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Special Issue on Education in Pandemics

EDITORIAL NOTE

Emily Dunlop and Mark Ginsburg

EiE RESEARCH ARTICLES

Educating during a Health Emergency:
An Integrative Review of the Literature
from 1990 to 2020

*Kathlyn E. Elliott, Katie A. Mathew,
Yiyun Fan, and David Mattson*

La Mise en Œuvre de la Gratuité de
l'Enseignement Primaire en Contexte
de Crise : COVID-19 et Réforme
de l'Enseignement au Sud Kivu,
République Démocratique du Congo
*Jean-Benoît Falisse, Cyril Brandt, Jean
Mukengere Basengezi, Sweta Gupta,
Dieudonné Kanyerhera, Pierre Marion,
Pacifique Nyabagaza, Ibrahim Safari
Nyandinda, Gauthier Marchais, et
Samuel Matabishi*

Home Learning for Children in Low-
Income Contexts during a Pandemic:
An Analysis of 2020 Survey Results
from Syria and the Democratic
Republic of the Congo
*Su Lyn Corcoran, Helen Pincock,
and Rachel Twigg*

Scapegoating the Usual Suspects?
Pandemic Control and the
Securitization of Qur'anic Education
in Northern Nigeria
*Hannah Hoechner and Sadiyu Idris
Salisu*

The 2020 Pandemic in South Sudan:
An Exploration of Teenage Mothers'
and Pregnant Adolescent Girls'
Resilience and Educational Continuity
Anne Corwith and Fatimah Ali

School Leaders' and Teachers'
Preparedness to Support Education
in Rwanda during the COVID-19
Emergency
*Emma Carter, Artemio Arturo Cortez
Ochoa, Philip Leonard, Samuel
Nzaramba, and Pauline Rose*

EiE FIELD NOTES

Improving Social-Emotional Health:
Expansion of Teacher and Student
Wellbeing during the COVID-19 Crisis
in Honduras
Craig Davis and Gustavo Páyan-Luna

The Sandbox Model: A Novel
Approach to Iterating while
Implementing an Emergency
Education Program in Lebanon during
the COVID-19 Pandemic
*Michèle Boujikian, Alice Carter, and
Katy Jordan*

Remote Family Engagement through
Virtual Tutoring: An Emergency
Response to Support Children,
Families, and Students
Carmen Sherry Brown

Project-Based Learning as an
Innovative COVID-19 Response
*Leena Zahir and Janhvi
Maheshwari-Kanoria*

BOOK REVIEWS

Pandemic Education and Viral Politics
by Michael A. Peters and Tina Besley
Noah Kippley-Ogman

*Education, Equality and Justice in
the New Normal: Global Responses to
the Pandemic*
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M. Castillo, and Suzanne Grant Lewis
Changha Lee

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EDITORIAL NOTE

Emily Dunlop and Mark Ginsburg 5

EiE RESEARCH ARTICLES

Educating during a Health Emergency:

An Integrative Review of the Literature from
1990 to 2020

*Kathlyn E. Elliott, Katie A. Mathew, Yiyun Fan,
and David Mattson* 18

La Mise en Œuvre de la Gratuité de
l'Enseignement Primaire en Contexte
de Crise : COVID-19 et Réforme de
l'Enseignement au Sud Kivu, République
Démocratique du Congo

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Mukengere Basengezi, Sweta Gupta, Dieudonné
Kanyerhera, Pierre Marion, Pacifique
Nyabagaza, Ibrahim Safari Nyandinda,
Gauthier Marchais, et Samuel Matabishi* 50

Home Learning for Children in Low-Income
Contexts during a Pandemic:

An Analysis of 2020 Survey Results from Syria
and the Democratic Republic of the Congo

*Su Lyn Corcoran, Helen Pinnock,
and Rachel Twigg* 80

Scapegoating the Usual Suspects? Pandemic
Control and the Securitization of Qur'anic
Education in Northern Nigeria

Hannah Hoechner and Sadiu Idris Salisu .. 108

The 2020 Pandemic in South Sudan: An
Exploration of Teenage Mothers' and Pregnant
Adolescent Girls' Resilience and Educational
Continuity

Anne Corwith and Fatimah Ali 136

School Leaders' and Teachers' Preparedness
to Support Education in Rwanda during the
COVID-19 Emergency

*Emma Carter, Artemio Arturo Cortez Ochoa,
Philip Leonard, Samuel Nzaramba,
and Pauline Rose* 164

EiE FIELD NOTES

Improving Social-Emotional Health:

Expansion of Teacher and Student Wellbeing
during the COVID-19 Crisis in Honduras

Craig Davis and Gustavo Páyan-Luna 202

The Sandbox Model: A Novel Approach to
Iterating while Implementing an Emergency
Education Program in Lebanon during the
COVID-19 Pandemic

*Michèle Boujikian, Alice Carter,
and Katy Jordan* 215

Remote Family Engagement through Virtual
Tutoring: An Emergency Response to Support
Children, Families, and Students

Carmen Sherry Brown 229

Project-Based Learning as an Innovative
COVID-19 Response

*Leena Zahir and
Janhvi Maheshwari-Kanoria* 245

BOOK REVIEWS

Pandemic Education and Viral Politics

by Michael A. Peters and Tina Besley

Noah Kippley-Ogman 259

*Education, Equality and Justice in the New
Normal: Global Responses to the Pandemic*

edited by Inny Accioly and Donaldo Macedo
Deepa Srikantaiah 264

*Learning, Marginalization, and Improving the
Quality of Education in Low-income Countries*

edited by Daniel A. Wagner, Nathan M.
Castillo, and Suzanne Grant Lewis

Changha Lee 268

CONTRIBUTORS 272

EDITORIAL NOTE

EMILY DUNLOP AND MARK GINSBURG

Historically, pandemics have forced humans to break with the past and imagine their world anew. This [coronavirus] one is no different. It is a portal, a gateway between one world and the next. (Roy 2020)

This special issue of the *Journal on Education in Emergencies (JEiE)* is focused on education during pandemics. While the choice of topic for this issue was prompted by the devastating impact of the COVID-19 pandemic, history has been plagued by a long list of pandemics (see Table 1). Studies from around the world have shown the effects a health crisis can have on education. A recent example is the Ebola crisis in West Africa, which resulted in schools being closed for seven to nine months; the impact on school enrollment and dropout rates as the schools reopened was devastating. Recent evidence, including that provided in this special issue, suggests that COVID-19-related school closures have already left their mark. Not only have they exacerbated preexisting inequalities—for example, students from the poorest and most marginalized communities have had the least access to remote learning technology—but the isolation caused by the closures has resulted in psychological trauma that will likely take years if not decades to overcome. The importance of these effects is reflected in the fact that at least four other journals have published special issues on education during the COVID-19 pandemic.¹

Table 1: A Century of Pandemics

Name	Year(s)	Number of Deaths
Antonine Plague	165-180	5 million
Plague of Justinian	541-542	30-50 million
Japanese Smallpox Epidemic	735-737	1 million
Black Death (Bubonic Plague)	1347-1351	200 million
Smallpox	1520	56 million
17th-Century Great Plagues	1600-1699	3 million
18th-Century Great Plagues	1700-1799	600 million
Cholera Outbreaks	1817-1923	1 million
The Third Plague	1855	12 million
Russian Flu	1889-1890	1 million

¹ Current Issues in Comparative Education (2022, Vol. 24), *Journal of Comparative and International Higher Education* (2022, Summer), NORRAG (2021, Special Issue No. 6), and *Prospects* (2020, Vol. 49).

Table 1: A Century of Pandemics (cont.)

Name	Year(s)	Number of Deaths
Yellow Fever	Late-1800s	100-150 thousand
Spanish Flu	1918-1919	40-100 million
Asian Flu	1957-1958	1.1 million
Hong Kong Flu	1968-1970	1 million
HIV/AIDS	1981-present	25-35 million
SARS CoV-1	2002-2003	770
Swine Flu	2009-2010	200 thousand
MERS CoV (Middle East Respiratory Syndrome)	2012-present	850
Ebola	2014-2016	11,300
COVID-19 (SARS CoV-2)	2020-present	6,545,561 ²

Source: Adapted from LePan (2020), Loyola University-Chicago and St. Edward's School (2020), and Open Society Foundations Education Program (2020).

Differences in government and corporate (in)action resulted in the impact of COVID-19 differing significantly across countries (Silva-Ayçaguer and Ponzo-Gómez 2021). Moreover, the health-related effects of the COVID-19 pandemic have not been uniform within societies, in large part because of inequalities in health, housing, nutrition, and access to health care across racial groups and social classes (Accioly and Macedo 2021; CDC 2022). Indeed, during pandemics, “many people...perish not solely because of the virus, but because countries don’t have the resources or public health infrastructure to handle it” (Taylor and Adler 2020, 149), and “choices were made, decisions were taken, lies were told [by government officials and corporate executives] that cost not a few lives, but hundreds and hundreds of thousands of lives that did not need to be lost” (Nichols 2022, 8).

The COVID-19 pandemic’s impact on health worldwide, coupled with the negative economic effects (Quaglietti and Wheeler 2022; Yeyati and Filippini 2021), has seriously affected education access and outcomes, as was the case during the 1918-1919 Spanish Flu pandemic (Arnold 2018; Stern, Cetron, and Markel 2009). Indeed, when COVID-19 hit, early childhood education centers, schools, and higher education institutions were closed, leaving 90 percent of children and youth around the world without ready access to education (UNESCO, UNICEF, and World Bank 2020). As reported in a study released in January 2021, “98% of countries have implemented full or partial closures due to COVID-19...[and there were] 199 billion closed days of school in 2020” (Grob-Zakhary et al. 2021, 4; see

² As of October 17, 2022 (WHO 2022).

also Meinck, Fraillon, and Strietholt 2022). One of the lessons learned from the education response to the COVID-19 pandemic was that “the response of national education systems was fragile and inconsistent. Ministers and public authorities were dependent on platforms and content made available by private companies and were not even able to ensure digital access for all students” (Nóvoa and Alvim 2020, 37). Despite various mitigation strategies, the closure of education institutions has been estimated or found to cause significant learning loss, which has the potential to affect future adults’ economic productivity and earnings (Kuhfeld et al. 2020; UNESCO Institute for Statistics 2022; Azevedo et al. 2020).

Like COVID-19’s impact on health and economics, its impact on education has varied across countries and among groups within countries (e.g., gender, rural/urban, social class, and racial/ethnic groups) (UNESCO 2022). As Russo, Magnan, and Soares (2020, 2) comment, “the existing educational inequalities have been significantly increased through measures [or lack thereof] to contain the spread of the virus.” According to the World Bank (2020, 5), “the crisis was not equally distributed: the most disadvantaged children and youth had the worst access to schooling, highest dropout rates, and the largest learning deficits.”

The unequal effect on education arose both within countries and across countries. For example, a study conducted between December 2020 and July 2021 in Burkina Faso, Denmark, Ethiopia, India, Kenya, the Russian Federation, Rwanda, Slovenia, the United Arab Emirates, Uruguay, and Uzbekistan (Meinck et al. 2022, xvii) found that “the periods of school closure varied within and across countries” and that “there were also differences in the participation of students in schooling and the modes, media, and teaching methods used in these periods.” Menashy and Zakharia (2022, 309) state further that “the pandemic...impacted...those most vulnerable in the global order with greatest force,” calling particular attention to “the world’s 79.5 million people forcibly displaced by conflict and persecution—86 percent of whom reside in low and lower-middle income countries.”

During the pandemic, countries, schools, teachers, students, and their families engaged in various strategies to continue teaching and learning, referred to in these pages as distance education or remote learning (Crompton et al. 2021; Inal 2022; Saini 2022). The differences in education access and outcomes within and across countries stemmed from the particular strategies used. For example, UNESCO et al. (2020, 6) report that, “as schools closed around the world to limit the spread of COVID-19, governments moved quickly to offer remote learning options, including through online platforms, television, radio and paper-based take-home packages.”

The research articles and field notes included in this *JEiE* special issue reinforce Arundhati Roy's (2020) notion that a pandemic can be considered "a portal, a gateway between one world and the next." The authors who contributed to this special issue offer insights into how education systems, students, teachers, and parents experienced the COVID-19 pandemic; how they confronted the challenges they faced; and how, in some cases, they began to conceive of a different and better future for education across the world after passing through the pandemic's portal. Reimers and Opertti (2021, 39) likewise observe in their introductory chapter of *Learning to Build Back Better Futures for Education* that,

in response to [the COVID-19 pandemic], many stakeholders collaborated to create novel ways of sustaining education at times when this was very challenging. These efforts are important not just because of what they did at a time of great need, but because of what they show about what is possible in reimagining education. There is much to be learned from studying these [31] innovations, particularly when it comes to supporting the necessary transformation of schools and school systems around the world.³

This special issue reflects an enormous and unprecedented undertaking by the *Journal on Education in Emergencies*. Our call for papers resulted in more than 200 abstract submissions and, subsequently, we received 69 theoretical and empirical research manuscripts or field notes. After a process of double-anonymous peer review, we selected six research articles and four field notes for this special issue and commissioned three book reviews. The global nature of the COVID-19 pandemic is reflected in the scale and scope of these contributions from 37 authors in a wide range of countries. We decided to publish this special issue in French as well as English, given that major pandemics (e.g., Ebola and HIV/AIDS) occurring prior to COVID-19 impacted education and society in francophone Africa. Moreover, given the global nature of the pandemic, it was important that we expand the reach of the evidence presented in this issue beyond an English-speaking audience. We hope that, by publishing this special issue in French, we will encourage scholars in francophone countries to broadcast lessons from the fieldwork and research findings on pandemics found within this issue to their home contexts.

³ Reimers and Opertti (2021) group the 31 innovations examined in their edited volume in terms of the areas these innovations supported: (1) student-centered learning, (2) deeper learning, (3) socioemotional development and wellbeing, (4) teacher and principal professional development, and (5) family engagement.

Several themes run through this special issue of *JEiE*, many of them in line with what we outline above. In “Educating during a Health Emergency: An Integrative Review of the Literature from 1990 to 2020,” Kathryn E. Elliott, Katie A. Mathew, Yiyun Fan, and David Mattson put education responses to the COVID-19 pandemic in historic perspective. Their integrative literature review of education responses to health crises such as SARS, MERS, Ebola, and HIV/AIDS shows that themes common in the COVID-19 education literature—the foundational role of context and community support, access to equitable education in the digital age, teachers’ and students’ social-emotional wellbeing, teachers’ role in adapting curriculum and pedagogy, the need for additional training and support for teachers, and the opportunity for a creative shift in education practices and policies—find parallels in previous pandemic responses.

