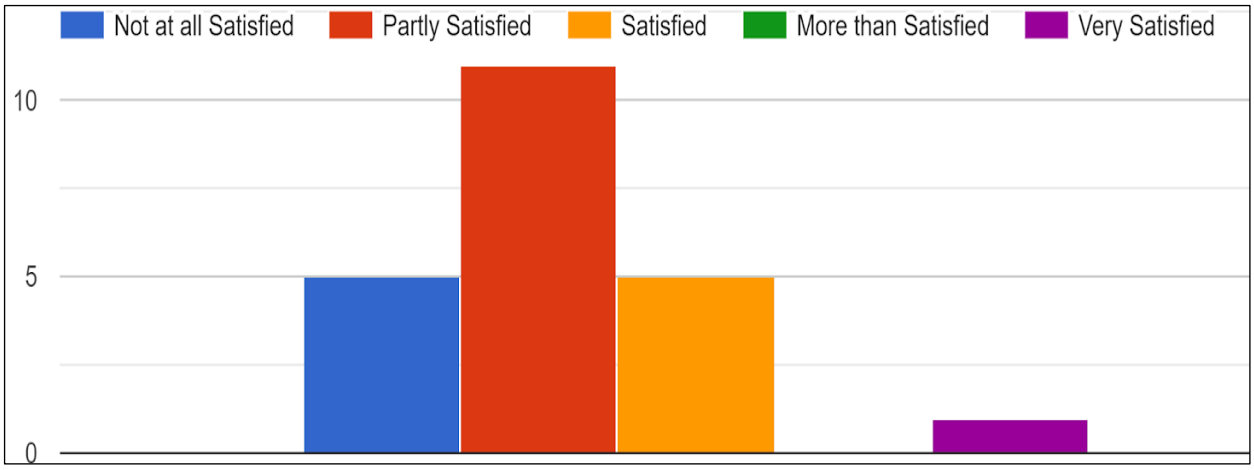



**Figure 14: Level of interaction with school teachers**

When asked if they (learners) agreed that they find it easy to access the remote learning platforms which their school was using, 54.5% disagreed, 18.2% strongly disagreed, 13.6% agreed and 9.1% neither disagreed nor agreed. This could explain why the majority were not satisfied with their level of interaction with their teachers. Surprisingly, when asked how often they participated in remote learning activities, 72.7% said they took part sometimes, while 22.7% indicated that they did not participate at all. Further evidence on how learners received feedback from their teachers during remote learning indicated that WhatsApp, Google Classroom, and Zoom were the popular tools used in providing the feedback. Finally, only 50% of the learners in the sample indicated that they were motivated to participate in remote learning, as can be seen in Figure 15.

