

# The Impact of COVID-19 on Education Systems in the Commonwealth

*Edited by Amina Osman with James Keevy*



The Commonwealth

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Published by the Commonwealth Secretariat

Typeset by NovaTechset

Printed by APS Group

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Publications Section  
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Tel: +44 (0)20 7747 6500  
Email: [publications@commonwealth.int](mailto:publications@commonwealth.int)  
Web: <https://books.thecommonwealth.org/>

***A catalogue record for this publication is available from the British Library.***

ISBN (paperback): 978-1-84929-205-4

ISBN (e-book): 978-1-84859-998-7

## Acknowledgements

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This publication is a collation of the finalised papers of a research project conducted by the Commonwealth Secretariat in partnership with JET Education Services. It is one of the outputs of a collaboration to engage young researchers and senior researchers to reflect on the impact of a health crisis on the education sector. The JET team led by Dr James Keevy is acknowledged for the efficient coordination of the project.

The immense contribution of the team leads and co-leads who led multi-country research teams and generously gave of their time and expertise, is gratefully acknowledged. The Secretariat also extends its thanks to the young researchers for their dedication and contribution, and to the reviewers who provided feedback which has strengthened this report. The research teams met regularly to identify and agree research areas, to adopt the research methodology and to exchange information, cross-check research and share analysis. The papers were reviewed and finalised by Dr Amina Osman and Dr James Keevy, with a final edit coming from the Commonwealth Secretariat.

Reviewers: Professor Likius Daniel, Dr Christina Devecchi, Dr Sue de Witt, Dr Jyotsna Jha, Mary Kangethe, Dr John Mugo, Dr Harriet Nannyonjo, Dr Kim Ochs, Jennifer Roberts, Claudette Russell, Dr Prabhakaran Sivakumar, Dr Marcia Socikwa, Dr Manuel Souto-Otero, Professor Godfrey Steele, Dr Chaya Surajbali-Bissoonauth, Dr Miriam Teuma.

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## Summary

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The Commonwealth Secretariat commissioned 11 papers to provide baseline information on how COVID-19 has impacted education systems in Commonwealth member countries. The papers have been edited and restructured so that they are now similar in length and arrangement, with the results collected into 11 chapters under four sections.

Each chapter features a research study, with data gathered using a combination of a literature review and online interviews or surveys. The chapters provide some background and context to the research, study methodology, and summarised findings. The researchers then discuss their findings and offer recommended solutions to the pressures and challenges being experienced because of the pandemic.

This summary is followed by an introduction to the research project that led to the Commonwealth Secretariat commissioning the 11 papers that make up the chapters of this report. There is also a brief section on research methods, given that these were often similar across the research.

### Section 1 Systemic response and education sector resilience

Section 1 features chapters on education sectors in selected Commonwealth countries, how prepared they were for the COVID-19 pandemic and how they have responded.

Chapter 1 on the preparedness and resilience of education systems, identifies ways Commonwealth members have facilitated and supported the continuation of teaching and learning at the early childhood, primary and secondary education levels during the pandemic. Ultimately, the study aims to suggest ways education systems can meet multiple threats in the future, including from hurricanes, experiences of drought and other natural disasters.

Key issues and policy messages arising out of Chapter 1 include the need for education systems to:

- plan and be prepared to face emergencies of different types;
- acknowledge and support students' socioemotional and psychological well-being;
- leverage communities by providing low-cost and low-tech solutions;

- engage stakeholder business entities, community groups and external donors for collaboration and partnerships to ensure access to scarce resources;
- ensure the sustainability of flexible teacher training opportunities;
- introduce intensive monitoring strategies; and
- intensify the response to inequality of opportunities in the education system.

Chapter 2 on the role of governments and government support for schools looks at how India, Kenya, Nigeria, Sri Lanka, Tanzania and Zambia have implemented mitigation measures to ensure the continuation of teaching and learning across the schooling systems while at the same time, attempting to contain COVID-19. It examines government policies by country and also surveys teachers and parents.

Some key lessons and recommendations arising out of Chapter 2 include:

- the need for governments to prioritise the health and safety of learners and educators on schools reopening;
- the importance of broad-based support and partnerships to respond to education needs, including with civil society and the private sector;
- the need, on reopening, for governments to re-establish and adequately fund all services targeting learners living in poverty (for example, school feeding programmes);
- the need for specific support measures to address the learning loss of marginalised students and the socio-psycho impact that disrupted their learning;
- the development and distribution of structured school workbooks, with weekly predesigned lessons in conjunction with television programmes;
- adjusting the school calendar to maximise teaching time following lockdown;
- that governments should plan for teacher mobilisation, prioritising regions that have been worst hit by the crisis;
- the need to for government support for *all* teachers and education personnel (as frontline workers) to ensure their safety, well-being and decent working conditions;
- the need to determine the safety of school infrastructure, including renovating, improving or installing hygiene facilities; and



# Section I

Systemic Response  
and Education Sector  
Resilience



# Chapter 1

## Preparedness and Resilience of Education Systems to Address Multiple Threats: Pandemics, Hurricanes, Drought, Food Insecurity

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### 1.1 Background and Introduction

Since the first cases of the Coronavirus Disease 2019 (COVID-19) were confirmed in Asia in late December 2019, the virus has spread rapidly across the globe. It has impacted social and economic life in ways that have given new meaning to the expression ‘new normal’. Countries continued to feel the impact of the spread of the disease, with schools in 22 countries on three different continents closing their doors by mid-March 2020. This resulted in more than 290 million students not having access to education in physical classroom environments (UNESCO 2020).

Most national ministries of education quickly pivoted to emergency remote instruction for business continuity during the early phase of the pandemic, but questions have been raised about preparedness and whether teachers, school administrators, students and their parents were equipped for this move to online instruction (RAND Corporation 2020; UNESCO 2020c). Questions have pointed to the need for a unique skill set for educators and parents to transition successfully from teaching and learning in a face-to-face mode, given that pedagogical practices cannot transfer seamlessly to remote instruction.

Schools from early childhood to the secondary level have been impacted across many countries globally. While restrictions on movement continue to be gradually lifted in most countries, public education systems, in which classrooms are not designed for the three to six feet (1–2 metre) of physical distancing recommended as one of the measures to stop the spread of the virus, have been slow to respond. Hence remote instruction is likely to continue as the virus continues to spread. Some countries have provided the tools needed for students to succeed, including internet-enabled devices and emergency or ‘just in time’ training for teachers. However, without a robust online learning

platform or a co-ordinated and coherent professional development training programme in place, the results have been mixed. While research to assess the level of success is ongoing, recommendations are needed to assist the preparedness of national governments and civil society for their roles in the education system, to adequately address the threats faced in these countries.