Taking up these important themes, Jean-Benoît Falisse, Cyril Brandt, Jean Mukengere Basengezi, Sweta Gupta, Dieudonné Kanyerhera, Pierre Marion, Pacifique Nyabagaza, Ibrahim Safari Nyandinda, Gauthier Marchais, and Samuel Matabishi, in their article “La Mise en Œuvre de la Gratuité de l’Enseignement Primaire en Contexte de Crise : COVID-19 et Réforme de l’Enseignement au Sud Kivu, République Démocratique du Congo” (translated as “Implementing Free Primary Education in a Crisis Context: COVID-19 and Education Reform in South Kivu, Democratic Republic of the Congo”), discuss the need to support teachers and the fact that COVID-19 compounded many preexisting crises. This article is uniquely situated as an original French-language piece in this bilingual special issue. The authors’ data-rich mixed-methods study of teachers shows that, in Democratic Republic of the Congo’s South Kivu province, the pandemic did not adversely affect teacher-parent relations. However, preexisting teaching conditions, including precarious contracts, made continuing in the profession untenable for many teachers in the area. The authors conclude that, while free education may be an important step, it is not a panacea for promoting increased access to schooling, and that, to be successful in crisis situations, education reform requires a sustained effort.

The next three pieces highlight the impact the COVID-19 pandemic has had on marginalized groups in already marginalized contexts by focusing on disabled learners, Qur’anic school students, and pregnant adolescents and teenage mothers. In “Home Learning for Children in Low-Income Contexts during a Pandemic: An Analysis of 2020 Survey Results from Syria and the Democratic Republic of the Congo,” Su Lyn Corcoran, Helen Pinnock, and Rachel Twigg look at programs that support learners with disabilities and at developing inclusive education practices during the pandemic in Syria and Democratic Republic of the Congo. They note

the importance of localized approaches to inclusive education that depend on community networks and point to teachers and parents as the key mechanisms for supporting learners with disabilities. In “Scapegoating the Usual Suspects? Pandemic Control and the Securitization of Qur’anic Education in Northern Nigeria,” Hannah Hoechner and Sadiyu Idris Salisu showcase the devastating effects school closures had on those attending Qur’anic schools in Northern Nigeria. The authors note specifically that the school closures allowed myths about the students who attend these schools to be perpetuated throughout the country, which in turn reinforced and legitimized the perceived appropriateness of drastic measures (e.g., forced school clearance and student deportations) as a form of control and securitization. In “The 2020 Pandemic in South Sudan: An Exploration of Teenage Mothers’ and Pregnant Adolescent Girls’ Resilience and Educational Continuity,” Anne Corwith and Fatimah Ali highlight the effects the pandemic had on teenage mothers and pregnant girls in South Sudan, who received minimal support and experienced persistent gender-based violence and negative stereotyping. However, the authors found that many of these girls exhibited great resilience and maintained their hope of returning to school and becoming financially independent.

We conclude the research articles section with “School Leaders’ and Teachers’ Preparedness to Support Education in Rwanda during the COVID-19 Emergency,” by Emma Carter, Artemio Arturo Cortez Ochoa, Philip Leonard, Samuel Nzaramba, and Pauline Rose. These authors shed light on the different responses the Rwandan government had to differing teaching conditions. They report, for example, that male teachers generally had better access to resources during the pandemic, as did teachers from better resourced schools. They also state that teachers believed that students from low-income families and communities were the least likely to benefit from remote learning. Unfortunately, this research echoes studies from around the world that have found that the school closures and reliance on remote learning exacerbated preexisting inequalities.

This special issue also presents four field notes that showcase important programs that were put in place to ameliorate many of the issues presented in the research articles. For example, in “Improving Social-Emotional Health: Expansion of Teacher and Student Wellbeing during the COVID-19 Crisis in Honduras,” Craig Davis and Gustavo Páyan-Luna explore how USAID’s Asegurando la Educación project transitioned to providing virtual social-emotional learning. They describe interventions that contributed to the country’s lowest national

dropout rate in five years and note that the schools receiving the interventions had higher enrollment rates than the national average. They conclude by offering insights into the importance of social-emotional learning to good mental health and student retention in crisis situations.

In “The Sandbox Model: A Novel Approach to Iterating while Implementing an Emergency Education Program in Lebanon during the COVID-19 Pandemic,” Michèle Boujikian, Alice Carter, and Katy Jordan extend these ideas to a program that supported refugee learning in Syria. The authors highlight how important using WhatsApp was to ensuring that children in Lebanon were able to keep learning as schools closed during the pandemic. They also offer a novel “sandbox” model that they used to rapidly test and iterate cycles of the program to ensure that it met the intended goals. They argue that this approach has the potential to be useful across many different contexts.

In “Remote Family Engagement through Virtual Tutoring: An Emergency Response to Support Children, Families, and Students,” Carmen Sherry Brown explores the importance of virtual tutoring during the pandemic and its effects on families and children, and on fieldwork interns who were attending a United States-based school of education. She also offers lessons for those implementing virtual tutoring programs. Finally, in “Project-Based Learning as an Innovative COVID-19 Response,” Leena Zahir and Janhvi Maheshwari-Kanoria offer insights into project-based learning as an important pedagogical approach to reach those who are digitally marginalized. Project-based learning could serve as a valuable strategy to be employed in many contexts in response to crises. These four field notes offer important programmatic responses to crises and are likely both scalable and adaptable across many contexts.

In addition to the six research articles and four field notes, this special issue of *JEiE* includes three book reviews. In the first, Noah Kippley-Ogman discusses Michael A. Peters and Tina Besley’s coauthored book, *Pandemic Education and Viral Politics*. In the second, Deepa Srikantaiah provides an overview and comments on Inny Accioly and Donaldo Macedo’s coedited volume, *Education, Equality and Justice in the New Normal: Global Responses to the Pandemic*. Finally, in the third book review, Changha Lee examines Daniel A. Wagner, Nathan M. Castillo, and Suzanne Grant Lewis’s coedited volume, *Learning, Marginalization, and Improving the Quality of Education in Low-income Countries*.

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NOTE FROM PORTICUS

Porticus is a global philanthropy that seeks to create a just and sustainable future in which human dignity can flourish. Education is key to achieving this mission. Porticus' All Eyes on Learning program aims to ensure that children in displacement situations can develop the academic, social, and emotional skills and competencies needed to help them reach their full potential. This special issue of *JEiE*, which helps to strengthen the evidence base on education in pandemics, also provides insights into the kind of approaches that can provide displaced children with more secure opportunities for a quality holistic education.



NOTE FROM EDUCATION.ORG

Education.org is a young foundation whose vision is to enable leaders to access and use the best evidence available to get the hardest-to-reach children and youth into school so they can build skills in literacy and numeracy and achieve overall wellbeing. This special issue of *JEiE* is an important tool for helping the education community make the best use of the lessons that have emerged from the COVID-19 pandemic. We thank all contributors, staff members, and reviewers for their tireless work to make this vision a reality.



EDUCATING DURING A HEALTH EMERGENCY: AN INTEGRATIVE REVIEW OF THE LITERATURE FROM 1990 TO 2020

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ABSTRACT

Prior to 2020, empirical research and reports on approaches to education during health crises were limited. They focused primarily on reporting local-level response and provided only limited analysis. Various historic epidemics, like SARS, Ebola, and HIV/AIDS, provided important lessons about educational efficacy during major health emergencies. However, the sudden emergence of the COVID-19 pandemic led to an explosion of research on educating during a worldwide health crisis. This integrative literature review (Torraco 2005) uses the INEE Minimum Standards framework to conceptualize the response to pandemics and epidemics from 1990 to 2020. The research analyzes 124 empirical studies, practitioner and governmental reports, and historic accounts of Ebola, SARS, and other epidemics, as well as early responses to COVID-19, in order to understand how education stakeholders continued educating during the spread of highly communicable illnesses. The high-level themes that emerged included the foundational role of context and community support; access to an equitable education in the digital age; the social-emotional wellbeing of teachers and students; teachers' role in adapting curriculum and pedagogy; the need for additional training and support for teachers; and the opportunity for a creative shift in practices and policies in education.

INTRODUCTION

The COVID-19 pandemic disrupted education globally, and even countries not accustomed to delivering education in emergencies had to develop strategies for emergency teaching (Hodges et al. 2020). Consequently, research on educating during a worldwide health crisis exploded, in particular to find alternatives to

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face-to-face teaching to help mitigate the spread of viral disease. Prior to 2020, research on providing education during health crises was limited; there were isolated reports and localized studies, but a broad understanding of teaching during a health crisis had not been achieved. Because epidemics and pandemics provide important lessons about providing education effectively during major health emergencies, we conducted an integrative literature review to explore what has been learned and written about education in emergencies, both from historic disease events and during the first year of the COVID-19 pandemic.¹

An epidemic is a sudden outbreak of a disease in a certain geographic area, whereas a pandemic is an outbreak of a disease across several countries or continents (CDC 2012). Between the years 1990 and 2020, epidemics and pandemics affected education around the world. Previous pandemics, such as sudden acute respiratory syndrome (SARS) in 2003 and influenza type A (H1N1) in 2009, led to mass school closures to limit the spread of the viruses (Brown et al. 2011; Davis et al. 2015; Fox 2004). The HIV/AIDS pandemic, which began in 1981 (CDC 2021), put a devastating strain on schools and families in sub-Saharan Africa (Robson and Sylvester 2007; Shaeffer 1994) and became an important global public health education challenge (Van Rompay et al. 2008). Although the MERS epidemic in 2012 and Ebola in 2014 were contained geographically, they posed a threat to education in the regions where they occurred (Jalloh and Raschid 2018). Both had long-term consequences for education outcomes (Smith 2021) and negatively affected students' psychosocial wellbeing (Al-Rabiaah et al. 2020). However, no prior disease events have had the same degree of global impact on education as the COVID-19 pandemic that began in 2020.

When evidence from previous disease events is considered in combination with emerging evidence from COVID-19, it is essential to ensure that access to education is disrupted as little as possible. Much of the literature examined in our review addressed underresourced contexts, where foreign aid was used for education projects run by nongovernmental organizations (NGOs) and United Nations agencies. Some local research universities, governments, and organizations had researched particular communities' responses to such a crisis in well-resourced countries. Both situations are significantly different from the COVID-19 pandemic, thus it should be acknowledged that, while the existing literature provides insights on past events, it also highlights the novelty of COVID-19.

¹ The integrative literature review, as defined by Torraco (2005), is a distinctive form of research that generates new knowledge about the topic reviewed.

Education is a fundamental human right articulated in the UN Declaration of Human Rights (UNESCO-IIEP 2022), and it must be provided for, even in emergency situations such as conflict, disaster, and disease outbreaks (Burde et al. 2017). To ensure a quality, coordinated humanitarian response in communities affected by disaster, the Inter-agency Network for Education in Emergencies (INEE 2012) established the Minimum Standards Framework (MSF) for education in emergencies. The MSF provides a base of technical knowledge and good practice to ensure that all children and youth will have access to safe, quality education, even in crisis situations. However, educating during a disease emergency presents a particular set of constraints for education stakeholders in terms of delivering quality education in a coordinated and equitable manner. In this integrative literature review, we explore how education stakeholders globally implemented the five MSF domains during disease events. We employed the MSF to map the education response to pandemics and epidemics from 1990 to 2020. The research questions that guided this review are:

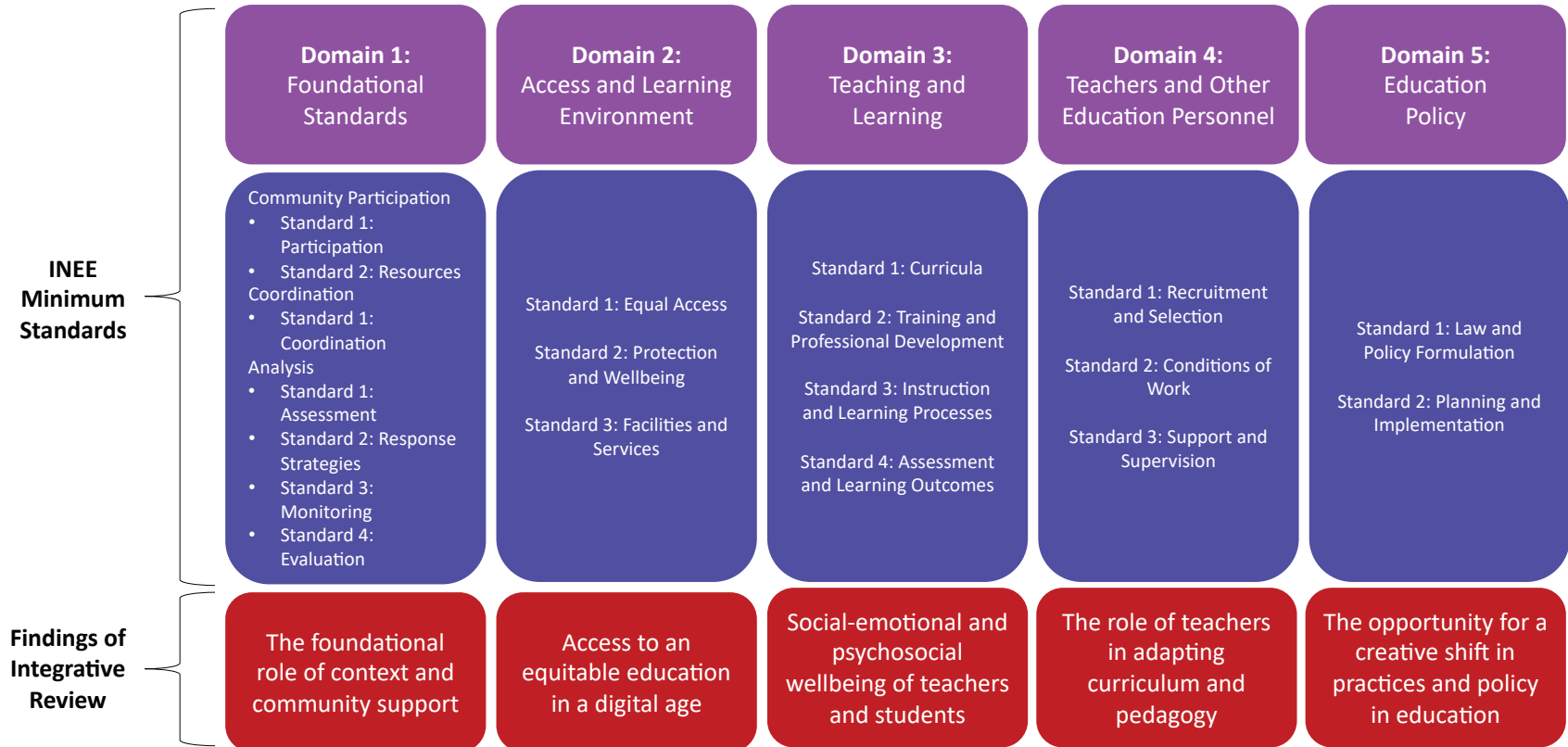
1. What affordances and challenges do teachers, instructors, and school leaders experience during health emergencies?
2. What pedagogical and curricular tools were most effective and equitable for teaching and learning in various emergency contexts?
3. What lessons from previous epidemics have been applied during the COVID-19 crisis?