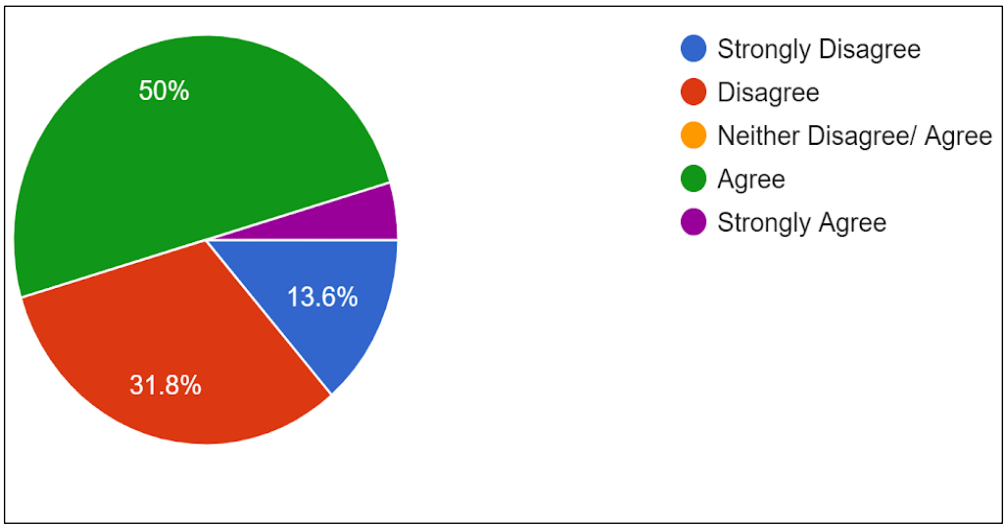



**Figure 15: Motivated to participate in remote learning**

# 6 Findings, Conclusions and Recommendations

To answer the question on the readiness of teachers for emergency remote teaching, this study collected data from teacher educators, teachers, students in HEIs and learners in high school. The study aimed particularly at understanding the pre- and in-service training that teachers received which built their competencies for remote teaching. It also explored the remote teaching practices that teachers and teacher educators used during the COVID-19 lockdown period, and the challenges, successes and opportunities they experienced with remote teaching. HEI students and learners also participated in the study in an effort to understand their experiences and participation in emergency remote learning.

## 6.1 Findings

### 6.1.1 Remote teaching preparation and training

#### 6.1.1.1 Teacher educators

Teacher educators reported having knowledge of remote teaching and having had some access to ERT training and capacity building through their universities. However, as reported by Zambia, this was more to support the distance education students and not necessarily aimed at teaching in emergency situations. However, most countries reported that their HEI staff received some form of capacity building to facilitate remote teaching during the COVID-19 pandemic, in particular to use online e-learning platforms such as Moodle, Microsoft Teams, Zoom, Google Meet, Skype, Microsoft 365, Panopto, and ICDL training. However, it should be noted that this was not the case for all participating SADC countries, notably Eswatini and Tanzania.

Teacher educators also had no problem accessing learning content, as most of their teaching materials were already in digitised formats, either through PowerPoint slides, summaries of learning content and assignments, voice notes, videos, learning content uploaded on e-learning platforms such as Moodle.

The majority of teacher educators were not comfortable with the tools used for remote assessment and felt that students plagiarised and cheated on the assessments. This brings into question the legitimacy and the quality of the qualifications that students will receive, as viewed by teacher educators.

Training for teacher educators appears to be focused on human, technological, content and equipment readiness. No training seemed to be forthcoming for psychological and sociological support to their students, their parents or even to staff themselves. As Mafenya (2013) stated, the failure or success of the shift from traditional face-to-face teaching and learning to ERT is highly dependent on ensuring that teachers and their learners are also psychologically and sociologically ready.

#### 6.1.1.2 Teachers

In times of pandemics such as COVID-19, governments have practically no time to provide training on ERT to their teachers as can be seen from countries that participated in the study as per Table 1. Evidence shows that when the emergency started, schools were shut down almost immediately. This made training almost impossible. Teachers' fear of the pandemic also contributed to their reluctance to be trained in ERT. The unequal distribution of teaching equipment, internet and connectivity, the rural/urban divide, the gaps between the rich and the poor, all affected the possibilities of training and quality ERT provision across the board. Countries such as South Africa indicated that the education system has been suffering from these inequalities long before COVID-19, and that the epidemic exacerbated the socio-economic divide. Many teachers in countries such as Eswatini, Tanzania and South Africa realised that the greater impact of the pandemic was on poor, rural learners, and were reluctant to participate in ERT as they did not want 'to leave any learner behind'.

However, findings indicated that ERT was provided in most participating countries using different means such as online lessons, radio, television, printed materials, and or blended learning packages. Teachers had to find fast solutions to shift their 'normal' instructional mode of delivery to a temporary method of providing education in a quick and trustworthy way. It might not have been the perfect way, but teachers tried their best to adjust to the 'new jungle' of ERT. As they acknowledged, navigating in the 'new jungle' was not for everyone. Some had to move without a compass and learn as they go along, either using their previous experience with technology or by reaching out to colleagues for assistance. Others, however, preferred to stay away and wait for the compass instructor to direct them on how to navigate in the 'new jungle'. Once again, the psychological impact of this shift to ERT on teachers is not known, but it is clear from interview reports that teachers were affected on this level and that socio-economic issues such as the lack of access to internet, electricity, connectivity and basic training, as well as fear of the pandemic, impacted on their motivational levels. The researchers reported that the Mauritian government consistently sent out communiques to teachers to provide psychological support, which did not happen in most other SADC countries.