Beyond the effects of the COVID-19 pandemic, the consequences of global warming and climate change have resulted in increasing vulnerability to the impact of severe weather systems and extreme events, such as Category 5 hurricanes. For example, the Caribbean country of the Commonwealth of Dominica was devastated by such a weather system in 2017, with the International Monetary Fund estimating the damage at 226 per cent of the country's gross domestic product (GDP) (Muñoz and Ötker 2018).

The Food and Agriculture Organization (FAO), International Fund for Agricultural Development (IFAD), UN Children's Fund (UNICEF), World Food Programme (WFP) and WHO (2019) note that moderate or severe food insecurity is mainly evident in countries with low and middle incomes, and in every continent the prevalence rate is slightly higher among women than men. In the Caribbean, the state of food security has been described as precarious, given the region's location risk for tropical storms, hurricanes, earthquakes and droughts. When combined with high dependence on food imports, disaster risk and climate change impacts also affect nutrition when decreased levels of local production results in a tendency to consume processed foods. Given this impact, Ewing-Chow (2019) notes that the Caribbean must develop a strategic agenda toward improving agricultural climate resilience through modernisation, production, efficiency, scale and consistency. This includes provisions for technology use, strengthened infrastructure and innovation. The Ewing-Chow report notes the need for incentives and advocacy, along with initiatives in the education system, to encourage young people to join the agricultural sector. The FAO, IFAD, UNICEF, WFP and WHO report (2019) calls for action on economic and social policies in Africa and other Commonwealth countries, including guaranteeing funding of social safety nets and ensuring universal access to health and education. It calls for action, as well, to tackle inequalities at all levels through multisectoral policies in these societies.

The aim of the research that is the focus of this chapter was to identify ways to facilitate and support (in the first instance) the continuation of teaching and learning at the early childhood, primary and secondary education levels during the pandemic, and ultimately to meet the many threats that the education system faces from hurricanes, experiences of drought and other natural disasters. What do we need to know and do to ensure continuity of teaching and learning and the resilience of our education systems through the impacts of a natural disaster? What do we

need to know and do to minimise the impact of climate change and natural disasters on food security?

The physical, social and economic risks of natural disasters require adequate preparation to minimise their impact and increase resilience of the education system and sustainability of our environment to meet our physical needs.

The research objectives/key research questions were as follows:

- How can countries with common experiences develop the skill sets needed to manage physical and human resources effectively to mitigate or minimise adverse outcomes of natural hazards, and by extension build capacity for resilience?
- What are the mitigation strategies required to produce a cadre of persons who are able to lead and service programmes in the education system in the context of disaster risk management?
- How can countries with common experiences build awareness for the development of legislation, systems, policies and practices to adequately prepare for disasters, as well as response frameworks to strengthen resilience to meet such events?
- How can we best apply lessons learned from the impact of COVID-19 to education systems in the context of contingency planning?
- How can we use knowledge of best practice for the implementation and monitoring of resilience programmes at the community level?

## 1.2 Survey methodology and findings

### 1.2.1 Research design and methodology

For the purpose of this study, a mixed methods approach was used. This allowed a level of flexibility to accommodate the different areas of study and for convenience of data gathering in the circumstances of different regions. The principal methods used for data gathering were a review of existing documents and other online sources, and an online survey.

The document review utilised official reports on government websites, newspaper reports, statements by education experts and officials, and documents and other sources that provided accounts of action plans, contingency measures or other information on the mitigation of COVID-19 in the education system. Documents were sourced for five Commonwealth countries, namely Ghana, Jamaica, Kenya, Malaysia and Nigeria. The selection of these countries was based on the fact that the researchers resided in these countries and were familiar with the available sources, for ease of access to information.

The following groups were targeted for the online survey:

- parents (early childhood, primary and secondary);
- teachers; and
- education experts and researchers.

The selection of participants for the survey was made using a non-probability combination of convenience and purposive sampling techniques. As such, participants were selected on the basis of ease of access and perceived applicability of the views of the participants in relation to the purpose of the study. This approach was adopted due to the limited time available for this study.

The sampling process involved sending invitations through contacts to representatives of the key groups – parents, teachers and education experts and researchers. A concept note detailing the background to the study and key questions related to the research objectives was sent to all potential participants. Any parent, education expert or researcher who accepted the invitation to participate in the study was included in the sample.

Data for the study were collected from both primary and secondary sources. Secondary data for the study were obtained from national records, including government sources of published and unpublished reports, press briefings and statements, as well as policy documents regarding the COVID-19 pandemic, response measures, and impact on and resilience of education systems of the study countries. Secondary data were collected via document analysis and a desk review of reports. Primary data, on the other hand, included data on the views of education stakeholders on the response of education systems to the COVID-19 pandemic. The survey utilised semi-structured questionnaires disseminated to participants using Survey Monkey. Consent was obtained from participants for the use of data.

This study was limited by constraints on the timeframe allowed for research to be conducted. Furthermore, the changing frames of reference as the COVID-19 pandemic moved through its phases and impacted countries with varying levels of severity may limit the call to action for immediate responses.

### 1.2.2 Literature review

#### Background

The notion of ‘education in emergencies’ (EiE) may encompass a wide range of human-made crises and natural events, including global emergencies such as the COVID-19 pandemic. International agencies such as the Inter-agency Network for Education in Emergencies (INEE), the World Bank and the

United Nations, typically play a major role in the recovery process, as local governments often lack available resources. The provision of education in emergencies is premised on the universal right to education for all persons (UN 1948), as well as several international law provisions which guarantee the right to education in crises (Anderson et al. 2011). Emergency situations intensify the challenges of providing quality education and often exacerbate existing inequalities for vulnerable groups, including girls, the economically disadvantaged, rural communities, refugees, and those with disabilities. The ongoing COVID-19 pandemic has led to unprecedented disruptions to formal education systems across the globe, with up to 1.5 billion students, or 91 per cent of students, forced to be out of school during the month of April 2020 (UNESCO 2020a). There is an immediate need systematically to assess the successes and limitations of previous responses to crises, while simultaneously building resources and knowledge on the best way forward. It is imperative that we can prepare global education systems at all levels to better meet the needs of learners, families and educators in the next crisis.