ANALYTICAL FRAMEWORK

In this article, we employ the MSF as an analytical framework to understand more fully how the international community has responded to pandemics and epidemics. The MSF has five key domains: foundational standards (community participation, coordination, analysis); access and learning environment; teaching and learning; teachers and other educational professionals; and education policy (INEE 2012). We examine community participation, Domain 1, which many of the articles reviewed said was crucial to a successful education response (Jameson et al. 2020). Bromley et al. (2017) stressed that community support is key to success and gave an example of effective community resilience that stemmed from high-touch, bidirectional learning, such as frequent trainings for at-risk populations and diverse partnerships with the local government that are led by community members. Domain 2 highlights the importance of access, to education broadly and

to the virtual and physical spaces where emergency education is often provided, especially during disease outbreaks (INEE 2021). Domain 2 (INEE 2012) also includes concerns about personal safety during a disease outbreak, which has been interpreted primarily as psychosocial wellbeing and hygiene. Domain 3 includes curricula, training, professional development, pedagogy, and assessment. This was a particularly fruitful area that offered many research studies, especially around curriculum and pedagogy, and teacher training; therefore, we separated these items into two sections in our findings. We combined teacher training with Domain 4, which covers the recruitment and selection of teachers, as well as the conditions of their work, supervision, and support. Domain 5 focuses on education law, policymaking, and implementation. For the purposes of this review, Domain 5 was understood to address policy changes, and it captures creative responses to educating during disease emergencies.

Figure 1: MSF and Findings



In our literature analysis, we did not flesh out all aspects of each domain. This article reflects the way the literature conceptualizes each domain and highlights gaps in how each area is understood in the research and in published works. There are gaps in equitable access, effective distance learning strategies (INEE 2021), and concerns about teacher support (World Bank 2020) and the mental health of students (Chang-Bacon 2021) and teachers (Chabbott and Sinclair 2020).

METHODOLOGY

Torraco (2005) argued that a chief purpose of an integrative literature review is to address emerging topics that would benefit from a holistic conceptualization and a synthesis of the literature to date, and to offer a new perspective. This is different from a traditional literature review, which summarizes the existing literature without offering analytical commentary. The purpose of this integrative literature review is to review the literature that has emerged around education responses to prior epidemics, such as Ebola, MERS, SARS, H1N1, HIV/AIDS, and early responses to the COVID-19 pandemic. It does not seek to systematically review all literature on the topic of educating during disease outbreaks, and instead combines perspectives to support a theoretical model (Snyder 2019). The INEE MSF was the guiding framework for this review.

While literature reviews enable researchers and practitioners to map and survey a given field, they are limited in two significant ways. They only consider work documented in academic and government reporting systems, which leaves important work unacknowledged or unseen. In addition to this limitation, our search was limited to articles in the English language and to studies on formal schooling. We found few studies focused on highly marginalized populations, street children, rural students, and ethnic and religious minorities.

We undertook this review in two stages, the first starting in April 2021. The authors began by conducting a search via Google Scholar, ERIC, and EBSCOhost using key search terms (Table 1). The search was limited to the period beginning January 1990 and ending December 2020. We chose 1990 as our earlier boundary to include the HIV/AIDS epidemic and the beginning of access to personal technology, such as at-home computers and the internet. We selected December 2020 as the end date because it enabled us to document publications about the early stages of the COVID-19 pandemic.

We crossed the primary search terms related to specific disease events with secondary and tertiary search terms related to education (Table 1). This combination of search terms, which was designed to capture articles related to education responses to epidemics and pandemics, returned empirical studies, practitioner and government reports, and historical accounts. In the first stage of the review, the authors reviewed the abstracts of all articles resulting from the search. This included all articles related to P-20 education, higher education, formal and nonformal education, teachers, students, school administrators, and education environments. We excluded articles that focused on medicine or medical education, were intended for a medical audience, and/or related to public health campaigns. When there were questions about whether an article qualified, the team made the decision together. The articles that met the inclusion criteria were then organized according to emergent themes: health/hygiene education, pedagogy, equity, leadership/administrators, students, teachers/instructors, social-emotional learning and psychosocial wellbeing, and creativity.

Table 1: Search Terms

Primary Search Terms	Secondary Search Terms	Tertiary Search Terms
Ebola	Pedagogy	P-20
SARS	Curriculum	Online
MERS	Teaching	Alternative
H1N1	Education	Remote
HIV/AIDS	Hygiene	Distance
COVID-19	Social-Emotional Learning	
	Psychosocial	
	Access	

In the second stage of review, the researchers reviewed the selected articles in greater depth. The main ideas of each article were coded according to the five MSF domains. The main goals were to critically analyze the literature according to different areas of concern and to examine the body of literature for best practices and for gaps in services provided or communities served (Snyder 2019). In total, we reviewed 124 articles (Table 2). We debated adding an additional domain because of the significant number of articles that listed best practices without discussing them in depth; it seemed that a new type of literature was developing before our eyes. However, because many of these best practices fit into the existing domains and we had not fully fleshed out a theory that explained the new type

of literature we were seeing, we decided against adding an additional domain. This subsection of literature is discussed in the conclusion.

Table 2: Results of Coding

Emergent Themes	Number of Articles Coded
Context and community support	26
Access to an equitable education	53
Social-emotional and psychosocial wellbeing	17
Teachers and other professionals	62
Creative shifts in practices and policy	15

Note: Forty-nine articles were double coded and are reviewed in more than one category.

FINDINGS

We discuss our findings from the articles in accordance with the five MSF domains: the foundational role of context and community support, access to an equitable education in the digital age, teachers' and students' social-emotional and psychosocial wellbeing, teachers' role in adapting curriculum and pedagogy and their need for additional training and support, and the opportunity for a creative shift in education practices and policies.

DOMAIN 1: CONTEXT AND COMMUNITY SUPPORT

Research has demonstrated that community participation is the key to successful emergency responses (Jameson et al. 2020). The first domain of the MSF emphasizes community participation as it relates to community practices and resources in a time of need; however, a clear definition of "community" is lacking (INEE 2012). For this review, the term can be understood broadly as both geographic (e.g., neighborhood) and relational (e.g., professional) communities where members feel a sense of belonging, fulfilled needs, and connection (McMillan and Chavis 1986). In the education context, it can refer to schools, institutions, districts, professional teacher networks, and online learning communities, to name a few.

Public policies and empirical research in education highlight the role of community participation and engagement in public health crises. The CDC (2014) recommends, for example, that universities collaborate with their local communities to develop an influenza pandemic response plan. In a crisis context, healthy community-school partnerships can help provide emergency assistance,

support for the emergency transition of schools to virtual or remote learning, family assistance, and community outreach (Valli, Stefanski, and Jacobson 2016). Collaborative efforts within school districts have the potential to enhance disaster preparedness (Burke et al. 2015). Emergency contexts, including public health crises, can create challenges for school-community partnerships, including interrupting the normal operation of institution-sponsored community services such as schooling, child care, and health care, but crises can also present unique opportunities to build relationships and improve regional resilience (Sutton and Tierney 2006). Saleh and Mujahiddin (2020) argue that higher education's role in implementing community empowerment practices during COVID could provide new models of community participation after emergencies (Iyengar et al. 2021).

Communities in a crisis context can also be relational. In response to educators' concerns about maintaining a sense of community in emergency remote learning environments, researchers have explored ways teachers can encourage engagement in order to maintain students' sense of belonging (Gares, Kariuki, and Rempel 2020). During the COVID-19 pandemic, institutions made an effort to maintain a sense of community, including by organizing virtual campus events (Fritz et al. 2020). Researchers adopted the concept of a community of practice (CoP; Lave and Wenger 1991) to describe education communities that enable learning to take place in situ through social participation and coconstruction, like teaching apprenticeships. Bolisani et al. (2020), who conducted a case study on the CoP among faculty members at an Italian university during the COVID-19 pandemic, identified characteristics such as a flexible management style, diverse skills and levels of involvement, and self-organization as important in building effective CoP models in emergency contexts. While CoP are often conceptualized as a type of professional learning, the literature demonstrates that these groups also provide emotional support and a sense of cohesion that mimic in-person communities.

Emergencies affect the stability of communities by interrupting people's usual roles, relationships, and activities (UNESCO 2010). In-person communities can be disrupted by epidemics and pandemics when social distancing is required, which may help to explain the limited literature on place-based communities in health crises compared to the plethora of research on online communities. Informal, self-directed online communities and networks serve as an alternative to in-person communities in emergency contexts (Macia and Garcia 2016). For example, at the onset of the COVID-19 pandemic, a community of teachers and administrators at a Dutch university shared their knowledge about remote teaching (Wolfensberger and Ding 2020). Social media have been used increasingly to share resources and build community among educators and academics during

health crises (Greenhow and Chapman 2020; Sobaih, Hasanein, and Elnasr 2020). However, despite the immense opportunities they present to build community and encourage participation in said online communities in emergencies, social media are still underutilized by education stakeholders (Fan and Elliott 2022).

DOMAIN 2: ACCESS TO AN EQUITABLE EDUCATION

Access continues to be the greatest education challenge during disease outbreaks. While it is also a central challenge during natural disasters and civil conflicts, disease emergencies require different solutions. It must be understood how disease affects education access; technology can make it seem easier but it often simply creates new hurdles. Cutri, Juanjo, and Whiting (2020), for example, highlight the way remote teaching can hide equity issues. It is important that researchers continue to investigate how physical distance and remote teaching affect both the perception and the measurement of education access and equity.

Hoadley (2007) looked at school as a place where students could be cared for during the HIV/AIDS epidemic, arguing that understanding school as a place of care is crucial to protecting the key mission of schooling—teaching and learning. While there was concern about providing accessible and equitable education during the HIV/AIDS epidemic, face-to-face education continued. The combination of remote virtual and in-person learning, also known as blended learning, during the COVID-19 pandemic raises questions about what care looks like in virtual and remote spaces and how educators can provide care in both synchronous and asynchronous environments.²

Specific concerns about access to education include reaching rural students and students with learning difficulties, and providing the special education supports they need. Jameson et al. (2020) find that, during school closures, students in rural areas with special education designations, such as those with autism or dyslexia who require augmentative and alternative communication, may not receive the services they qualify for. Schwartzman (2020) adds that most online platforms are not adaptive for those who have disabilities. Some schools concerned about not being able to provide adequate services for students in special education did not transition to remote learning at all (Jameson et al. 2020). Rural schools tend to be underresourced, and rural students are less likely than their suburban and

² Synchronous classes run in real time, with students and instructors attending together from different locations. Asynchronous classes run on a more relaxed schedule, with students accessing class materials during different hours and from different locations; see <https://thebestschools.org/resources/synchronous-vs-asynchronous-programs-courses/>.

urban counterparts to have a computer or internet access at home or to own a smartphone, which makes it harder for the rural students to access curriculum. Moreover, teachers in rural schools often lack professional development in technology and special education training. Based on quantitative data from Sierra Leone and Guinea during the Ebola outbreak, Smith (2021) argues that rural and poor students are most likely to leave school during disease emergencies. García and Weiss (2020) show that the COVID-19 pandemic has exacerbated the opportunity gaps between wealthier and poorer students, especially those who lack access to food, shelter, and health care. University students in the United States faced barriers to success in their courses, due mostly to challenges with internet connectivity, and some struggled with housing insecurity; both problems were greatest for non-White first-generation and female students (Gillis and Krull 2020). According to the Kansas State Department of Education (2020), immigrant students in Kansas face unique challenges, such as not being able to access school information in their native language, and they suggest potential solutions, like making school- and district-level plans for multilingual families. Disengagement is another concern for educators in largely minoritized and poor communities, as it leads to poor achievement, frequent absence, and disruptive behavior (Drane, Vernon, and O'Shea 2020). Roman's (2020) findings on disengagement extend to preservice teachers, who also are susceptible to disengaging from their learning.

The literature also shows that a range of responses to schools' concerns about digital inclusion emerged during the COVID-19 pandemic (García and Weiss 2020), including the use of TV channels in New Zealand and Australia. Portugal delivered all educational materials through the mail, and the United Arab Emirates set up a technical hotline for students who encountered technology troubles (Drane et al. 2020). As has been made clear during the current pandemic, the lack of access to personal technological devices can be a major challenge during a crisis. Allier-Gagneur et al. (2020) argue that national or international policies could be implemented to lower the cost of these devices, such as by lifting taxes, using Universal Service and Access Funds to bring down costs, or allowing installment payments. They note that limited internet connectivity is another major concern. Rush, Wheeler, and Partridge (2014) argue that access to the internet and technological devices during emergency situations often depends on the generosity of companies; Verizon, for example, gave US\$43 million to New York City Public Schools to use to bridge the digital divide (Verizon 2022).

Access to internet-connected devices is an especially significant problem in countries and regions where there is poor internet connectivity. Adnan and Anwar (2020) looked at higher education in Pakistan, where funding to keep up with technology was lacking even before the COVID-19 pandemic. Qazi et al. (2020) had similar findings in Brunei and Pakistan, where rural students were less satisfied with online learning than their urban and suburban counterparts. Students in Pakistan also found it difficult to access the curriculum online, saying that internet connections were too expensive and they had trouble with connectivity (Adnan and Anwar 2020). Jalloh and Raschid (2018) highlighted similar problems during the Ebola epidemic in Sierra Leone, where many universities cancelled classes for an entire year. Samuel et al. (2020) showed that, in Nigeria, internet is not advanced enough to support e-learning for all students; for example, in some rural areas there is no regular power supply.