#### 6.1.1.3 Students/learners

No country reports indicated any targeted training in remote learning for students and learners. Students in HEIs seemed to rely more on their experience with online learning activities at their training institutions. High school learners often did not have such experiences. It is well known that the vast majority of Africa's youth live in rural or township areas. These areas are the most vulnerable when it comes to educational services, infrastructure and equipment for education provision. The country

reports consistently revealed the struggles students and learners had to access the basic tools for remote learning, such as electronic equipment, internet access and connectivity, and that they were hampered by excessive costs of data bundles, unstable or no electricity supply, teachers who were not available. Those who could access ERT were generally from urban areas, had access to internet and connectivity, were often from private schools or well-endowed institutions and had parents who could afford to provide them with the financial support they needed. It once again became clear, that there was no psycho-social support for most learners across the participating countries. The country reports revealed that learners felt anxious, even fearful, and tried to block the idea of ERT from their minds. Others reported the fear of feeling left behind. Students and learners felt supported by their parents, but were dissatisfied by the support and interaction provided by their teachers. They also struggled with the idea of studying from home, either viewing their homes as places where they would rest, or having too many people in their homes to be conducive to study. All of this indicates that students and learners are in need of psycho-social support by their teachers and other professionals to adjust their mindsets and attitudes towards ERT.

### 6.1.2 ERT practices

Ministry officials report that the Ministries of Education carried out several initiatives to ensure continued teaching and learning. These initiatives ranged from making hardcopy learning materials available to learners, to creating online sites where e-learning resources were deposited. Radio and television broadcasts of lessons were popular means of making learning accessible during this pandemic. Ministries often collaborated with global partners, such as UNICEF, World Bank, UNESCO, GPE and mobile and other private sector companies, to provide ERT in their respective countries. Some Ministries secured funding to digitise their curriculum content, to train their teachers in ERT and to create digital centres and platforms. Ministries also had to guard against unscrupulous profiteers who saw the pandemic as an opportunity to profit. The profiteers would offer digital learning content not aligned to the school curriculum at exorbitant cost. Ministries had to go through massive amounts of learning materials that these companies offered, and it took a lot of their valuable time to do the evaluations. Ministry officials also described how their efforts to train teachers for ERT were met with resistance, as teachers fear the disease or are influenced by teachers' unions not to go back to school since schools are deemed unsafe places for teachers.

Teachers and teacher educators reported that they were ready to implement and support remote learning. However, there are a number of challenges which they are facing. Other than not receiving adequate training for ERT, access to e-learning gadgets, the internet and connectivity were often raised as the most pertinent challenges. This was especially true for those living in rural and township areas. Some teachers and teacher educators felt an ethical responsibility not to continue with online teaching as it would leave some learners and students behind simply because they are poor and have no access to e-learning in rural areas. Teachers described making use of WhatsApp, to send summaries of learning content to their learners, notes and PowerPoint slides to their students, some also including voice notes and videoclips. Participants felt this is an opportune time to address the challenges by making ERT a permanent feature of both pre and in-service teacher training and to 'bring e-learning to the fore and allow it to reach vulnerable populations'. However, e-learning needs to be aligned to the national curriculum and existing syllabi, and countries in SADC should move away from adopting materials from other countries without aligning these to local curricula. They also suggested that the policy

environment is conducive to advocating for quality e-learning which will help to close the educational quality gaps. This could also address the plight of women, girls and people with disabilities, especially in rural areas.

Students and learners reported having limited access to the internet, with internet bundles too expensive and connectivity remaining a major challenge especially in rural areas. This negatively affected their participation in online learning. Some also reported the fear and frustration they felt when teaching and learning was moved online. It impacted them on a psychological level to the extent that they did not feel motivated to participate in remote learning activities. Although governments made lessons available by radio, television and on websites, many could not access these due to no or intermittent electricity supply. Many felt ill-prepared for online learning because they received no training, felt that the modes of delivery were not interactive, teachers did not abide by agreed schedules; they felt fearful and frustrated and just wanted to give up. Others reported being forced to break the lockdown rules and walk to their classmates' homes to fetch textbooks they had to share. Rural and poverty-stricken learners felt trapped, and that they are at a disadvantage compared to learners who could continue their learning online.