#### Past emergencies/crises

Access to quality education is one of the human rights for all, aimed at improving everyone's opportunity to make the most of their lives (Krafft 2012; UNESCO 2013). School enrolment is vulnerable to significant negative impacts from natural disasters, particularly for the poor and those in developing countries (Kousky 2016). Preparations based on previous crises caused by natural disasters are key to the attainment of education for all. These include standardised provision for school facilities; hazard-specific water and sanitation facilities; and child protection (Castro Osorio and Culma 2018). Winthrop (2020) notes the response of education systems in past crises and advocates the following strategies as good practice for education in emergencies: *mobilisation of education networks to disseminate life-saving public health messages; planning for school closures to last months, not weeks; considering unintended consequences and finding ways to mitigate these; building schools back better.*

#### Developing skills to minimise effects of crises

Government ministries and education departments ensure the development of skills necessary to minimise the effects of crises on education, especially those that may require specialised skills in the management of the impact of natural occurrences (Haraldseid-Driftland et al. 2019). School management and teachers are trained in lifesaving skills, social and emotional learning, and psychosocial activities (Bouck 2010), with the goal of achieving holistic development of children's social, emotional, cognitive and physical needs (Kofinti et al. 2020). Also, community training and sensitisation on child

protection is carried out to enable responsible individuals and the public to meet the needs of the education sector (Pareek and Rao 2005).

### Strategies for capacity building

Governments and non-governmental organisations develop strategies for capacity development to deal with the impact of natural occurrences and disasters (Sandanam et al. 2018). This aims at enabling the state and organisations to manage human resources, teaching methods and finances during and after disasters (Ofei-Manu and Didham 2017). In most cases, capacity issues and priorities depend on a country's own level and path of development (Winkler and Rajamani 2014).

### Building awareness

Strengthening community involvement and participation in developing legislation and policies represent a strategy that states and NGOs use in managing education systems in regions that are prone to natural disasters (Prasad et al. 2015). Creating disaster risk management committees and developing skills to provide technical and political assistance to disaster managers are also necessary. Other stakeholders also provide a framework to enable state and community to work together (Britton 2007; Kim and Sohn 2017). Building public information and social mobilisation involve planning activities and gathering data on the vulnerability of departments within the education sector. The examination of existing policies pertaining to education systems is also useful (Keim 2011). Participatory appraisal also reviews existing plans, the role of teachers and students in disaster management, and the development of the school curriculum as it relates to disaster preparedness (Sujata 2010).

### Distance learning, best practice and lessons learned

Although appropriate responses to education in emergencies are highly context-dependent, there are several broad approaches which may be applied across regions and different types of disaster risk. Some of these include prioritising support to teachers, community-based schools and psychosocial interventions (Burde et al. 2017); flexible teacher training programmes (Joyner 1996); Inter-agency Network for Education in Emergencies' (INEE) minimum standards; and UNICEF's 'School in a Box' initiative. Burde et al. (2019) also recommend a focus on access to vulnerable groups, quality of learning and well-being as the three core pillars of education in immediate post-emergency situations. Most notably, the INEE's minimum standards outline 19 standards across five domains, namely, *foundational standards*, *access and learning environment*, *teaching and learning*, *teachers and other educational personnel*, and *educational policy* (INEE 2010).



In a recent report, UNESCO (2020b) listed several lessons learned from the current crisis and past emergencies. These include managing the 'distance' created by remote learning processes; adjusting and increasing formative assessments as a form of continuous monitoring and evaluation; training teachers in distance learning pedagogies; supporting vulnerable and disadvantaged groups; increasing the technical and technological capabilities of distance learning; supporting open access to educational resources; adjusting the curriculum to promote the psychosocial needs of learners; ensuring data and inclusion; and protecting the data of students and educators. UNESCO (2020a) also suggests several distance learning solutions that could help to support learners disrupted by COVID-19 and other crises.

However, there are also challenges. Saavedra (2020) in an Education for Global Development blog noted the immediate impacts on children and youth. These include the loss of learning opportunity, increased school drop-out rates and the possibility of children having to miss their most important meal of the day because of not being in school. Some countries have worked to ensure that negative impacts do not become entrenched. UNICEF (2020) identified Nigeria as one of the countries that had transformed to support children in remote learning. Jamaica's efforts at all education levels have also been highlighted for that country's use of national public television, radio, online platforms and WhatsApp to ensure that students at all levels have access to learning.

### Monitoring and evaluation

Monitoring and evaluation (M&E) is used by governments across the world to improve school systems and educational results, and to play an integral role in holistic education transformation coupled with building the resilience of education systems to natural disasters (Oromaner 2018). States and development partners in the education sector use well-developed M&E systems to measure not only the outputs, but also the outcomes of the education sector (Holvoet and Inberg 2014).

### 1.2.3 Findings

#### Findings – secondary sources

As stakeholders in the education system cope with the COVID-19 crisis, the response had eased at the time of writing, from total lockdown to attempts at reducing loss of learning and re-opening in limited ways to facilitate promotional examinations. The documents reviewed indicated several mitigation strategies in effect in the country studies, for short- and medium-term recovery, and the ultimate sustainability of the sector in terms of risk management. Strategies to close the inequality gap and allow all children

access to the same opportunities in the education system, building resilience in the process, were evident in the four main themes that emerged from the document review. The themes that emerged were as follows:

- focus on capacity-building strategies;
- contingency planning;
- systems and policy development for disaster preparation; and
- strengthening resilience.

In addition, the review identified best practice for implementation of resilience programmes across the country studies. The findings and discussion provide insights into applying lessons learned that can inform a way forward.

#### *Capacity building and contingency planning*

In **Ghana**, the Ministry of Education developed a COVID-19 Coordinated Education Response Plan (2020). The plan presented three strategies to address school closure, as follows:

- Strategy 1: Closure of schools to meet the immediate and short-term need – four to eight weeks;
- Strategy 2: Closure of schools over the medium term – three to nine months; and
- Strategy 3: Closure of schools over the long term – 2021 and beyond.