The literature demonstrates that some of the challenges faced by students during health emergencies break down around gender. For example, girls globewide bear more responsibility than boys for household chores and are less likely to have access to internet and devices (Allier-Gagneur et al. 2020). Evans (2002) looked at the relationship between education and HIV/AIDS among street children in Tanzania. While all these children come from extremely poor families, those who lost parents to AIDS were in an even more precarious situation, a problem exacerbated by gender. In a system of fee-paying schools, where many orphaned students have to work rather than attend school, young women are often vulnerable to sexual and labor exploitation (Robson and Sylvester 2007). During the HIV/AIDS crisis, teenage girls were especially vulnerable to contracting the disease, as many engaged in sexual relationships to fund their education (Evans 2002). Girls were similarly affected by Ebola; in Sierra Leone, government policy shifted after the Ebola epidemic (Lázaro Lorente et al. 2020), and pregnant girls were no longer allowed to attend school (Pärnebjörk 2016). Menzel (2019) problematized this policy, arguing that many young women in Sierra Leone were pregnant before Ebola, but the increased concern over maintaining foreign funding from the international community led to more emphasis on the rate of pregnancy in young women. Smith (2021) also questioned the impact the Ebola epidemic had on girls and orphans dropping out of school, finding relatively limited data to support claims that these were the populations that had been most affected. The effects disease emergencies have on teachers also affect access to education more broadly. Robson and Sylvester (2007) highlighted the loss of teachers in Zambia during the HIV/AIDS epidemic, which made class sizes larger and limited the number of students who could be enrolled. Santos and Novelli (2017) stated that teachers in Liberia were without work during Ebola due to the school closures,

which increased their economic precarity and resulted in a shortage of teachers. As a result of this shortage, along with restrictions on class size to control Ebola, many students were pushed out of the education system (Santos and Novelli 2017).

DOMAIN 3: SOCIAL-EMOTIONAL AND PSYCHOSOCIAL WELLBEING

A 2018 addition to INEE's MSF defines psychosocial support as "processes and actions that promote the holistic wellbeing of people." This addition encouraged national governments and the international aid community to adjust curricula, such as by including an emphasis on self-confidence and hope. The global community's broader emphasis on ensuring developmental psychosocial support and wellbeing for teachers and students coincided with the onset of the SARS epidemic, as well as the ongoing Ebola and HIV/AIDS crises, which means the literature has been concerned with both mental and physical health since the Sphere Guidelines were published in 1997 (Alfadhli and Drury 2016).³

Our analysis revealed two important themes. First, the impact of emergencies differed according to social and cultural contexts; second, it differed according to the specific disease. A meta-analysis by Burde et al. (2015) suggests that the social-emotional needs of students in areas of protracted conflict and natural disasters may differ from the needs of students in areas where the threat has subsided. A study related to cases of MERS among medical students also highlighted disparities in how people of different genders respond to psychological threats, with females having a higher mean stress average than males (Al-Rabiaah 2019). External factors, such as war and conflict, also contribute to a pandemic's impact on the psychosocial and emotional wellbeing of students and teachers (Murray 2019).

Violent conflict can lead to the spread of disease and disrupt the basic social networks that promote social-emotional health, including schools, which have a social contract with parents stipulating that they will provide a degree of safety for their children. This was seen in Liberia, with schools navigating a delicate balance of fulfilling the expectations of parents and the need for public safety as communities recovered from Ebola outbreaks (Santos and Novelli 2017). Quarantine protocols also severely disrupt social routines, and parents fear both possible infection and quarantine restrictions. National volunteers, implemented as part of the Liberian Ministry of Education's response to Ebola, particularly those familiar with the local communities, helped address both practical safety protocols and social dynamics. In a comparison of a student population in

3 See https://en.wikipedia.org/wiki/The_Sphere_Handbook.

Guangzhou China and the general public in Hong Kong, Gu et al. (2015) found that students in Guangzhou held unsubstantiated beliefs about the threat of H1N1 and experienced higher levels of anxiety than the Hong Kong public because of these false beliefs. Interventions by university counseling centers that prioritized contextual and cultural knowledge proved more successful in helping students cope with stress during the SARS epidemic. Longitudinal data provide evidence that the needs of students and teachers during stressful times diverge across differences in gender and culture. Ignoring these differences may cause educators to misunderstand how cultural identity informs individual students' choice of mechanisms to cope with anxiety and stress (Main et al. 2011).

A consistent finding across these diverse contextual factors is that psychosocial distress during a pandemic is a direct result of interrupted schooling. Chang-Bacon (2021) highlights the difficulty faced by students whose schooling was interrupted and suggests that traditional concepts of how interrupted schooling affects students may need to be adjusted to reflect the experiences of those who lost academic advancement and suffered psychosocial distress due to having to learn remotely during COVID-19. School routines and rituals support resilience because they provide children with an element of a normal life and a sense of consistency (Burde et al. 2015). Their relationships with their peers and teachers also provide important emotional and developmental support, and the destabilization of their normal routines is a common cause of psychosocial distress (INEE 2018). Recognizing the importance of these relationships and the distress caused by isolation helps to determine the appropriate education response. According to Crosby, Howell, and Thomas (2020), trauma-informed teaching practices focus on developing teacher-student-peer relationships to combat the effects of trauma on psychosocial wellbeing. They also point out that necessary social-distancing guidelines may interfere with teachers' ability to encourage healthy relationships with and between their students. Helping teachers model emotional regulation skills, encouraging conversation to give students an opportunity to process their experiences, and increasing the amount of time spent interacting playfully with peers are pedagogical strategies recommended in multiple articles reviewed for this study, especially for high-risk children (Çifçi and Demir 2020; Crosby et al. 2020; Roman 2020).

Psychosocial distress and challenges to wellbeing may not affect every population the same way. Minahan (2020, 24) points out the disparate impact COVID-19 has had on populations within the United States: "The pandemic is also widening the achievement gap for children living in poverty and children of color, who are experiencing higher rates of illness, death, and economic impact...the

disproportionate impact of the pandemic on the mental health of children of color must be addressed as we return to classrooms.” One obstacle facing school administrators who are making changes that center on student mental health and wellbeing is the constant pressure they feel to address academic performance in order to prepare for standardized testing. Chang-Bacon (2021) writes that tension exists between school administrators’ desire to get students back on track and to look after their mental health and wellbeing.

DOMAIN 4: TEACHERS AND OTHER PROFESSIONALS

The literature on teaching and learning that emerged in response to educating during disease events underscores the role teachers play in effectively adapting curriculum and pedagogy to provide quality education in emergencies. The studies reviewed revealed three major themes related to teachers’ effectiveness during major health crises: individual teachers’ and systems’ characteristics, teachers’ use and adaptation of digital tools, and pedagogical barriers to providing quality education.

Teachers’ success in adapting to new education contexts during epidemics/pandemics has been linked to individual teachers’ and systems’ characteristics. Preliminary findings indicate that teachers’ agency was activated by the COVID-19 pandemic as they adapted to an uncertain teaching environment (Gudmundsdottir and Hathaway 2020). Individual affective factors were correlated with university instructors’ willingness to take risks with online teaching (Cutri et al. 2020). On a systems level, instructors’ autonomy, greater academic freedom, and curriculum control led to a more positive experience of online teaching (Perrotta and Bohan 2020). School-based supports have previously been shown to mitigate technology-related stress by improving teachers’ sense of computer self-efficacy (Dong et al. 2019). Several articles across the literature cited the importance of supporting teachers during health crises (Rasmitadila et al. 2020; Rupnow et al. 2020), but whether they received timely and necessary supports was less well understood.

A major challenge teachers must navigate during a health crisis is to adapt their instruction to new modalities. In Hong Kong, SARS provided the impetus for the use of digital tools to provide education from a distance (McNaught 2004). Teachers there experienced the rapid transition to digital education with mixed results (Fox 2004). During Ebola, low-tech digital solutions were used in Guinea and Sierra Leone, especially radio broadcasts (Hallgarten 2020), which had a demonstrated positive impact on students’ retention of basic concepts (Barnett et al. 2018). The onset of COVID-19 and the prevalence of modern technology

catalyzed the global use of digital tools to educate more holistically to focus not only on academics but also on social and emotional wellbeing during the pandemic (Carrillo and Flores 2020; Mishra, Gupta, and Shree 2020). Long-term lockdowns during COVID-19 forced teachers to continue educating while adapting to new modalities. They found digital tools useful for instructional planning and delivery but challenging for differentiation and assessment (Research for Action 2020; Rupnow 2020). Hirsch and Allison (2020) argue that remote learning underscores the need for a high-quality, grade-appropriate curriculum. Unfortunately, empirical studies done during COVID-19 reveal that adapting curricula for remote delivery and differentiating the lessons to meet the needs of different learners has been challenging in practice (Alhumaid et al. 2020; Gillis and Krull 2020; Mishra et al. 2020; Schwartzman 2020; Tajik and Vehedi 2021). Huber (2020) argues that online education relegates teachers to the position of the helpdesk and perpetuates systemic inequities by altering the nature of communication and relationships.

A pedagogical barrier frequently cited is students' level of participation in digital learning. Their lack of participation is attributed to two main issues: engagement and accessibility. The first relates to students' indifferent attitude toward online learning (Alhumaid et al. 2020; Pattenaude and Caldwell 2020), which is a difficult obstacle to overcome. The challenge of engaging students in digital learning led Gillis and Krull (2020) to conclude that the choice of instructional technique is less important than how well implemented it is. The COVID-19 pandemic highlighted another barrier: the broader systemic inequities that affect online education (Tajik and Vehedi 2021). The gap between students from different socioeconomic backgrounds—the haves and have nots, remote rural and urban affluent—affects the students' success (Mishra et al. 2020). Applying the same pedagogical approach to all and expecting the same results is bound to fail, due to the digital divide in students' access, skill, and available technology (Schwartzman 2020). Some predict that the learning loss associated with COVID-19 school closures will have a disproportionate impact on disadvantaged students (Kuhfeld et al. 2020).

DOMAIN 5: CREATIVE SHIFTS IN PRACTICES AND POLICIES

Another area that emerged in the literature review was that disease emergencies offer an opportunity for a creative shift in practices and policies using the resources available and considering the constraints in novel ways. Prior disease events illuminated educators' innovative adaptation of health and hygiene content to reach at-risk individuals. In rural India, for example, educators developed a peer-education model to educate low-literacy communities about the risks of

HIV/AIDS (Van Rompay et al. 2008). Evidence from the Ebola outbreaks in West Africa showed that educators collaborated to address health education and training needs by providing massive open online courses (Evans et al. 2017).

Other examples of creative adaptations appear in curricula and student inquiry. In the United States, a significant number of high school science teachers used the Ebola crisis to present scientific concepts, and some teachers even developed hands-on laboratory activities related to the disease (Smith et al. 2016). The COVID-19 pandemic provided the impetus for biochemistry instructors to model science inquiry (Zewail-Foote 2020). Drake and Reid (2020, 6) argue that COVID-19 presented a “wicked problem” and that it gave teachers the opportunity to design learning that enabled students to have a big-picture perspective. An effective shift in pedagogy can have a positive impact on student learning in terms of creativity, academic progress, and autonomy (Bubb and Jones 2020). However, not all students have been able to access effective pedagogy during COVID-19 (Sondah 2020). It is important to acknowledge that, although education emergencies can catalyze beneficial changes to curricula, they also uncover contemporary social challenges which further reinforce inequality in students’ access to curriculum.

Many institutions that were reluctant to change their traditional pedagogical approach had no option but to shift entirely to online teaching during the pandemic (Dhawan 2020). As the future of education is reformed postpandemic, various scholars urge thoughtfulness. Nóvoa and Alvin (2020) argue that the pandemic has revealed the possibility of educational transformation and has brought much-needed reinforcement to the role of education as a common public good. Spicksley (2020) suggests that teachers’ conceptions of education have changed during the pandemic and caused them to be more pessimistic about the future of education. Shah, Paulson, and Couch (2020) warn that the responsibility for creating resilient education systems should focus not on individuals but on ecologies, and that policymakers and leaders should seek transformative solutions. In the existing literature, creative shifts are attributed mostly to teachers, which reflects their capacity for individual resilience during education crises. But, as Shah et al. (2020) suggest, resilience should be conceptualized as a process and approached from the organizational level.

Evidence in the literature of creative shifts and organizational resilience in national and regional policies was more limited. While some articles discussed ineffective policies, like Sierra Leone’s ban on pregnant girls attending school (Pärnebjörk 2016), and made policy recommendations for how to limit learning loss (García and Weiss 2020), few articles directly documented creative pivots in government policy. One article evaluated the effectiveness of closing schools during H1N1

(Brown et al. 2011; Davis et al. 2015) and another documented whether schools had adhered to the government guidelines for school closures (Doyeema et al. 2014). Brown et al. (2011) found that the cost of closing schools due to a lack of child care would far outweigh the cost savings of closing schools to prevent influenza. Davis et al. (2015) similarly demonstrated that school closings were reactive and largely ineffective at reducing influenza-like illness. Doyeema et al. (2014) showed that schools in Michigan generally adhered to statewide policies about closing schools, usually due to significant illness and absenteeism.

However, some education systems have noted creative shifts that anecdotally show improvements. The Roaring Forks school district in the US state of Colorado found that providing for families in need minimized barriers to education, while centralizing the curriculum eased teachers' workload (Center on Reinventing Public Education 2020). The United Arab Emirates set up a national technical hotline for students having technology troubles (Drane et al. 2020), and other places, including the state of Kansas (Kansas Department of Education 2020), passed laws forbidding the cancellation of internet services for nonpayment. Malaysia passed a law allowing school funds to be used to purchase data packages for students in need (Rasmitadila et al. 2020).

The literature also included examples of places where shifting policy has further complicated or worsened a situation. In some areas of the United States, schools were canceled due to legal concerns about equitable access to instruction (Jameson et al. 2020). Ultimately, the research hints at the complicated nature of policymaking during disease emergencies. Some creative shifts in education policy led to positive outcomes, whereas others worsened an already challenging situation.