However, if remote teaching and learning is done right, it can bridge the gap created by poverty and social injustice, provide opportunity for quality learning at a lower cost than what governments pay for face-to-face learning. It can give all learners access to quality teachers and learning resources through online modes of delivery. Parents also seem to be more supportive and involved with their children's learning by buying smartphones and laptops, making funds available for data bundles, relieving children of home chores. Some parents provide technical support for their children and assisted with homework assignments.

Some learners reported sharing textbooks and breaking lockdown rules to visit classmates to get hold of the shared textbooks. Remote teaching practices were hindered by limited access to IT equipment such as laptop computers and smartphones, internet and connectivity, and electricity. WhatsAapp was by far the most popular remote learning platform used by both teachers and teacher educators, even those who had classes of more than 500 students as reported by Namibia.

#### 6.1.2.1 ERT challenges, successes and opportunities

National taskforces created opportunity for coordinated action to make remote teaching a reality. The need for online teaching can address the pre-pandemic technology divide by highlighting the demand for access to electricity, sanitation, IT equipment and resources, and appropriate training. Teachers and teacher educators reported successes in terms of their ability to reach out to their students, to teach online, to work from home thereby saving time and cutting on travel costs, challenging themselves to facilitate online teaching, having a lot more interaction with their students/learners and communicating more with parents than under normal circumstances.

This study has also shown that online classes rely heavily on self-motivation, self-discipline and ability for effective written communication among different stakeholders especially the government, teachers and the learners. Though there have been arguments related to poor ICT infrastructure in most SADC countries, in general online classes are less expensive than regular school programmes especially if the initial investment in ICT is put in place. The literature search indicated that online schools and

universities have gained a lot of interest over the past 10 years. In higher education, especially universities, the prospect of a 'virtual campus' in which students communicate, study and work together with each other and with teachers from different locations, brings both challenges and opportunities. The argument for a virtual secondary and primary school has also been strengthened by the findings on ERT.

From this study it is noted that if public education is to be opened up to new forms of learning, the fundamental challenge is to ensure that both quality and academic integrity of the programmes that are offered are enhanced. Though different scenarios were explored in the regional study, what was clear was that virtual education mostly implied provision of instruction in a learning environment where teacher and student are separated by time or space, or both, and the teacher provides the prescribed school content through the use of methods such as multimedia and other available platforms. In all these, issues related to quality, equity and cost effectiveness needed to be central and integrated.

Enormous opportunities were also encountered. A virtual classroom provides for live teacher instruction and feedback online that enables real-time voice interaction, whiteboard sharing, and breakout sessions to enhance the learning experience for learners. This provides learners an opportunity to interact with the teacher as well as classmates by oral and written communication. Use of this was not widespread but it remains an opportunity to be exploited, especially in the provision of education in an emergency such as the current COVID-19 pandemic. Further, virtual classrooms provide an opportunity for social networking. Virtual classrooms promote increased social interaction, learner-centred instruction and highlight the need for a problem-solving curriculum. The ERT equally highlights practical implications which need to be considered, such as a shift from teacher-centred to learner-centred systems of learning. There is therefore the need for a recommitment to creating an ideal learning environment for learners, employing new technologies to address variances from the ideal normal classroom situation. The most important implication for teachers is a shift from traditional to new roles and classroom responsibilities. The transition from teacher to facilitator might not happen overnight and must be supported by organised and professional commitment.

There are many advantages to using other modes of teaching especially in emergencies, as learnt from the study on ERT. Compared to traditional classroom settings, virtual learning is a better option for many schools. Depending on the self-discipline, pace of learning and style and motivation of an individual, an online education could easily provide a more effective learning experience than attending classes in the traditional model of teacher interface. Learners, as witnessed from most of the SADC countries, learn from anywhere, even from the comfort of their homes, in most cases saving countless hours of transit to get to different schools. Clearly, despite some challenges highlighted in this study, virtual learning is sometimes extremely flexible allowing learners to learn when they want to do so.