The ministry also reviewed existing infrastructure to assess its ability to deliver content and facilitate distance and remote learning via various modes to as many students as possible across the grade levels in primary and secondary schools. The ministry determined that radio, television and the internet would best serve the needs of students. The strategy for leveraging these different media included partnering with other government agencies, such as the Centre for National Distance Learning and Open Schooling (CENDLOS), to provide access to content and an appropriate learning management system. The plan identified the need for strategies to support the poorest and most marginalised children, to ensure that ‘no child was left behind’. Importantly, the plan also prioritised learning for the most vulnerable children and those with special needs, including the provision of learning devices/equipment and connectivity where possible, accessibility of instruction/language of instruction (sign language, subtitles, sending of recorded lessons), and supporting caregivers/parental engagement to encourage learning as well as help plan the structure and routine to facilitate learning. The informal sector, where out-of-school children are engaged in learning, was also to be considered for inclusion by the ministry.

In **Jamaica**, the government has been actively pursuing capacity-building and planning strategies to develop resources and promote services to mitigate the impact of the present crisis that will also be sustainable in the event of any other crisis. These strategies, which are sector specific, included the following:

- the Jamaica Teaching Council partnered with a private educational services provider to train teachers using webinars to familiarise them with use of online platforms for learning continuity;
- the Ministry of Education, Youth and Information (MOEYI) developed an e-instruction monitoring toolkit to ensure schools could function efficiently while offering opportunities for remote learning; training was also provided for teachers on e-leadership, e-teaching and e-testing;
- students without internet service have been provided with access to a learning management system through a zero-rated data service plan;
- the ministry pre-recorded content for use by the national public broadcasting company to ensure broadcast of materials in line with the national curriculum; and
- the national Early Childhood Commission developed a dedicated webpage for children 0–5 years old (<https://ecc.gov.jm/covid-19-corner/>) with lesson plans, storytelling and tips for parents.

In **Kenya**, the Ministry of Education developed a three-pronged approach to ensure uninterrupted learning with adherence to COVID-19 prevention guidelines. The three approaches entailed digital learning, the introduction of radio and television programmes for primary and secondary school students and improving water and sanitation infrastructure and knowledge on health and hygiene. In a June 2020 presentation, Grace Maina outlined the role of the Kenya Institute of Curriculum Development (KICD) in strengthening the Kenyan Education Cloud and the development of online content to revamp the lessons delivered via television and radio through the KICD EDU channel. There were also enhanced media partnerships to ensure the long-term transmission of educational programmes. A gender-sensitive COVID-19 response plan was developed by the ministry that recognised the need to focus on the most vulnerable learners, including children living in remote places, situations of hardship, those in poor urban informal settlements, ethnic minorities, the internally displaced, children and youth living with special needs, and children in refugee camps. According to Maina's presentation on the work of KICD, a technology company provided tablets for children in informal settlements and UNICEF offered support to children in refugee camps.

Proposed interventions for Kenya post-COVID-19 involve the following:

- building the capacity of teachers to use remote learning methodologies;
- supporting decentralised access to connectivity;
- establishing linkages with line ministries to ensure provision of electricity and renewable energy in rural areas;
- refurbishing school facilities and enforcing compliance with safety and security standards of school infrastructure;
- providing psychosocial support to manage the psychological impact of COVID-19 and future crises;
- lobbying community support for girl-child education and providing support to vulnerable learners, including those with special needs; and
- recruitment of additional teachers, including those serving on contract terms in understaffed schools.

With the declaration of a pandemic and the importation and spread of the coronavirus disease, **Nigeria** developed an Education Sector COVID-19 Contingency Plan (2020). The plan presented three scenarios and attendant strategies to address school closure, as follows:

- Scenario 1: Closure of schools for a period of one month during which teaching and learning would continue via homework or take-home assignments;
- Scenario 2: Closure of schools for a period of one to three months, with teaching and learning continuing via online and audio-visual methods; and
- Scenario 3: Closure of schools for more than three months, during which there would be digitisation of curricula, radio, TV and provision of self-learning instructional materials based on the national curriculum.

The plan also identified the need for parents and teachers to be reoriented to access resources for teaching and learning. However, the authors of the plan identified challenges, including the inability of parents and the community to provide adequate support for learning if they were not well equipped. Moreover, rural areas were at a disadvantage.

Given the challenges, individual states in Nigeria introduced mitigation strategies, while also building capacity for long-term sustainability in the event of any future disaster or crisis. In an April 2020 article in *The Guardian* newspaper, Omiko Awa discussed measures taken by the Lagos

State government to ensure learning continuity (Awa 2020). The state used radio and television as the main platform for education officials to reduce the effects of learning loss for students in some of the schools in Lagos. To supplement this measure for children who were unable to access learning via radio and television, WhatsApp could be used to receive instructional content. This method involved parents receiving the educational content via their phones, for delivery to their children.

Business entities also contributed to capacity building in Nigeria, through the distribution of smartphones, along with the installation of solar panels at central locations within villages and communities. The solar panels provided a measure of sustainability, charging smart phones across the state of Lagos so helping children continue their education during the COVID-19 lockdown period. This strategy was also planned to supplement and enhance learning when schools were able to reopen (Leung 2020). This initiative, a tripartite arrangement between the technology company KaiOS Technologies, an innovative Nigerian research and development company (Robert and John Ltd), and the Lagos State government, demonstrated best practice for capacity building, meeting the needs of low-income families and building resilience in communities.

#### *Systems and policy development*

In **Jamaica**, the Ministry of Education, Youth and Information led the systems development process for transition to remote teaching and online learning as part of its crisis response to COVID-19. The ministry instituted a national timetabling system for mixed-mode teaching strategies, which included a schedule for delivery of educational content via television and radio programmes. The core subject areas of emphasis were English language and literature, mathematics, science, social studies, and history. The ministry also started digitising some of its processes, including the registration of new students at the Grade 1 level, attendance and accountability measures; and the implementation of a learning management system for all schools to support teaching and learning. To complement the initiatives, teacher training to further build the skill sets needed for digital transformation was due to continue into 2021 (IDB 2020).