CONCLUSION

The findings from this integrative literature review classified the extant literature in accordance with the five domains of INEE's MSF. The MSF was designed to guide humanitarian organizations' delivery of education in emergencies. The advent of the COVID-19 pandemic has shown that disease crises pose unique challenges for education. In general, we found alignment with the MSF in the review, as many of the findings fell into one or more domains. Overall, the literature maintains that education institutions should deliver responses that respect cultural knowledge, expect different communities to experience different effects, and emphasize psychological wellbeing for both teachers and students. Research gathered from this review suggests that adjustments to curricula and pedagogy could be applied

effectively to address the needs of students and teachers. For example, supporting the social-emotional needs of students and teachers was found to be important, especially in high-risk groups and communities. Addressing students' diverse needs means that schools' often scarce resources are divided multiple times, and none of these needs receive enough funding. The literature points to the need for teachers to do more while simultaneously highlighting the fact that they are overworked and exhausted. This is also true of the parents and community members who partner with schools, the literature suggests.

Ultimately, the findings highlight that most of the concerns and recommendations in the literature are focused at the individual and school levels. There is significant research pointing out how individuals and schools can do more, but only limited recommendations about how society and governments at large can combat the challenge of educating during disease emergencies. For example, Domain 1 includes both community participation and coordination; while there is discussion in the literature of community involvement, there is little discussion of coordination, which is a natural place for government to step in. Shah et al. (2020) forewarned that the responsibility for resilience in providing education in emergencies should focus not on the individual but on the ecology. Focusing on individual resilience limits the discursive space for policymakers and leaders to engage in structural solutions to endemic emergencies. Resilience should instead be conceptualized as a process and should be approached from the organizational and societal levels. This means that teachers should be well paid, and that nations should ensure that they have an adequate number of teachers to respond in an emergency (Domain 4). Additionally, conversations in the literature about access to education (Domain 2) are mentioned as if it were a new problem, when in fact there has long been a gap between the rates at which wealthy and poor students access education. Instead of looking for one-time solutions, like radio programming, or finding ways to get cheap technology to students, nations perhaps should seek to create education systems that provide all students with the tools they need to succeed. Schwartzman (2020) argues that metastatic capitalism is partly to blame, as gaps in the education governments provide often are filled by wealthy individuals and countries with for-profit services, leaving the poor to fall farther behind. While we often shower praise on companies that offer free internet services or give out low-cost laptops, if these same companies were not receiving large tax breaks, money might be available to build the infrastructure that would enable all families to have wireless internet access or to fund schools adequately from the beginning. If we as a global community were to address the major social ills, there would be significantly fewer challenges during emergencies. This is where education policy (Domain 5) can clearly help solve some of these problems, like that of the Nordic

countries that emphasizes social services and education, thereby modeling for the world how to approach and prioritize national spending.

The literature revealed other important gaps besides the lack of policy guidance. Few articles referred to the wider community being involved in providing effective education, or to including the voices of vulnerable populations in key conversations. There also was no discussion of the LGBTQ+ populations' access to education in disease emergencies. We also found few articles about the effects of MERS, perhaps because that research was published in languages other than English, as the virus was confined to one region. Only a few articles referenced educating in emergency experiences during disease outbreaks in South America.

It is important to note that, while many examples of successes and failures were found in the literature, all policies and practices should be implemented with the contextual nuances of each location in mind. This will ensure that poor and rural students in wealthy nations are not forgotten, and remind us that the low-tech, low-cost solutions successful in poor and low-resourced communities can also be implemented in high-resource contexts. This review also highlights the importance of planning for future epidemics and pandemics, and for other emergencies, while also working to address longstanding inequalities so that fewer people are in a truly desperate situation when the next emergencies arrive.

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LA MISE EN ŒUVRE DE LA GRATUITÉ DE L'ENSEIGNEMENT PRIMAIRE EN CONTEXTE DE CRISE : COVID-19 ET RÉFORME DE L'ENSEIGNEMENT AU SUD KIVU, RÉPUBLIQUE DÉMOCRATIQUE DU CONGO

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RÉSUMÉ

En septembre 2019, la République démocratique du Congo a mis en place une nouvelle politique abolissant les frais de scolarité dans l'enseignement primaire. Quelques mois plus tard, les écoles fermaient pour 4.5 mois suite à la pandémie de COVID-19. Comment le confinement a-t-il affecté la mise en place de la politique de gratuité ? A-t-il atténué ou exacerbé ses effets ? Cet article étudie l'expérience des écoles et des enseignants dans deux territoires du Sud-Kivu affectés par les conflits armés. Sur base d'une enquête auprès de 752 enseignants et 637 parents d'élèves et sur 157 entretiens qualitatifs dans 55 écoles, nous montrons que, dopés par la gratuité, l'effectif scolaire reste stable et les relations enseignants-parents ne semblent pas se dégrader—et ce malgré une absence presque totale d'enseignement pendant la période de fermeture. Cependant, les privations liées à la pandémie rendent (encore plus) intenable la position des enseignants sous contrats précaires dont les salaires étaient antérieurement payés grâce aux frais de scolarité. Ceux-ci quittent la profession en nombre, menaçant la stabilité du système éducatif. Ainsi, l'introduction de la gratuité n'est pas une panacée en contexte de crise ; la durabilité d'une telle réforme nécessite une ambitieuse et inclusive refonte des ressources humaines.

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INTRODUCTION

Les mesures prises par les gouvernements pour lutter contre la COVID-19 ont souvent eu des effets drastiques sur les systèmes éducatifs à travers le monde. Le corpus de recherche émergeant fait état d'un recul de l'accès à l'enseignement dans de nombreux pays, et en particulier ceux affectés par la violence dont le système éducatif était souvent déjà en crise (Datzberger et Parkes 2021). Face à ce problème, la gratuité de l'enseignement a été proposée comme une piste potentielle pour contrecarrer le choc négatif causé par le confinement et les fermetures d'école (Hallgarten 2020). Dans nombre de pays dits « fragiles » ou à faible revenus, une partie de l'enseignement public est, en effet, assurée par des enseignants opérant sous des contrats précaires et dont les salaires sont payés directement par les parents et la communauté (Dolan et al. 2012), questionnant par-là l'idée d'éducation universelle. La réforme de ces systèmes est décrite comme nécessaire et compliquée, mais pourrait-elle être une réponse aux défis d'accès à l'enseignement exacerbés par les crises, sanitaires ou autres ? Qu'advient-il lorsque cette réforme se passe dans un contexte d'urgence sanitaire doublée d'une crise sécuritaire prolongée ?

L'est de République démocratique du Congo (RDC) est affecté par des conflits armés depuis près de 30 ans. Les écoles continuent à y fonctionner tant bien que mal. Elles opèrent dans un contexte très difficile, marqué par la destruction des infrastructures et le ciblage délibéré du personnel par les factions armées (Brandt 2021), les déplacements forcés de population, l'insécurité et la militarisation de la vie publique. Les obstacles sont immenses et encore exacerbés par le sous-financement chronique du secteur de l'éducation, un problème qui touche de nombreux pays et qui pousse les écoles congolaises à exiger des parents d'importantes contributions pour payer les enseignants et financer les infrastructures. Pour faire face à ce défi, la RDC s'est lancée dans une réforme de son système éducatif en décembre 2019 : les frais liés aux études ont été interdits dans les écoles primaires publiques. Les taux d'inscription ont aussitôt augmenté, mais les écoles ont été déstabilisées. Moins de six mois après la mise en place de la réforme, la pandémie COVID-19 est arrivé. Les écoles ont alors fermé pendant quatre mois et demi en 2020 et un mois et demi en 2021.

Dans cet article, nous analysons les effets combinés de la politique de gratuité et de la fermeture des écoles due à la pandémie de la COVID-19 sur l'enseignement, la relation parents-enseignants, et la situation des enseignants. En utilisant des méthodes de recherche quantitatives et qualitatives dans 55 écoles, nous visons à faire remonter le vécu des acteurs de première ligne. Notre zone de recherche

fait partie des zones les plus affectées par le conflit armé qui perdure à l'est de la RDC ; elle ne prétend donc pas représenter la RDC, mais vise à informer les débats sur les politiques d'enseignement en contexte de crise prolongée.

La partie suivante expose le contexte de l'enseignement, de la politique de gratuité, et de la pandémie de COVID-19 en RDC. Dans la deuxième partie, nous présentons nos méthodes. La troisième partie présente les résultats de notre recherche, en présentant d'abord les réalités de terrain de la mise en place de la Gratuité avant de détailler le vécu du confinement depuis le point de vue des acteurs. Nous essayons ensuite de comprendre certains des effets à moyen-terme (après quelques mois) de la combinaison Gratuité—confinement.

CONTEXTE

FINANCEMENT ET GRATUITÉ DE L'ENSEIGNEMENT PRIMAIRE EN RDC

À l'indépendance de la RDC (anciennement Zaïre) en 1960, l'enseignement primaire est gratuit et guidé par un objectif d'éducation des masses (Bongeli ya Eto 2015). La crise économique et les politiques d'ajustement structurel des années 1980 changent la donne : les finances publiques s'effondrent et les salaires des fonctionnaires sont réduits drastiquement, poussant le gouvernement à « inviter » les parents à financer le système éducatif dès 1986. Rapidement, ils financent directement la majeure partie puis la totalité du secteur éducatif quand, en 1992, le gouvernement zaïrois cesse purement et simplement de payer les salaires des enseignants. Au supplément de salaire mensuel, la « prime de motivation » versée par les parents, s'ajoute ainsi un financement de l'ensemble de l'appareil administratif. Ce nouvel arrangement est profondément inégalitaire (Poncelet, André, et de Herdt 2010). Paradoxalement, il est aussi décrit comme un facteur expliquant la résilience du secteur éducatif pendant les guerres des années 1990 et du début des années 2000 (Banque Mondiale 2005). Le retour à une certaine stabilité dans certaines parties du pays à partir de 2003 marque aussi un retour progressif du financement de l'Etat. Il reste néanmoins limité : en 2015, les ménages contribuent toujours plus d'une fois et demi plus au secteur de l'éducation que l'Etat selon les calculs de Verhaghe (2017), qui relève pas moins de 130 types de frais scolaires différents exigés aux parents (qui varient considérablement d'une province à l'autre et au sein d'une même province).

L'idée de la gratuité de l'enseignement primaire, jamais tout à fait abandonnée, réapparaît dans les débats de la Conférence Nationale Souveraine entre 1990 et 1993. Les bailleurs et partenaires de la RDC mettent aussi la pression, l'absence d'un enseignement primaire *de facto* gratuit cadre mal avec les discours sur « l'éducation pour tous » et avec les objectifs de développement du millénaire. Après la Deuxième Guerre du Congo (1998-2003), la Table Ronde de l'Éducation de 2004 reprend l'idée et elle est finalement intégrée à l'article 43 de la Constitution de 2006. Pendant près de 13 ans, les tentatives pour rendre effective cette gratuité vont cependant toutes échouer. Finalement, le 20 août 2019, la porte-parole du président nouvellement élu Félix Tshisekedi annonce la mise en œuvre immédiate de la Gratuité de l'enseignement primaire ainsi que des deux premières années du secondaire.

Avec cette nouvelle politique, les parents ne sont plus censés payer ni les suppléments pour les enseignants (la « prime de motivation ») ni le financement des coûts opérationnels des écoles et des bureaux administratifs. Même si dans la pratique, des frais mineurs tels que l'assurance des étudiants ou l'inscription aux examens de fin d'année scolaire persistent, les effets de la réforme sont sans appel : au moins 3 millions d'élèves supplémentaires sont inscrits à l'école primaire à travers le pays à la rentrée 2019-2020 (Latif et Adelman 2021).

La mise en œuvre de la réforme est cependant compliquée. Le budget consacré à l'éducation augmente entre 2019 et 2020, passant de 20,8 à 24,5 pour cent du budget national du pays, avec un taux d'exécution en léger décalage (passant de 3,1 à 4 milliards de dollars). Fin 2019, l'État Congolais augmente les salaires des enseignants, paye la plupart des 138 000 enseignants inscrits sur ses listes mais jusque-là non rémunérés, et en ajoute 58 000 nouveaux sur ses listes (CONEPT 2021). A l'heure d'écrire cet article, cependant, la réforme n'est toujours pas pleinement financée : la Banque Mondiale estime en 2021 qu'une augmentation d'au moins 160 pour cent par rapport aux dépenses de 2019 serait nécessaire pour couvrir les frais de la réforme (Banque Mondiale 2021) et de grandes inconnues demeurent, y compris sur les enseignants non-inscrits qui seraient jusqu'à 132 000 (CONEPT 2021) et pour lesquels une solution devra être trouvée. Du côté des bailleurs, la Banque Mondiale s'est engagée à verser 800 millions de dollars sur 4 ans (pour les ressources humaines dans 10 provinces sur 26), mais le premier versement de 100 millions, prévu en décembre 2019, a été reporté suite à des soupçons de corruption (Banque Mondiale 2021).

LE STATUT DES ENSEIGNANTS

Dans la pratique, cette histoire complexe de sous-financement et de réformes, marquée aussi par l'augmentation du nombre d'enseignants sur le terrain au cours des années 1990 et 2000 ainsi que par des formes de « gouvernance réelle » dans le secteur éducatif (Titeca et De Herdt 2011), a donné lieu à une série de statuts 'informels' ou 'de facto' des enseignants. Dans cet article, nous classifions les enseignants en deux catégories principales (pour plus de détails, voir Brandt 2017). Les enseignants que nous appelons comme étant sous « contrat favorable » sont ceux qui sont dits « mécanisés » et « payés », c'est-à-dire qu'ils sont enregistrés et payés par l'Etat. Les enseignants que nous qualifions comme étant sous « contrat défavorable » ne sont pas payés par l'Etat, il s'agit des enseignants dits « mécanisés » mais « non payés », des « nouvelles unités » qui ne sont outre souvent pas encore enregistrés officiellement, ou de ceux dits « omis » du registre officiel. Ces enseignants sous contrat défavorable dépendent souvent du paiement direct des écoles ou des parents. Comme d'autres aspects du système éducatif congolais, le statut des enseignants est souvent politisé : un appui politique et parfois même un paiement sont souvent nécessaires pour accéder au statut de mécanisé et payé (Brandt 2017). La décentralisation—qui dans le secteur éducatif a mené à la création de nouvelles unités administratives éducatives déconcentrées, de bureaux et de postes—a souvent servi à distribuer des postes au sein de réseaux d'influence (Brandt et Moshonas 2020). L'appartenance à un groupe ethnoculturel, l'origine régionale (c'est-à-dire le fait d'être considéré comme originaire d'une certaine région) et l'affiliation politique sont des éléments clés pour obtenir le soutien de parrains pour les postes, les inscriptions et la progression dans l'échelle des carrières (Marchais et al. 2020).