## 6.2 Conclusions

Despite the fact that teaching and learning did not come to a complete standstill, the COVID-19 outbreak has severely disrupted teaching and learning at all levels of schooling. Evidence drawn from this research clearly indicated that some learners, students, teachers and teacher educators could not navigate 'the jungle' or enter 'a brave new world' of online teaching and learning due to unaffordability of data and unavailability of internet connectivity and network coverage, including a lack of access to

basic amenities such as electricity and clean, running water. Like most countries around the globe, national governments of SADC member states did what they could under very difficult situations by issuing directives and regulations regarding teaching and learning during the pandemic. In the final analysis, the COVID-19 pandemic became a valuable lesson to SADC nations to ensure that the inequalities in education provision are addressed as a matter of urgency. Current advances in technology provide the means to do so. This pandemic made us realise how connected we all are to the global world and to each other. How our governments manage the future of their citizens will require a global worldview. 'Planetary perspectives will become essential for personal and societal health' (Joyce, Wolf, et al., 1993). Unless we substantially reform the ways in which we conduct education, the demands of the global world will remain out of the reach of most African and SADC youth, and the social tragedies of our cities and rural areas will deepen. Moral purpose must drive our efforts to create an educational culture that will be better for all of us and our children.

## 6.3 Recommendations

1. National COVID-19 taskforces to remain in place to ensure partnerships and coordinated action address emergency remote teaching and learning, and specifically issues of access to IT equipment such as laptop computers and smartphones, easy access to internet and connectivity (zero-rated data for education), access to electricity, health and sanitation standards (as a common good) for all schools and training institutions among others.
2. University/college strategic plans to include emergency remote teaching planning, training, and implementation as part of the normal training curriculum. The training should include psycho-social support and care for their students/learners.
3. Regular coordinated in-service training for all teachers and school managers on emergency remote teaching and learning (with a focus on online assessment and evaluation tools). This is important to ensure the legitimacy of remote teaching and learning qualifications.
4. Coordinated development of up-to-date, innovative and relevant learning materials across the whole education sector.
5. Equal access to learning materials and model television and radio lessons for all teachers, learners and their parents.
6. Clear, direct, swift and coordinated actions after the pandemic to build more equitable, sustainable and inclusive schools/HEIs that will be more resilient in the face of crises.
7. Draw real lessons and experiences from countries that could successfully deliver education even during emergencies, and make these widely known throughout the region.
8. Adopt and support decentralised models of delivery of education in emergencies which should involve bottom-up consultations on finding solutions for education delivery during crises.
9. There is need for a regional framework and strategy for provision of education during emergencies similar to those being developed on Teacher Professional Standards and Continuing Professional Development.
10. Parents were not surveyed in this research, but reports from students and teachers indicate that parents should also receive remote teaching training in order to better understand how to support their children.

11. All training should also focus on helping teachers and learners to build psycho-social competencies that will help them to cope during times of crisis, and to motivate them to continue with the academic project.

# References


ADEA. (2020). *Delivering education at home in African member states amid Covid-19 pandemic: Country status report*. Abidjan. Association for the Development of Education in Africa (ADEA). Retrieved 29 May 2020, from http://www.adeanet.org/sites/default/files/report_education_at_home_covid-19.pdf

Aguilar E (2013) *Instructional Coaching. How Coaching Can Impact Teachers, Principals, and Students. Edutopia March 25.* Retrieved from: www.edutopia.org/blog/coaching-impact-teachers-principals-students-elena-aguilar

Albornoz, F, Anauati, M, Furman, M, Luzuriaga, M, Podestá, M and Taylor, I (2017) *Training to teach science: experimental evidence from Argentina*. CREDIT Research Paper No. 17/08. Retrieved from: www.nottingham.ac.uk/credit/documents/papers/2017/17-08.pdf

Angola (2020): *Covid-19 - Education Ministry Determines 15-Day Schools Closure.* Retrieved 29 May 2020, from https://allafrica.com/stories/202003200364.html

Ashworth, E, Demkowicz, O, Lendrum, A and Frearson, K .(2018). Coaching Models of School-Based Prevention and Promotion Programmes: A Qualitative Exploration of UK Teachers' Perceptions. *School Mental Health* 10(3): 287–300. Retrieved from: www.ncbi.nlm.nih.gov/pmc/articles/PMC6096953/

AU, 2015. *Agenda 2063: The Africa We Want*. Ethiopia. AU. Accessed from https://au.int/en/agenda2063/overview.