Stakeholder engagement is an important and critical input driver for systems and policy development in any country, irrespective of the existence of a crisis. In **Kenya**, different educational bodies and stakeholders in the health sector embarked on country-wide consultations on how best to adjust nationally to the 'new normal' of living with the effects of COVID-19. The result of these consultations was a call on government to preserve employment, prioritise teachers' and learners' health and safety, and provide sufficient professional support and training to ensure continuous learning. As

a result of the surge in numbers of COVID-19 cases, especially in the months of June and July 2020, the need to safeguard learners drove the Ministry of Education, in consultation with the Ministry of Health and other education stakeholders, to declare the 2020 school calendar null and void. The reopening of primary and secondary schools had been postponed at the time of this study to 2021, with a phased reopening of colleges and universities. Learners would remain in their current classes in 2021, a move that was supported by teachers' unions and parents' associations (KNUT, KHRC, UASU and KMPDU 2020).

Kenya's experience of systems and policy development also highlights a role for parents in the Competency Based Curriculum (CBC). The CBC, which was launched in 2017, emphasises the development of skills and their application to real-life situations. Even before the COVID-19 pandemic, Kenya had made headway in implementing this approach to delivery of instructional content. The CBC offers opportunities for resilience building, by helping learners 'own' their learning, and enhances the role of the parent in learning. In this context, parents were considered a primary target in embracing online teaching and the use of multimedia elements in learning as part of the 'new normal'. When coupled with the CBC, this approach has potential to harness the time at home to equip learners with non-academic skills that contribute to holistic development (eLimu 2020).

In **Malaysia**, where the pandemic affected the administration of promotion and final examinations, the Ministry of Education postponed the examinations to late 2020 or early 2021 in some instances. The Deputy Director for Research and Development at Strengthening Human Right and Peace Research- South East Asia (SHAPE-SEA), Mariam Othman, in an online op-ed (2020) noted consideration for use of an alternative assessment tool. In common with most countries in this study, the ministry developed and promoted the use of e-learning platforms so that teaching and learning could continue.

All these measures were intended to support teachers and to ensure that no student was left behind.

#### *Best practice for resilience*

The strategies adopted by the countries show similarities, such as the rapid expansion of access to remote learning via radio, television and use of online learning management systems, with focus on communities with unequal access. Also noted among measures and strategies were collaborations between education ministries, private service providers and NGOs to provide access to smart devices, wireless networks (such as Wi-Fi), and solar energy sources within villages and communities in an effort to ensure learning

continuity; provision of teacher training opportunities for delivery of instruction in multiple modalities; parental involvement; and monitoring and evaluation. In the context of best practice, these strategies have provided the countries with a recommended way forward for implementation of resilience programmes.

Looking ahead to a post COVID-19 era in **Nigeria**, the state Permanent Secretary for Lagos Education District 1 was reported on 25 June 2020 to have advised teachers to work on their mentoring skills and expertise. Furthermore, they should demonstrate endurance and tolerance when they returned to in-person teaching in schools, in order to cope with students who were lagging behind because they could not access the opportunities provided through online teaching (Akoni 2020). In a report of the webinar proceedings, Permanent Secretary Barrister Solarin stressed the need for teachers to seek out relevant knowledge and skills acquisition to sharpen and broaden their expertise. The remarks point to the need for psychosocial support to teachers, and training to assist with the national response to build resilient programmes.

In regard to knowledge-based strategies for decision-making, an NGO in Nigeria, Sustainable Education and Enterprise Development (SEED), has been providing inclusive solutions to assist schools that serve children from low-income families to build lasting pathways to education quality. SEED conducted an overview of school resilience in Lagos State, with school owners/leaders using a strengths, weaknesses, opportunities, threats (SWOT) analysis to build a picture of what is at stake for most of the low-cost private schools in Lagos State that serve vulnerable children. The data assisted the entity to further develop its action plan for service and strategies to mitigate the effects of disruption of education on vulnerable children in the communities during and post-COVID-19. An anonymous comment in response to the strategies presented by SEED is noted below:

*The analysis and recommendations here is a worthy cause for all stakeholders either private, public or international body. Most especially Nigerian private investors should see these recommendations as a clarion call to assist low-income education providers (SEED, 2020).*

In a news briefing of 7 May 2020, the US Embassy and Consulate in Nigeria noted that UNICEF, in collaboration with USAID and the Bauchi State Education Board in Nigeria, had provided opportunities for continuing education through radio and television. Teaching resources were also being developed in the local languages/dialects. This was in keeping with the UNESCO recommendation for the use of distance learning programmes, open educational applications, and platforms by schools and teachers to reach learners remotely. Further, Northern

Education Initiative Plus (NEI Plus), a USAID-funded programme designed to strengthen the ability of Bauchi and Sokoto States to provide quality education and improve children's reading skills, presented a plan to further support the education system (Fugate 2020). The NEI Plus team was at the time of writing, producing interactive voice response (IVR) programmes focused on social-emotional learning for distribution over television, radio and cellphones. The programme is designed to build the interpersonal skills of parents and teachers and help them to recognise and deal appropriately with signs of stress that may be a result of the pandemic. These activities highlight the benefits of co-operation, collaboration and support from international partners that can promote resilience-building in communities where needed.

In **Kenya**, the COVID-19 pandemic has exposed the robustness of Kenya's education system's capacity to train and build skills and competencies. It has also highlighted monitoring and evaluation as an important measure for assessing the effectiveness of its mitigation strategies during the period of lockdown. In Grace Maina's June 2020 presentation, previously mentioned, she outlined the Kenya Institute of Curriculum Development (KICD) strategy for conducting an online survey to assess the uptake of education channel broadcasts among stakeholders. The findings suggested that many students were not accessing the lessons, either because they were out of broadcast range or they did not have the necessary equipment. The findings of the survey yielded important information for determining mitigation strategies to serve communities most in need.

In **Jamaica**, provision of social services was highlighted as being critical to building resilience during implementation of mitigation strategies. The Ministry of Education, Youth and Information used the education system to roll out a model of support to its Programme of Advancement through Health and Education (PATH), which is the government's flagship social protection programme. Support is provided to PATH beneficiaries (including preschool-age children) through cash transfers to purchase food. The National Parenting Support Commission also partnered with UNICEF to provide helplines to offer psychosocial care to parents across Jamaica and advice for protecting families and communities (IDB 2020).

In **Ghana**, the need for psychosocial support, protection and prevention/management of gender-based violence is presented in the COVID-19 Coordinated Education Response Plan (2020). However, the ministry noted the need for these support services to be provided via remote learning modalities. The plan discusses the use of tailored community engagement programmes delivered via radio and the Ghana Learning TV, with teachers and heads of schools obtaining materials via these means and through WhatsApp to prepare them to provide the support needed.