Les annuaires statistiques au niveau national et provincial ne nous donnent pas la ventilation des différentes catégories d'enseignement et la question de qui est compté est éminemment politique. En 2018, soit avant la réforme, la Banque Mondiale parle de 540 000 enseignants du primaire dont environ 60 pour cent étaient salariés du secteur public (Banque Mondiale 2020, 10), alors que le rapport de l'Institut National de Statistique recense 460 937 enseignants. En 2019, première année de mise en place de la Gratuité, le dernier annuaire scolaire disponible (2019-20) répertorie un total de 464 960 membres du personnel dans les écoles primaires publiques : 392 526 enseignants et 72 434 personnels supplémentaires (DRC/MEPST 2021). Notre enquête de 2019, que nous détaillons dans la section 2 et qui n'est pas représentative de l'ensemble de la RDC, trouve 36 pour cent d'enseignants non payés par l'Etat (nos différentes catégories de personnes sous contrat « défavorables »), dont 64 pour cent disaient être enregistrés auprès des autorités (mécanisés non payés).

LA PANDÉMIE DE COVID-19

La pandémie de COVID-19 est arrivée en RDC dans un contexte déjà marqué par une longue histoire d'épidémies majeures, de la résurgence de la maladie du sommeil dans les années 1990 (Falisse et Mpanya 2022), à la récente épidémie d'Ebola, en passant par de nombreuses meurtrières épidémies de choléra et de rougeole (par exemple en 2019-2020). Les épisodes de choléra, malheureusement quasi-endémiques dans la province du Sud Kivu, n'avaient cependant jamais poussé à la fermeture des écoles ou même à des mesures spécifiques. L'épidémie d'Ebola au Nord Kivu et en Ituri (2018-2020) avait bien poussé quelques écoles à fermer temporairement leurs portes, mais de façon limitée et avec un important soutien international afin de ne pas interrompre l'enseignement (Daems et Willemot 2018). Ces problèmes sanitaires passés attestent d'un système de santé fragile, mis à mal par un sous-financement chronique, et décrit comme vulnérable face à de nouveaux pathogènes, y compris la COVID-19 (UNICEF 2020). Lorsque cette dernière pandémie est déclarée, le gouvernement central adopte cependant un rôle de coordination fort, recyclant notamment l'infrastructure humaine déployée en réponse à Ebola (Al Dahdah, Falisse et Lurton 2021). L'expérience joue aussi, l'épidémie d'Ebola avait renforcé les tensions entre la population et les autorités, notamment en raison de l'application militarisée des mesures de santé publique dans les provinces touchées (Congo Research Group 2021).

Le 24 mars 2020, alors que le pays a officiellement compté 394 cas de COVID-19 et 25 victimes, le président Tshisekedi déclare l'état d'urgence, limitant déplacements et rassemblement—avec un impact négatif conséquent sur l'économie, le revenu des ménages et l'emploi. Comme dans de nombreux pays à travers le monde, le gouvernement congolais a également fermé les écoles, et ce dès le 23 mars 2020. Peu de temps après, le Ministère de l'Éducation a publié un Plan de Réponse Éducative (MEPST 2020). Un Plan de Réponse Humanitaire modifié pour répondre à la COVID-19 incluant une section sur l'éducation (OCHA 2020), ainsi qu'un plan spécifique au cluster humanitaire « éducation » (Cluster Education RDC 2020). Les plans, à l'image de celui du cluster éducation, soulignent les risques du confinement et de fermeture des écoles, entre autres : recrutement forcé dans des groupes armés dans les zones touchées par le conflit, travail forcé, violence, exploitation, mariage précoce et de multiples formes d'abus. Ils soulignent aussi la nécessité de trouver des moyens de continuer le processus éducatif par l'enseignement à distance, notamment « low tech » via les radios. Comme nous le montrons dans notre analyse, il y a eu très peu de continuité d'enseignement dans nos zones de recherche, et les plans sont généralement restés lettre morte.

Les écoles ont finalement réouvert le 10 août pour fermer à nouveau en janvier et en février 2021. Le présent article s'intéresse au premier épisode de fermeture.

MÉTHODES ET DONNÉES

Notre analyse se base sur les données récoltées par le projet de recherche BRiCE, mené par l'*Institute of Development Studies* (IDS) et l'*Institut Supérieur Pédagogique de Bukavu* (ISP Bukavu) entre 2018 et 2022. Il fait partie d'un projet de recherche-action plus large qui a pour objectif de mieux comprendre et d'améliorer le quotidien des enseignants dans les contextes affectés par les conflits armés et qui est financé par l'Union Européenne et mis en œuvre par *Save the Children* au Niger et en RDC. Notre recherche est interdisciplinaire, elle combine les sciences de l'éducation et l'étude des conflits armés et comprend une composante qualitative et une composante quantitative. La collecte des données s'est étalée quatre années.

La composante quantitative de cet article se base sur deux collectes de données effectuées dans 55 écoles publiques dans les territoires de Fizi et Uvira, dans la province du Sud Kivu en RDC. La première collecte de données a eu lieu en mai 2019 et la deuxième en octobre 2020, soit avant et après la mise en œuvre de la politique de Gratuité et la première phase de fermeture des écoles. Les données couvrent 752 enseignants (727 en 2020), 637 ménages ayant un enfant à l'école primaire, et 55 directeurs d'école. En annexe, le Tableau A1 donne plus de détails sur les élèves et les enseignants que nous avons échantillonnés, le Tableau A2 fournit un profil des écoles de notre étude, et le Tableau A3 donne des statistiques descriptives des caractéristiques des enseignants. Il est utile de noter ici que si les enseignants et les parents ont été choisis au hasard, les écoles sur lesquelles nous sommes concentrés ont été sélectionnées, entre autres facteurs, parce qu'elles se trouvent dans une zone « sûre », accessible et couverte par la téléphonie mobile et parce qu'elles sont viables. En d'autres termes, notre échantillon s'attarde sur des écoles qui sont sans doute parmi celles qui se trouvent légèrement plus favorisées. Il n'est pas exactement représentatif de l'ensemble des écoles des territoires de Fizi et Uvira, et encore moins de la province ou du pays. Notre analyse est avant tout descriptive, les erreurs standards sont ajustées par école (clusters) lorsque des tests de différence statistique sont réalisés.

La collecte de données a eu lieu au même moment que la mise en œuvre d'un projet d'éducation. Pour réduire d'éventuels biais de désirabilité sociale, malheureusement inhérent à notre type de recherche qui porte en partie sur une pratique officiellement interdite, les contributions des parents aux rémunérations, différentes précautions ont été prises. Les enquêteurs, qui ont été recrutés localement et de façon totalement externe à *Save the Children*, ont mis l'accent avant le début des enquêtes sur l'indépendance de la recherche et la confidentialité et l'anonymat des réponses. Ils ont posé des questions sous différents angles (ce qui fait que nous avons parfois plusieurs variables portant sur la même chose). Le fait de poser la même question aux parents, ainsi qu'aux directeurs d'écoles, nous a permis de vérifier les informations fournies par les enseignants, notamment concernant les contributions financières des parents. Des méthodes dites de rappel, développées dans des projets précédents, ont été utilisées pour reconstituer l'historique des enseignants sur certaines variables clés (par exemple : emploi et expérience de la violence). Afin de réduire les erreurs, la période de rappel était courte (une année scolaire), des repères temporels basés sur l'histoire locale ont été utilisés afin de situer les événements, et les dates et données rapportées dans les différentes enquêtes ainsi que dans l'étude qualitative ont été triangulées.

La composante qualitative de l'étude se base sur deux phases de collecte de données d'environ un mois chacune dans les territoires d'Uvira et Fizi, en octobre-novembre 2019 et mars-avril 2020. La recherche a été complétée par des entretiens qualitatifs réalisés en juillet 2020, principalement à propos du contexte épidémique en RDC. Ainsi, un total de 157 entretiens qualitatifs semi-structurés ont été réalisés avec des enseignants, directeurs d'écoles, inspecteurs de l'éducation, représentants de l'état, du pouvoir coutumier et autorités locales par l'équipe de recherche de l'ISP. Nous y faisons référence en utilisant l'abréviation « Int » ou « Int-Cov » pour les entretiens de l'enquête additionnelle COVID-19, suivie du numéro de l'entretien. Le questionnaire a été progressivement adapté aux thématiques découvertes lors des entretiens ; il comprenait des questions sur la politique de Gratuité, l'économie politique du recrutement des enseignants, l'impact de la pandémie de COVID-19 et de la fermeture des écoles sur l'enseignement, les relations entre enseignants et parents ainsi que le développement professionnel des enseignants. Les données qualitatives ont été analysées en extrayant systématiquement les passages relatifs à la Gratuité et à la pandémie. Nous avons ensuite essayé de dégager les grandes tendances qui de les mettre en dialogue avec les données quantitatives qui constituent la colonne vertébrale de notre analyse.

RÉSULTATS

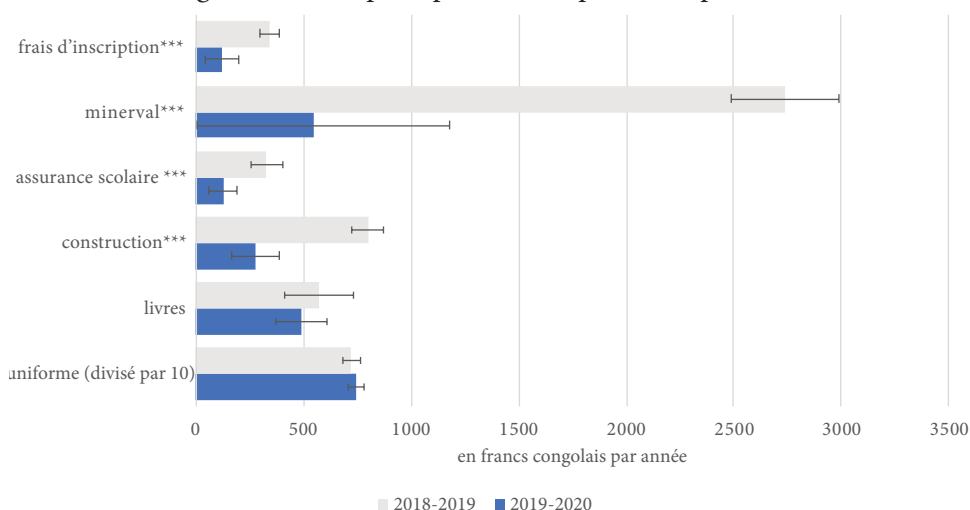
Nous décrivons d'abord l'expérience des enseignants pendant la période de confinement en nous basant sur le récit et l'analyse qu'elles et ils en ont fait durant les phases d'entretien de notre recherche. Dans une deuxième sous-partie, nous complétons cette description d'une analyse de la situation à moyen-terme, trois mois après le (premier) confinement.

Avant de développer notre analyse de la situation à l'arrivée de la pandémie, notons deux changements importants qui surviennent avec la mise en place de la Gratuité.

Le premier est l'accroissement sans précédent du nombre d'élèves inscrits et fréquentant les écoles, nous y avons déjà fait allusion. Nos données montrent aussi, et c'est important de le souligner, que la gratuité, dans le sens d'absence de paiement de salaire des enseignants, est une réalité. En 2018-2019, 89,93 pour cent (CI¹ : 84,40-95,45, n=715) des parents déclaraient avoir payé le salaire des enseignants *chaque* mois de l'année scolaire, et aucun parent (0,2 pour cent, CI : -0,11-0,67) n'avait échappé à ce paiement à un moment de l'année. L'année suivante, une fraction très faible de parents— 10 pour cent (CI : 4,54-15,59)—déclare avoir continué à payer les frais de scolarité *à un moment* de l'année scolaire (dans 1 pour cent des cas, les parents ont déclaré que les élèves ont effectué des travaux manuels pour les enseignants, principalement des travaux agricoles ou d'autres formes de travail manuel). Comme le montre la Figure 1 ci-dessous, certains frais restent, surtout ceux liés à l'équipement des élèves (livres et uniformes) mais la contribution des parents au fonctionnement des écoles et au paiement des salaires est réduite à la portion congrue. Notons aussi que ces données doivent être prises avec précaution. Il est en fait très probable que les contributions des parents restent plus substantielles que ce que notre enquête révèle : en 2020, seuls 57 pour cent des enseignants sous contrat défavorable ont accepté de nous indiquer leur revenu, alors qu'ils étaient 97,2 pour cent en 2019. Dans le même temps, la quasi-totalité des enseignants sous contrat favorable nous ont partagé cette information, les deux fois.

1 CI : Intervalle de confiance.

Figure 1 : Principaux postes de dépense des parents



Note : *** différence significative à $p < 0,001$ entre les deux années. Barres d'erreur : écart type ajusté pour l'échantillonnage par école. N=715 parents d'élèves.

Le deuxième changement est l'accentuation considérable des inégalités découlant du statut d'emploi des enseignants. Les enseignants ayant un contrat favorable étaient déjà dans une meilleure situation matérielle avant la Gratuité, nos données de mai 2019 en attestent (ils avaient, par exemple, une plus grande probabilité de posséder des biens coûteux tels qu'un vélo, une moto, une pompe à eau ou un accès à l'électricité ; ils étaient aussi en moyenne plus vieux, 43,8 ans contre 31,5). Cette situation d'inégalité va s'empirer avec la Gratuité qui interdit la rémunération des enseignants par les parents. L'Etat promet de progressivement enregistrer et de payer tous les enseignants, mais dans la pratique le processus est compliqué, politisé, et peu transparent : la situation de la plupart des enseignants sous contrat défavorable n'est, au moment d'écrire cet article, pas régularisée. Notre enquête de terrain montre que les directeurs d'écoles ayant peu de relations avec les politiciens, parfois en raison de leur affiliation à un parti ou de leur appartenance ethnoculturelle, ont des chances très réduites de voir leurs nouveaux enseignants mécanisés (Int. 31, 36, 39, 45, 53). Ceci explique à la fois la continuité de certains frais payés dans les écoles et le maintien des inégalités structurelles dans le système éducatif.