AU, 2016. Continental Education Strategy for Africa 2016 – 2025. Ethiopia. AU accessed from http://akb.africa-union.org/auc/bitstream/AKB/24734/1/CESA%2016-25.pdf

Botswana (2020): *Authorities announce plans to ease COVID-19 lockdown measures May 5 /update 6*. (2020). Retrieved 29 May 2020, from https://www.garda.com/crisis24/news-alerts/339416/botswana-authorities-announce-plans-to-ease-covid-19-lockdown-measures-may-5-update-6

Black-caucus-UCT. (27 March 2020). *BAC opposition to UCT's migration towards online learning retrieved on 5 June 2020* from https://www.facebook.com/Black-Academic-Caucus-UCT-785908911530731/[BACofficial letter to UCT Statement]

Branch, R.M., and Dousay, T.A. 2015. *Survey of Instructional Design Models*. Indiana, USA. Association for Educational Communications and Technology. Accessed from https://aect.org/docs/SurveyofInstructionalDesignModels.pdf?pdf=SurveyofInstructionalDesignModels

Care and connection: understanding the lived experiences during COVID-19. Retrieved 03 June 2020 from http://heltasa.org.za/care-and-connection-understanding-the-lived-experiences-during-covid-19/

Creswell, J.W (2014). *Research Design: Qualitative and Quantitative Approaches* (4th ed). New Delhi: Sage Publications.

Du Plessis, P., & Mestry, R. (2019). Teachers for rural schools – a challenge for South Africa. *South African Journal of Education*, *39* (Supplement 1), S1-S9. doi: 10.15700/saje.v39ns1a1774

Higher Education Learning & Teaching Association of Southern Africa. Accessed from http://heltasa.org.za/

Global Partnership for Education (GPE). Accessed from https://www.globalpartnership.org/where-we-work/malawi

Hodges, C.; Moore, S.; Lockee, B.; Trust, T. & Bond, A. (2020). *The Difference between Emergency Remote Teaching and Online Learning.* Washington, DC, USA. EDUCAUSE review. Accessed from https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning.

International Task Force on Teachers for Education 2030, 2020. *COVID-19 Responses*. Accessed from https://teachertaskforce.org/what-we-do/covid-19-responses

Joyce, B., Wolf, J, & Calhoun, E. (1993). *The Self-renewing School*. USA: ASCD, Alexandria, VA.

Mafenya, P.N. (Nov., 2013). An Investigation of First-Year Students' Pedagogical Readiness to E-Learning and Assessment in Open and Distance Learning: An University of South Africa Context. *Mediterranean Journal of Social Sciences*, [S.l.], 4(13), p353. ISSN 2039-2117. Available at: https://www.mcser.org/journal/index.php/mjss/article/view/1522.

Mauritius Institute of Education. *Online Resources*. Accessed from http://portal.mie.ac.mu/school-of-science-and-mathematics/online-resources/

Mauritius Institute of Education. *NYCBE Textbooks Grade 1-6. Grade 7, 8 and 9 (Mainstream and Extended programme)*. Accessed from http://portal.mie.ac.mu/curriculum.html

McAleavy, T., Gorgen, K. (2020). *Overview of emerging country-level response to providing educational continuity under COVID-19 Best practice in pedagogy for remote teaching.* UK. Education Development Trust. Accessed from https://www.educationdevelopmenttrust.com/our-research-and-insights/commentary/providing-educational-continuity-under-covid-19-be

Monotoya, S. & Barbosa, A. (2020). *The importance of Monitoring and Improving ICT use in Education Post Confinement* : http://uis.unesco.org/en/blog/importance-monitoring-and-improving-ict-use-education-post-confinement[Accessed: 29.05.2020]

Moore, M. G. & Kearsley, G. (2011). *Distance education: A systems view of online learning*. USA: Wadsworth Cengage Learning.