### Findings – online survey

The survey instrument contained six open-ended questions on the following themes: i) infrastructure needs for government-run schools to adapt to the shift to online teaching and learning; ii) the skill sets required by educators to adapt to changing needs in the education system; iii) some of the short-term challenges that countries faced while implementing online teaching and learning; iv) best practice that could be adopted by countries for mitigating the adverse impact of natural disasters; v) key inclusions in national education policies or frameworks for resilience and effective response to natural disasters; and vi) the role(s) that international agencies, intergovernmental organisations and non-government organisations could play to support education systems globally, during times of crisis.

#### *Infrastructure needs*

Student respondents indicated the need for provision of reliable and affordable resources for access to the internet, and for technical and pedagogical support to teachers and students in the education system. An NGO administrator identified similar needs, while indicating the need for increased broadband capabilities which could be achieved through partnerships between government and telecommunications providers, especially in rural areas. A common theme among respondents was the need for accessible internet for the population.

#### *Skill sets of educators*

In providing responses on the skill sets required by educators to adjust to changing needs in the education system, student group respondents identified training of teachers in information and communication technology (ICT) and pedagogical skills to deliver the syllabus in an engaging manner in an online environment. The teachers who responded also identified ICT skills. Good communication and time management skills were also among skills needs identified by respondents.

#### *Challenges to implementation of online teaching and learning in the short-term*

The main challenges identified to implementation of online teaching and learning in the short term during the pandemic included inadequate internet service and IT infrastructure. The teacher group indicated accessibility as a major challenge, particularly among marginalised groups such as the rural poor, and the lack of resources such as computers. Some student group respondents identified the degree of readiness of students, and their inability to adjust to new ways of learning, as a challenge.

*Best practice for mitigation of natural disasters*

With regard to best practice for mitigating the adverse impact of natural disasters, both the student group and the teacher respondents indicated the need for adoption of practices that focus on population education and information about safety and disaster mitigation and management. Further, the student group suggested adoption of measures to improve food security and self-reliance, along with economic diversification, with the latter suggestion supported by the NGO administrator. In addition, the development of a stimulus package to help the population cope better with disasters was suggested by the student group and teacher respondents. Collectively, these two groups also advocated for the enforcement of policies and laws which positively impacted health and safety.

*National education policies and frameworks – key inclusions*

In the area of measures to be included in national education policies or frameworks to help build resilience and effectively respond to crises such as COVID-19, a common theme among respondents was the need for measures to allow for learning to continue remotely during disasters. These would include mandating IT infrastructure improvement and resources made available to implement these measures in an equitable way across the education system. Respondents also indicated that the improved education system must cater to the needs of all categories of students, including those with a disability. Further, the student group respondents indicated that policies and frameworks must contain measures to promote improved safety and hygiene practices throughout education systems, and countermeasures to limit the spread of disease.

*Role of international agencies and NGOs in support of the education system globally*

The importance of funding was underscored among the majority of respondents when asked about the role(s) of international agencies, intergovernmental organisations and non-government organisations in support of education systems during times of crisis. The NGO administrator indicated that these organisations were expected to play a role in the provision of educational resources and funding to implement their introduction. Further, the administrator indicated that these agencies could serve as ‘connectors’ for the stakeholder engagement required to inform the development of policy for the education system. The roles identified by both student group respondents and teachers included the need for technical support and expertise for the development of online learning resources, IT skills training and improvement in ICT infrastructure support in schools, especially in marginalised communities. Funding to deploy resources such as learning aids, hardware such as computers and other devices to reach the marginalised populations, were also indicated by the student group respondents.

### 1.3 Challenges and lessons learned

#### A way forward

From the literature review, it can be concluded that education systems must be prepared to face emergencies of different types. Disruptions caused to the lives of millions of children and their families necessitate proactive and decisive efforts from policymakers and key stakeholders. Education in emergencies is best mitigated by prior planning for any inevitable occurrence, and subsequently attending to particularly disadvantaged groups, students' psychological well-being, leveraging community low-cost and low-tech solutions, sustaining flexible teacher training, and introducing intensive monitoring strategies.

The challenges to moving forward include intensification of inequality in situations where children do not have essential tools, including learning resources, internet connectivity or supportive parents (Saavedra 2020). As stakeholders cope with the crisis, the literature reviewed here suggested that mitigation strategies must include consideration of recovery, and an understanding of how to close the gap that prevents all children from having equal opportunities in the education system.

#### Lessons learned from secondary sources

In **Jamaica**, The UNESCO Cluster Office for the Caribbean (2020) reported that the COVID-19 pandemic had resulted in unprecedented education disruption in the small island states of the Caribbean. The majority of governments in the English and Dutch Caribbean have temporarily closed their education institutions in an attempt to reduce the spread of the disease. Through partnerships with organisations such as UNESCO, support has been offered to Caribbean small island developing states in helping to facilitate learning continuity. Such partnerships have assisted in the creation and execution of webinars to guide governments, education institutions, schools and teachers on how to sustain education in these times, as well as to prepare stakeholders for the post-COVID-19 era.

**Kenya** has received WHO recognition for its COVID-19 status reporting. With daily updates of descriptive statistics of the disease, the country has had a steady information flow that has allowed adequate planning and decision-making in education systems. The importance of reliable data as part of knowledge management cannot be over-emphasised. To ensure that lessons learned during the COVID-19 pandemic led to sustainable development, the education system must infuse these lessons as part of day-to-day learning through the KICD. This should produce a cadre of persons who are able to lead contingency planning and disaster risk assessment and management from a position of knowledge.

Lessons from the **Kenyan** response, as highlighted in the June 2020 presentation on the KICD, show many opportunities for a way forward. Maina (2020) suggested the following:

- use of online, distance learning and multimedia elements as another ‘new normal’ approach to learning;
- including parents as the primary target and initiating strategies to support them;
- harnessing time at home to build non-academic skills in children for holistic development, for example, engaging in age-appropriate chores; and
- developing psychosocial programmes with sessions that include examples of resilience building, such as following a daily routine to help children ‘own’ their learning.

Despite the existence of systems that have been vital to mitigation strategies, some countries have no national disaster management plan in place. Such a plan has the potential to provide the legal platform for collaboration, participation and resource mobilisation that is necessary for management of disasters, risk assessment, early warning, harmonised command structures, incident protocols and information flow during disasters. This would complement existing systems and strengthen resilience.