PERCEPTIONS ET VÉCU DE L'EFFET DE LA PANDÉMIE SUR LES ENSEIGNANTS ET LEUR ENSEIGNEMENT

Même si les chiffres officiels de la pandémie de COVID-19 sont restés bas par rapport à bien des pays, le contexte n'en n'est pas moins resté anxiogène : plus de trois-quarts des parents et enseignants se disaient préoccupés ou très préoccupés par la pandémie de COVID-19 en octobre 2020. Sur le terrain, les mesures barrières (masque, distanciation sociale, lavage régulier des mains) sont difficiles à appliquer lorsque les écoles fonctionnent, en raison des effectifs pléthoriques et du manque d'infrastructure.

ENSEIGNER PENDANT LE CONFINEMENT ? QUI ET COMMENT ?

Dans la pratique, l'écrasante majorité des enseignants—86,63 pour cent (CI : 82,91-89,78)—et des chefs d'établissement rencontrés ont indiqué ne pas avoir été en contact avec les élèves pendant la période de fermeture des écoles et ne pas avoir fourni aux élèves ou à leurs parents de soutien pédagogique, direct ou indirect (par exemple des devoirs), ou même émotionnel. De façon quasi-symétrique, 87,13 pour cent des parents (CI : 83,81-90,45) expliquent que leurs enfants n'ont rien appris pendant la période de confinement. Certaines exceptions ont cependant existé (Int-Cov. 3, 8, 30), à l'image de cette enseignante qui explique avoir continué à enseigner chez elle, mais auprès de certains élèves uniquement :

« Oui, je suis restée en contact avec quelques élèves pendant le confinement, et j'ai cherché à les soutenir par rapport à leur éducation, et leur moral surtout ceux-là qui sont dans mon entourage. Chaque 15h ou 16h j'appelle les élèves pour faire des rappels aux matières déjà vues, ils sont très attentifs quand je suis en train de parler. Ils répondent convenablement aux questions. Et même, je les sensibilise comment se comporter pendant cette période. » (Int-Cov. 3)

Une école rapporte même avoir continué un enseignement en présentiel « en respectant les distances de sécurité » (Int-Cov. 12) pour des élèves préparant le test national de fin d'études primaires (TENAFEP). Aucune pratique systématique n'a cependant été rapportée, les pratiques sont ad hoc et découlent du fait que certains enseignants, parents et élèves se trouvent souvent dans une situation de proximité physique et sociale avec certains élèves. Les enfants les moins favorisés, y compris les réfugiés burundais, sont en revanche plus susceptibles d'avoir été sollicités pour des travaux agricoles ou pastoraux (Int-Cov. 15, 16, 17, 18, 31, 34).

Le manque de directives, de communication, et de soutien des autorités éducatives déconcentrées est mis en avant pour expliquer le manque d'enseignement pendant le confinement (Int-Cov. 5, 6, 29, 33). Le tableau général qui se dégage des entretiens qualitatifs comme quantitatifs est celle d'autorités déconcentrées (au niveau des sous-provinces éducatives) généralement absentes lors de la période du confinement. Les entretiens donnent une image mitigée des méthodes d'apprentissage à distance déployées par le ministère de l'Éducation. Il s'agit d'une question d'accès, une minorité d'enseignants rencontrés expliquent ne pas être au courant de ces outils (Int-Cov. 6, 26, 32, 35), certains notent qu'ils ne captent pas les radios diffusant l'enseignement à distance (Int-Cov. 29, 30, 31), et surtout une vaste majorité de parents et d'enseignants ne disposent pas de radio et encore moins de télévision. Selon notre enquête de 2019, 33,6 pour cent des ménages disposaient d'une radio et 18,5 pour cent d'une télévision. Lors de l'enquête suivant le premier confinement, 70,2 pour cent des parents (CI : 64,66-75,17) soulignaient que l'absence de livres scolaires était en outre un problème majeur. Plus de la moitié pointaient également l'absence de radio, de téléphone, et de connexion internet. Comme l'explique un répondant :

« Oui, certains élèves ont eu plus de facilité ou de difficultés à étudier pendant le confinement parce que certains élèves de la ville leur familles ont des télévisions, postes radios et même il y a des élèves ont des bons téléphones pour étudier tandis que ceux-là qui vivent dans les zones rurales n'en ont pas. » (Int-Cov. 3)

Sans surprise, les solutions *high-techs* n'ont pas atteint la majorité des élèves congolais. Même les solutions *low-techs* n'étaient pas très visibles dans les écoles que nous avons visitées. Ce point reflète d'une expérience très mitigée de l'enseignement à distance pendant la pandémie largement partagée dans d'autres pays.

Même dans la minorité de cas où les parents peuvent dégager du temps, les circonstances ne sont souvent pas réunies. Ainsi (1) seulement 19 pour cent des élèves (CI : 13,19-25,07) a fréquenté l'école pré-primaire ; (2) seules 59 pour cent (CI : 52,82-65,7) des mères et 77 pour cent des pères (CI : 72,04-81,80) savent lire et écrire ; (3) seuls 20,82 pour cent (CI : 15,37-26,27) des élèves ont des livres à la maison ; (4) seuls 62,47 pour cent (CI : 57,32-67,63) des parents vérifient que leurs enfants font leurs devoirs et (5) seuls 10,13 pour cent (CI : 6,75-13,5) des parents disent avoir une communication régulière avec l'école. Comme le relève l'étude, les différences principales apparaissent lorsqu'on compare les familles pauvres et riches, mais les chiffres restent globalement faibles. Au final, ce ne sont que 9,79

pour cent (CI : 7,08-12,49) des parents de notre échantillon qui affirment avoir aidé leurs enfants pendant le confinement. Ceux-ci étaient significativement plus riches que ceux qui n'avaient pas aidé leurs enfants (possédaient en moyenne 5,88 items de notre liste de 15 items contre 4,89 ; $p=0,019$).

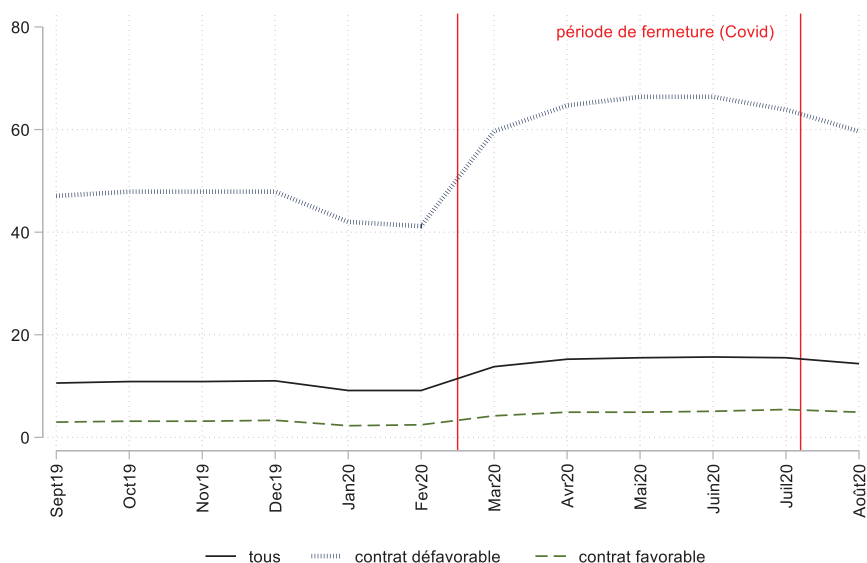
En ajoutant à ce contexte peu propice le fait que les enseignants ont expliqué ne pas avoir bien compris comment s'inscrire dans les programmes éducatifs à distance par manque d'information et de formation, et le fait que cet enseignement à distance n'a parfois pas été pris au sérieux, car non notifié de façon formelle aux enseignants et aux parents (Int-Cov. 7), force est de constater qu'il n'y a eu que très peu d'opportunité d'apprentissage pendant le confinement.

La période de confinement a généré au sein des familles une anxiété et un stress considérables (voir également Tableau 1 plus loin dans cet article). Ils sont principalement dus (1) à l'incertitude et aux difficultés financières (Int-Cov. 2, 8, 24, 32) générées par la perte de revenu (en particulier pour familles dépendant du commerce transfrontalier, fermé, avec le Burundi ; Int. 2) et (2) aux faits que les enfants privés des activités structurantes de l'école se retrouvaient à « vagabonder » (Int-Cov. 2, 8, 14, 25, 28). Même si les parents notent les efforts de certains enseignants pour continuer à soutenir les élèves pendant le confinement, le sentiment général n'en est pas moins d'avoir été livrés à eux-mêmes.

ÊTRE ENSEIGNANT PENDANT LE CONFINEMENT : STATUT ET REVENU

Marquée par les difficultés des enseignants à faire exister une forme d'enseignement, la période de confinement est aussi marquée par d'importantes difficultés matérielles. Techniquement, l'Etat congolais garantit le paiement des salaires aux enseignants pendant la période de confinement, mais la pratique est souvent différente. Plusieurs enseignants sous contrat permanent décrivent des retards (Int. 1, 27, 31, 34), mais les enseignants sous contrat précaire sont clairement les plus concernés, comme le montre bien la Figure 2. L'augmentation des retards et non-paiements en avril 2020 est significative et coïncide avec les fermetures des écoles dans le pays.

Figure 2 : Non-paiement du salaire mensuel (% des enseignants)



Note : N=689 enseignants

Les entretiens suggèrent que le paiement des enseignants « nouvelles unités » par les comités de parents et de gestion a fréquemment été reporté (Int-Cov. 10, 11) quand il n'a pas été simplement suspendu (Int-Cov. 1, 16, 20, 22, 30). Bien que la gratuité ait formellement aboli le paiement des enseignants par les comités de parents et de gestion (voir section 1B), la Figure 2 montre que dans la pratique aux alentours de 65 pour cent des enseignants sous contrat défavorable étaient encore payés pré-pandémie. À la suite du confinement et de la fermeture des écoles, ce sont cependant près de la moitié des enseignants sous contrat défavorable qui cessent de recevoir toute forme de paiement ou de salaire. La différence est significative ($p=0,046$; en tenant compte de l'effet cluster et en contrôlant pour le territoire) : pour les enseignants sous contrat défavorable, la proportion de mois non payés durant la période du confinement (mars-août, en comparaison à septembre-février) augmente de 17,8 pour cent (CI : 10,05-25,02) alors qu'elle n'augmente que de 2,34 pour cent pour les autres enseignants (CI : 0,89-3,78). Il s'agit cependant de rester prudent, pour deux raisons au moins : (1) la Figure 2 montre qu'il y avait déjà une grande disparité avant la fermeture des écoles et (2) il y a un très fort taux de non-réponse par rapport au salaire parmi les enseignants sous contrat défavorable (43 pour cent, contre 1 pour cent chez les autres) qui vient sans doute du tabou autour des primes à partir de la mise en place de la politique de gratuité (cependant, recoder ces non-réponses en assumant

que les non-répondants étaient payés n'a pas d'incidence sur la significativité de la différence entre les deux catégories de contrats).

Pour ces enseignants, le confinement et la mise à l'arrêt de nombreux secteurs d'activité a signifié qu'il y avait très peu d'activités alternatives à adopter. Les activités de repli telles que le petit commerce transfrontalier ont été réduites par la fermeture des frontières RDC-Burundi et RDC-Rwanda (Int-Cov. 4) et plusieurs enseignants ont indiqué qu'ils s'étaient tournés vers l'agriculture, dans des champs leur appartenant ou appartenant à leur famille, ou dans les champs d'autres personnes, contre rémunération (Int-Cov. 16, 20, 30, 32). Au total, ce sont près de 34,57 pour cent (CI : 29,09-49) des enseignants de notre échantillon qui déclarent avoir entrepris une activité additionnelle pendant le confinement ; l'absence de différence significative ($p=0,783$) entre enseignants disposant d'un contrat favorable et les autres renforce l'idée d'options limitées pour les enseignants.

BIEN-ÊTRE DES ENSEIGNANTS PENDANT LE CONFINEMENT

La fermeture des écoles affecte de multiples dimensions constitutives du bien-être des enseignants. Près de 59 pour cent des enseignants rapportent avoir été plus stressés pendant cette période, principalement à cause de la peur de la COVID-19, des difficultés salariales et économiques, mais aussi de la perte de repères liée à l'interruption d'un métier aidant à trouver du sens. Plusieurs enseignants ont aussi noté que le confinement avait considérablement accru les tensions au sein de leur foyer, ainsi que les tensions avec leurs voisins et leur entourage social, notamment parce que personne n'a l'habitude de passer ses journées à la maison « à ne rien faire » (Int-Cov. 4, 24).

Les entretiens suggèrent une possible hétérogénéité dans cette dépréciation du bien-être. Presque tous les chefs d'établissement et les enseignants interrogés ont noté que les « nouvelles unités » étaient plus stressés, de même que ceux vivant en milieu urbain où moins d'activités génératrices de revenus complémentaires et d'activités structurantes étaient disponibles (Int-Cov. 9, 25), ainsi que les femmes, parce qu'elles avaient plus de chances d'avoir la charge supplémentaire des enfants, et parce qu'elles étaient moins susceptibles de pouvoir se replier ou de développer des activités alternatives (Int-Cov. 9, 11, 30). Si nos données quantitatives confirment que les enseignants sous contrats défavorables sont plus enclins à se dire préoccupés par les conséquences de santé de la COVID-19 sur leur famille ($p=0,004$), l'idée d'une expérience très différenciée des effets du confinement sur la vie quotidienne n'est pas pleinement confirmée par nos données. Le tableau

ci-dessous résume la perception des effets du COVID-19 et du stress par catégorie d'enseignant ; même si les enseignants sous contrat défavorables ont légèrement plus d'expériences négatives liées à la COVID-19, la différence reste mineure. C'est en fait toutes les catégories, parents comme enseignants, homme comme femme, et enseignants sous contrats favorable comme défavorables, qui semblent affectés par la pandémie (de façon similaire, il n'y a presque pas de différence entre zones rurales et zones plus urbanisée, si ce n'est une perte d'activités sociales légèrement plus importante dans les zones plus urbanisées).