Nzimande, B. 2020. *Measures to phase out the Coronavirus COVID-19 lockdown and phasing in of PSET strategic functions*. South African Government. Accessed from https://www.gov.za/speeches/minister-blade-nzimande-measures-phase-out-coronavirus-covid-19-lockdown-and-phasing-pset

Open University of Mauritius (2020):http://www.open.ac.mu/about-us/ [Accessed on 22nd June 2020]

Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods.* New Delhi: Sage Publications.

Reliefweb. 2020. *COVID-19 in DR Congo: Assuring alternative education now schools are closed*. New York. Reliefweb. Retrieved 29 May 2020, from https://reliefweb.int/report/democratic-republic-congo/covid-19-dr-congo-assuring-alternative-education-now-schools-are

Republic of Mauritius. 1 April 2020. *COVID-19: Special arrangements for students and motor vehicle owners*. Accessed from http://www.govmu.org/English/News/Pages/Covid-19-Special-arrangements-for-students-and-for-motor-vehicle-owners.aspx

Republic of Mauritius. Ministry of Education, Tertiary Education, Science and Technology. *Guidelines Online Learning Platforms*. Accessed from http://ministry-education.govmu.org/English/Pages/online-guidelines.aspx

Republic of Mauritius. Ministry of Higher Education, Science and Technology, (2020e). http://www.govmu.org/English/News/Pages/Covid-19-Ensuring-teaching-and-learning-continuity-through-digital-education-is-a-must,-says-VPM.aspx [Accessed on 22nd June 2020]

Russell, G & Bradley, G (1997). Teacher's computer anxiety: implications for professional development. *Education and Information Technologies, 2*, 17-30 (1997)

SADC. 22 June 2020. *Bulletin 7: SADC Regional response to COVID-19*. Botswana. SADC. Accessed from https://www.sadc.int/news-events/news/bulletin-7-sadc-regional-response-covid-19/

SADC, 2012. *Regional open and distance learning policy framework*. Botswana. SADC. Accessed from https://www.sadc.int/files/3113/7820/8525/Approved_Regional_ODL_Policy_Framework_June_2012_1.pdf

Save the Children 2018. *Change for Children 2018 Annual Report*. Washington, DC, USA. Save The Children, 2018. Accessed from https://www.savethechildren.org/content/dam/usa/reports/annual-report/annual-report/portrait-stc-annual-report-2018.pdf

Silverman, D. (2000). *Doing qualitative research*. London: Sage

The Herald. 2020. Accessed from https://www.herald.co.zw/category/articles/top-stories/

The World Bank. *Remote Learning, EdTech & COVID-19*. (2020). Retrieved 29 May 2020, from https://www.worldbank.org/en/topic/edutech/brief/edtech-covid-19

Trading Economics (2020). Retrieved on 28 July 2020 from https://tradingeconomics.com/zimbabwe/individuals-using-the-internet-percent-of-population-wb-data.html

UNESCO. *COVID-19 Educational Disruption and Response*. (2020). Retrieved 29 May 2020, from https://en.unesco.org/covid19/educationresponse

UNESCO Institute for Statistics database (2020)

UNICEF 2020. *COVID-19 and Education in emergencies*. New York, USA. Education cannot wait. Accessed on 29 May 2020 from https://www.educationcannotwait.org/covid-19/

UNICEF (2020-10) Office of Research – Innocenti. *Promising practices for equitable remote learning: Emerging lessons from COVID-19 education responses in 127 countries.* Italy. Accessed from https://reliefweb.int/sites/reliefweb.int/files/resources/IRB%202020-10.pdf

United Nations, 1948. *Universal Declaration on Human Rights*. New York. UN. Accessed from https://www.ohchr.org/EN/UDHR/Documents/UDHR_Translations/eng.pdf

UN Office for the Coordination of Humanitarian Affairs. *Southern and Eastern Africa COVID-19 Digest*. (2020). Retrieved 29 May 2020, from https://reports.unocha.org/en/country/southern-eastern-africa/

Wikipedia. *COVID-19 pandemic in the Comoros*. (2020). Retrieved 29 May 2020, from https://en.wikipedia.org/wiki/COVID-19_pandemic_in_the_Comoros

Zimbabwe Voice 2020. Accessed from https://zimbabwevoice.com/

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|---|---|
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