Ministries of education in the countries studied have played a role in monitoring implementation plans that have responded to learning needs. However, these will need careful evaluation to improve the plans should the closure of schools last longer than expected. Monitoring and evaluation tools will need to be developed to evaluate the measures being implemented during and after the COVID-19 pandemic.

#### 1.4 Discussion and recommendations

Insights emerging from the review of source documents supported the literature review, highlighting the need for proactive and decisive actions by policymakers and key stakeholders. There was support for the view that emergencies and crises that impacted the education system were best mitigated by preliminary planning for any inevitable occurrence. With such plans and resources in place, ministries of education could quickly pivot to measures and strategies to mitigate the impact of COVID-19 on disadvantaged groups.

The themes explored suggest the need for effective school management and training of teachers to facilitate support for the social and emotional learning needs and psychosocial activities of students. However, the type

of response in regard to capacity building depends on the country's level of, and path to, development. The issues identified were multidimensional and complex, and related as much to broader societal challenges and systemic issues as they did to training and skills development, and technology transfer in sustainable ways.

In the documents reviewed there was evidence of the need to:

- acknowledge and support students' socioemotional and psychological well-being;
- leverage communities by providing low-cost and low-tech solutions;
- engage stakeholder business entities, community groups and external donors for collaboration and partnerships to ensure access to scarce resources;
- ensure the sustainability of flexible teacher training opportunities;
- introduce intensive monitoring strategies; and
- intensify the response to inequality of opportunities in the education system.

As noted by Saavedra (2020), where children do not have the tools, learning resources, internet connectivity or supportive parents, consideration must be given to ways in which to close the gap of inequality in opportunity in the education system, among the mitigation strategies.

Stakeholder collaboration, local and international, has emerged as a viable means of providing support, and catering for the learning needs of students. However, sustainability explicitly needs stakeholder collaboration, with regional umbrella bodies collaborating with respective governments, to formulate policies and build systems that will be responsive to the needs of countries with common experiences. These umbrella bodies, in liaison with respective governments, can draw different skills, competences, and physical and human resources from member countries to mitigate the effects of natural hazards, emergencies and crises in these countries.

## References

- Akoni, O (2020), 'Schools resumption: Lagos gives recipe on post COVID-19 teaching skills', *Vanguard*, 25 June 2020, available at: <https://www.vanguardngr.com/2020/06/schools-resumption-lagos-gives-recipe-on-post-covid-19-teaching-skills/> (accessed 20 July 2020).
- Anderson, A, P Hyll-Larsen and J Hofmann (2011), 'The Right to education for children in emergencies', *Journal of International Humanitarian Legal Studies*, Vol. 2(1), 84–126.
- Awa, O (2020), 'COVID-19: Lagos government, schools adopt new ways to engage students', *The Guardian Newspaper*, available at: <https://m.guardian.ng/features/education/covid-19-lagos-government-schools-adopt-new-ways-to-engage-students/amp/> (accessed 14 July 2020).

- Bouck, E (2010), 'Reports of life skills training for students with intellectual disabilities in and out of school', *Journal of Intellectual Disability Research*, Vol. 54 No. 12, 1093–1103.
- Bowen, G (2009), 'Document Analysis as a Qualitative Research Method', *Qualitative Research Journal* Vol. 9 No. 2, 27–40.
- Britton, NR (2007), 'National Planning and Response: National Systems', in EDITOR, *Handbook of Disaster Research. Handbooks of Sociology and Social Research*, Springer, New York, NY, 347–367.
- Burde, D, A Kapit, R Wahl, O Guven and M Skarpeteig (2017), 'Education in emergencies: A review of theory and research', *Review of Educational Research*, Vol. 87 No. 3, 619–658.
- Burde, D, H Lahmann and N Thompson (2019), 'Education in emergencies: "What works" revisited', *Education and Conflict Review*, *Education and Conflict Review*, 2, 81–88.
- Castro Osorio, C and E Culma (2018), *Beyond displacement by armed conflict: the relationship between environmental, economic and armed displacement in Colombia*, in Zurayk, R, E Woertz and R Bahn (eds.), Faculty of Agricultural and Food Sciences, American University of Beirut, Lebanon, 232–245.
- eLimu (2020), <https://www.elimucentre.com/cbc-curriculum-structure/> (accessed 13 July 2020).
- Ewing-Chow, C (2019), 'Five Overlooked Facts about Caribbean Food Security', Forbes Media LLC, available at: <https://www.forbes.com/sites/daphneewingchow/2019/02/20/five-facts-about-caribbean-food-security/#266e243a5016>
- FAO, IFAD, UNICEF, WFP and WHO (2019), *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns*, FAO, Rome.
- Federal Ministry of Education (2020), Nigeria Education Sector COVID-19 Contingency Plan, available at: <http://education.gov.ng/education-a-coordinated-response-to-covid-19/> (accessed 14 July 2020).
- Fugate, J (2020), *Radio lessons in Northern Nigeria support reading during the COVID-19 pandemic*, available at: <https://www.creativeassociatesinternational.com/stories/radio-lessons-in-northern-nigeria-support-reading-during-the-covid-19-pandemic/> (accessed 17 July 2020).
- Haraldseid-Driftland, C, I Aase and K Aase (2019), 'Developing Curriculum: Nursing Students' Involvement in Skills Training Design', *Ensuring Quality in Professional Education Volume I*, 189–207.
- Inter-American Development Bank (IDB) (2020), COVID-19 Jamaica, available at: <https://socialdigital.iadb.org/en/covid-19/education/regional-response/6086> (accessed 14 July 2020).
- Inter-agency Network for Education in Emergencies (INEE) (2010), *Minimum Standards for Education: Preparedness, Response, Recovery*, New York, INEE.
- Joyner, A (1996), 'Supporting education in emergencies: A case study from southern Sudan', *Development in Practice*, 6(1), 70–76.
- Keim, ME (2011), 'Preventing Disasters: Public Health Vulnerability Reduction as a Sustainable Adaptation to Climate Change', *Disaster Medicine and Public Health Preparedness*, 5(2), 140–148.
- Kim, Y-K and H-G Sohn (2017), *Disaster Risk Management in the Republic of Korea*. Springer, Singapore.
- KNUT, KHRC, UASU and KMPDU (2020), *Effects of Coronavirus Pandemic on Education – Mitigation Measures, Analysis and Recommendations on Reopening of Schools, Colleges and Universities*, Nairobi-Kenya, available at: <https://www.khrc.or.ke/publications/215-multi-agency-report-on-effects-of-coronavirus-covid-19-pandemic-on-education-mitigation-measures-analysis-and-recommendations-on-reopening-of-schools-colleges-universities/file.html> (accessed 14 July 2020).
- Kofinti, RE, E-A Ewusie, Y Kwaah and EE Asmah (2020), 'Effects of Parental Attitudes Toward Spousal Violence on Early Childhood Development and Learning Support Among Ghanaian Children', *Journal of interpersonal violence*.

- Kousky, C (2016), 'Impacts of Natural Disasters on Children', *The Future of Children*, 26(1), 73–92.
- Krafft, C (2012), *Challenges facing the Egyptian education system: Access, quality, and inequality [Arabic]*. 1. Population Council.
- Leung, E (2020), 'Lagos state government, KaiOS and Robert and John team up to enable students in Nigeria to continue education during and after COVID-19', Press release, available at: <https://www.kaiostech.com/lagos-state-government-kaios-robert-john-team-enable-students-nigeria-continue-education-covid-19/>
- Maina, G (2020), *Education Disrupted, Education reimagined Part II KENYAN EXPERIENCE*, available at: <https://www.wise-qatar.org/app/upload/2020/06/grace-maina-education-disrupted-education-reimagined-part-ii.pdf>
- Ministry of Education (2020), COVID-19 Coordinated Education Response Plan for Ghana, available at: <https://ges.gov.gh/wp-content/uploads/2020/04/EDUCATION-RESPONSE-PLAN-TO-COVID-19-IN-GHANA-APRIL-2020-1.pdf> (accessed 14 July 2020).
- Muñoz, S and I Ötker (2018), *Building Resilience to Natural Disasters in the Caribbean Requires Greater Preparedness*, International Monetary Fund, available at: <https://www.imf.org/en/News/Articles/2018/12/07/NA120718-Building-Resilience-to-Natural-Disasters-in-Caribbean-Requires-Greater-Preparedness>
- Ofei-Manu, P and RJ Didham (2017), 'Disaster Risk Reduction Capacity Assessment: Conceptualizing a Systematic Capacity (Assessment) Framework for Japan', *Handbook of Disaster Risk Reduction and Management*, 97–138, available at: <https://doi.org/10.1142/8164>
- Oromaner, MJ (2018), 'Review of Hard questions on global educational change: Policies, practices, and the future of education', *Education Review // Reseñas Educativas*, 25.
- Othman, Mariam (2020), 'The effects of the COVID-19 pandemic on one's enjoyment of the right to education', available at: <https://shapesea.com/op-ed/covid-19/the-effects-of-the-covid-19-pandemic-on-ones-enjoyment-of-the-right-to-education/>
- Prasad, S, H-C Su and N Altay (2015), 'Building disaster-resilient micro enterprises in the developing world', *Disasters*, 39(3), 447–466.
- RAND Corporation (2020), Schools Pivot Online in Wake of COVID-19: Q&A with RAND Experts, available at: <https://www.rand.org/blog/2020/04/schools-pivot-online-in-wake-of-covid-19-qampa-with.html>
- Saavedra, J (2020), *Educational Challenges and Opportunities of the Coronavirus (COVID-19) Pandemic*, World Bank Group, available at: <https://blogs.worldbank.org/education/educational-challenges-and-opportunities-covid-19-pandemic> (accessed 20 July 2020).
- Sandanam, A, A Diedrich, GG Gurney and TD Richardson (2018), 'Perceptions of Cyclone Preparedness: Assessing the Role of Individual Adaptive Capacity and Social Capital in the Wet Tropics, Australia', *Sustainability*, 10(4), 1165.
- Sujata, S (2010) 'Disaster Management Education in Indian Schools: Gaps, Challenges and a Human Resource Plan Model for School Education Sector', *Indian Journal of Public Administration*, 56(4), 979–995.
- SEED (2020), *Impact of COVID-19 on Education for Vulnerable Children*, available at: <https://www.seed.com.ng/impact-of-covid-19-on-education-for-vulnerable-children/> (accessed 20 July 2020).
- United Nations (UN) (1948), 'Universal declaration of Human rights', available at: <https://www.un.org/en/universal-declaration-human-rights/> (accessed 6 July 2020).
- UN Educational, Scientific and Cultural Organization (UNESCO) (2013), *Right to education*, available at: <https://en.unesco.org/themes/right-to-education> (accessed 19 July 2020).
- UNESCO (2020), '290 million students out of school due to COVID-19: UNESCO releases first global numbers and mobilizes response', available at: <https://en.unesco.org/news/290-million-students-out-school-due-covid-19-unesco-releases-first-global-numbers-and-mobilizes> (accessed 7 June 2020).
- UNESCO (2020a), 'Education: From disruption to recovery', available at: <https://en.unesco.org/covid19/educationresponse> (accessed 6 July 2020).

- UNESCO (2020b), *Distance learning strategies in response to COVID-19 school closures*, available at: <https://unesdoc.unesco.org/ark:/48223/pf0000373305> (accessed 6 July 2020).
- UNESCO (2020c), *Startling digital divides in distance learning emerge*, available at: <https://en.unesco.org/news/startling-digital-divides-distance-learning-emerge> (accessed 20 July 2020).
- UN Children's Fund (UNICEF) (2020), 'Unequal access to remote schooling amid COVID-19 threatens to deepen global learning crisis', available at: <https://www.unicef.org/press-releases/unequal-access-remote-schooling-amid-covid-19-threatens-deepen-global-learning> (accessed 13 July 2020).
- United States Embassy & Consulate Nigeria (2020), 'USAID Helps Keep Bauchi Students Learning Under Lockdown Through E-Learning Collaboration', available at: <https://ng.usembassy.gov/usa-id-helps-keep-bauchi-students-learning-under-lockdown-through-e-learning-collaboration/> (accessed 17 July 2020).
- Winkler, H and L Rajamani (2014), 'CBDR&RC in a regime applicable to all', *Climate Policy*, 14(1), 102–121.
- Winthrop, R (2020), *COVID-19 and school closures: What can countries learn from past emergencies?* The Brookings Institution, Center for Universal Education, available at: <https://www.brookings.edu/research/covid-19-and-school-closures-what-can-countries-learn-from-past-emergencies/>