Tableau 1 : Expériences négatives liées au COVID-19 (% des répondants)

	Genre enseignant		Contrat enseignant			
	Parent	Enseignant	Homme	Femme	Favorable	Défavorable
Perte de revenu	54,03%	50,89%	51,92%	48,11%	49,74%	54,03%
Perte d'accès au marché	20,38%	23,34%	23,60%	22,64%	24,43%	20,38%
Incapable de soutenir malades	12,80%	15,69%	15,91%	15,09%	16,75%	12,80%
Tâches additionnelles	4,74%	5,99%	6,64%	4,25%	6,46%	4,74%
Maladie	1,42%	1,79%	2,10%	0,94%	1,92%	1,42%
Maladie mentale	62,56%	57,02%	56,29%	58,96%	54,97%	62,56%
Perte d'activités sociales	83,89%	77,55%	77,10%	78,77%	75,22%	83,89%
Vente catastrophique	16,59%	14,67%	15,73%	11,79%	13,96%	16,59%
Répondants	715	784	572	212	573	211

Note : enquête d'octobre 2019. Différence entre les deux groupes : + $p < 0,15$; ** $p < 0,05$

Mentionnons aussi que le confinement semble aussi avoir affecté le sentiment de sécurité. Des enseignants et directeurs ont ainsi partagé leur crainte d'être pris pour cible parce qu'ils bénéficiaient toujours d'un salaire (Int-Cov. 10, 16, 17, 18), certains exprimant même la crainte que leur propres collègues « nouvelles unités » ne viennent les « fouiller sur le chemin du retour » (Int-Cov. 3) ou « venir la nuit pour nous faire du mal » (Int-Cov. 9). Dans un contexte tendu et militarisé, les conflits d'ordre professionnel peuvent parfois devenir violents. Le statut administratif et contractuel des enseignants apparaît ainsi comme un déterminant clé de leur bien-être social et émotionnel, et peut s'articuler avec les dynamiques de violence.

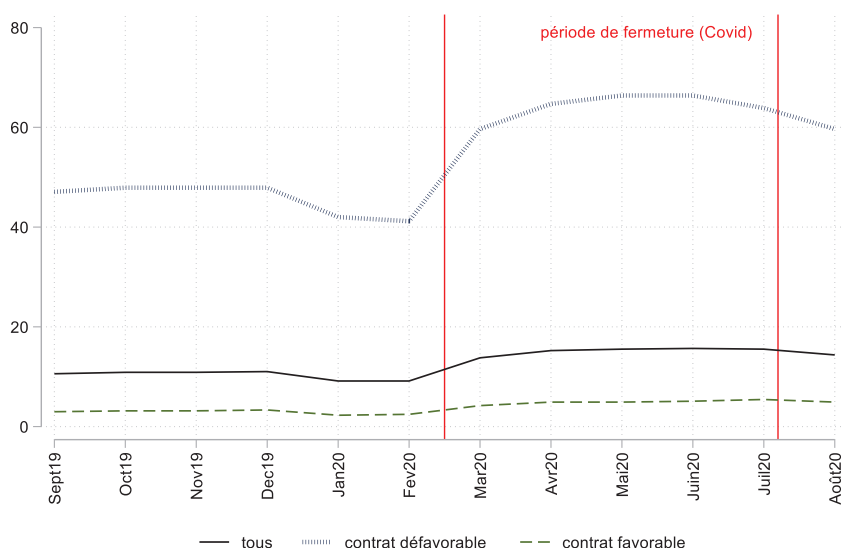
EFFETS À MOYEN TERME

Dans cette section, nous décrivons l'évolution de la situation des enseignants et de l'enseignement trois mois après la fin du (premier) confinement, en octobre 2020, et la comparons avec la situation pré-pandémie, mais aussi pré-gratuité, en mai 2019.

INSCRIPTIONS DES ÉLÈVES

Une inquiétude prépondérante chez les enseignants et chefs d'établissement interrogés pendant le premier confinement était que certaines catégories d'élèves ne reviennent pas à l'école, et ainsi de perdre une partie des acquis de la Gratuité. Il s'agit en particulier des filles qui se sont mariées et/ou sont tombées enceintes pendant le confinement (Int-Cov. 12, 16, 18, 30, 31) et des enfants issus de milieux socio-économiques plus pauvres (y compris les réfugiés) et/ou de zones rurales, plus susceptibles de travailler pour leur foyer dans diverses activités telles que l'agriculture de subsistance ou les tâches ménagères (Int-Cov. 15, 24, 32). Nos données montrent cependant qu'il n'y a pas, dans les zones de notre enquête, de baisse statistiquement significative ($p=0,668$; $n=49$ écoles) du nombre d'élèves inscrits entre le début de l'année 2019-2020 et le début de l'année 2020-2021. Ce fait est d'autant plus remarquable qu'il y avait eu une hausse très significative (19,2 pour cent) du nombre d'élèves à la rentrée 2019-2020 ($p=0,000$; Figure 3).

Figure 3 : Evolution du nombre moyen d'élèves par école



Note : N=49 écoles pour lesquelles l'information était disponible. Tel que rapporté directement par le directeur. Barres d'erreur : écart type.

Concernant les élèves plus vulnérables, le nombre d'enfants réfugiés ou vivant avec un handicap est stable entre l'enquête de mai 2019 et celle d'octobre 2020, à la fois en regardant les chiffres donnés par les écoles et le profil des élèves perdus de vue d'une enquête à l'autre. La proportion de filles rapportée par les écoles, loin de baisser, est en hausse significative entre nos deux enquêtes, le ratio passant de 0,98 fille par garçon à 1,23 fille par garçon ($p=0,000$).

ENSEIGNANTS

La majorité des répondants interrogés pendant le premier confinement s'inquiétaient du fait que les enseignants—et principalement les nouvelles unités—puissent ne pas revenir à l'école à la réouverture en raison et de l'incertitude pesant sur leur rémunération. Des enseignants « nouvelles unités » expliquaient ainsi qu'il était peu probable que les enseignants sous ces contrats retournent à l'école étant donné qu'ils n'ont pas été payés régulièrement, ou pas du tout, depuis la mise en œuvre de la politique de gratuité (Int-Cov. 16, 20, 21, 34). Dans la pratique, nous n'observons pas de changement significatif dans le nombre moyen d'enseignant déclaré par institution entre la rentrée 2018-2019 (15,89) et le début 2020 (16,1), mais une légère baisse qui n'est pas statistiquement significative ($p=0,137$) s'observe avec la rentrée 2020-2021 (15,78). Celle-ci cache cependant deux tendances inverses, qui confirment les informations des entretiens qualitatifs : d'une part, le nombre d'enseignants mécanisés et payés est en légère hausse, de 4 pour cent en moyenne ($p=0,092$), alors que la part des « nouvelles unités » et des enseignants sous contrat défavorable de façon générale est en clair baisse, de 18,2 pour cent ($p=0,049$) et de 14,75 pour cent ($p=0,037$) respectivement. Une partie de cette dynamique est un jeu de vases communicants, étant donné que parmi les enseignants sous contrat défavorable que nous avons rencontré en 2019 ($n=292$), 12,23 pour cent avaient changé de statut. Mais la baisse significative est aussi très probablement liée à des enseignants sous contrat défavorable ayant quitté leur école. La différence est frappante : alors que nous avons pu retrouver 91,69 pour cent des enseignants sous contrat favorable interrogés en 2019 en octobre 2020, nous n'avons pu retrouver que 64,38 pour cent des enseignants sous contrat défavorable ($p=0,000$).

Par définition, nous ne savons pas exactement quand ces enseignants sous contrat instable ont quitté la profession. Les entretiens qualitatifs suggèrent que les conditions de travail insoutenables imposés par la Gratuité et la fermeture, ainsi que l'absence de salaire pendant la période de confinement (Int. 4, 8, 11, 12, 34, 56) ont joué un rôle important dans ces départs. Différents chocs peuvent avoir accéléré le mouvement, en plus de la Gratuité. Il y a bien sûr le confinement, mais

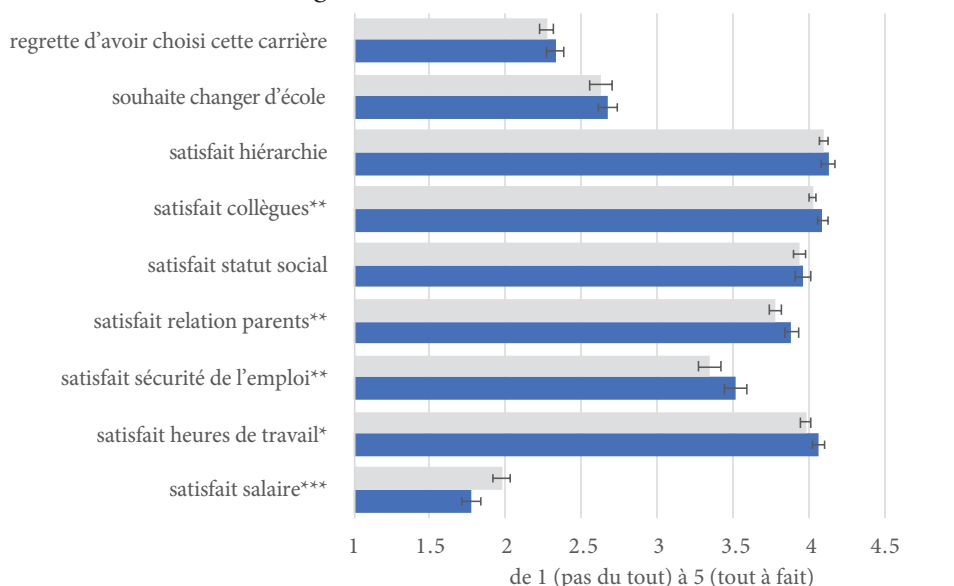
aussi la chute du cours du franc congolais en mai 2020 (-16 pour cent par rapport au dollar), qui a renforcé la perception d'un salaire trop bas (Int. 5, 34, 50).

BIEN-ÊTRE DES ENSEIGNANTS

Le choc considérable provoqué par la Gratuité et la période de confinement a provoqué un mal-être important chez les enseignants, surtout ceux sous contrat défavorable. Une grève concernant le paiement des enseignants « nouvelles unités » a été organisée en octobre 2020 (Int. 2, 17, 37, 55) : 36,96 pour cent de nos enquêtés sous contrat favorable et 77,01 pour cent de ceux sous contrat défavorable ($p=0,000$) y ont pris part. Elle a donné lieu à des tensions entre écoles, par exemple lorsque des enseignants d'une école avec un staff composé surtout de « nouvelles unités » en grève ont jeté des pierres sur une école payante et ont frappé deux élèves (Int. 4) : nos entretiens suggèrent qu'avec la Gratuité, les enseignants rémunérés par l'Etat ont tendance à se considérer comme les « vrais » agents de l'État, par opposition aux nouvelles unités (Int. 4, 7, 36, 53), ce qui alimente les griefs et tensions (Int. 5).

Les enseignants se plaignent surtout de l'effet de la Gratuité sur leur situation salariale. Comme le montre la Figure 4, les autres indicateurs de bien-être changent peu à l'exception de la sécurité de l'emploi et les relations avec les parents et les collègues qui s'améliorèrent légèrement. D'autres questions non-présentées dans la Figure 4 confirment ce résultat : deux à trois fois plus de répondants disent que la relation entre enseignants et parents, élèves, ou direction s'est améliorée plutôt que détériorée. Les entretiens qualitatifs suggèrent aussi que la Gratuité a été un soulagement pour de nombreux parents et a généralement amélioré les relations entre enseignants et parents (Int. 2, 10, 47, 50). Au-delà du soulagement financier évident pour les parents, la Gratuité semble avoir en partie éliminé une série de distorsions dans le fonctionnement des écoles générées par les frais de scolarité et la relation transactionnelle à l'éducation qu'ils établissaient. Par exemple, elle a rétabli de la transparence dans les sanctions prises envers les élèves telles que l'expulsion d'un enfant en cas de mauvais comportement (Int. 49).

Figure 4 : Satisfaction au travail



Note : *, **, *** différence significative à $p < 0,1$, $p < 0,05$ ou $p < 0,01$ entre les deux années. Barres d'erreur : écart type ajusté pour l'échantillonnage par école. N=752 enseignants pour 2019 ; 727 en 2020.

Il convient cependant de rester extrêmement prudent quant aux conclusions que nous pouvons tirer de ces résultats : les données ont été collectées en octobre 2020, à un moment où un nombre substantiel d'enseignants sous contrat défavorables—probablement les moins satisfaits—avaient déjà quitté les écoles.

CONCLUSIONS

Notre article montre que l'ambitieuse réforme du secteur de l'éducation lancée par le gouvernement congolais en septembre 2019 a eu des effets considérables sur les écoles des territoires de Fizi et Uvira au Sud Kivu, et ce, malgré le confinement et la violence. L'augmentation significative du nombre d'élèves dans les écoles suggère que la réforme porte en partie ses fruits et améliore l'accès universel à l'éducation primaire en RDC. Entrepris dans un contexte déjà très difficile, la réforme peine cependant ; l'effectif d'enseignants—lié au financement du secteur—n'a pas augmenté en proportion de la population scolaire, mettant les enseignants en face de classes pléthoriques et au niveau scolaire hétérogène. Avant l'introduction de la réforme mettant en place la gratuité de l'enseignement, le système scolaire reposait en partie sur le travail d'enseignants engagés directement par les écoles et payés par la communauté, ceci entre autres pour contourner les

difficultés à embaucher de nouveaux enseignants-fonctionnaires payés par l'Etat. La réforme interdit ces pratiques, mais ne lève pas les contraintes à l'embauche. Au contraire, la régularisation du statut de ces enseignants, nécessaire pour faire face à l'augmentation d'élèves, se heurte souvent à des logiques de gouvernance politisée du secteur éducatif, menant à des grèves et de vives tensions au sein des écoles et à la perpétuation informelle de certaines contributions directes des parents. Il est aussi important de noter que le choc n'est pas seulement d'ordre financier, mais affecte aussi le bien-être et l'identité des enseignants sous contrat précaire.

Le « double choc » que constitue la combinaison Gratuité et COVID-19 est, dans l'état de nos connaissances, unique au cas de la RDC, mais cela ne signifie pas que notre analyse soit dépourvue d'intérêt pour l'étude d'autres contextes : le mouvement poussant à la gratuité réelle de l'enseignement est fort à travers le monde, et le risque d'épidémie à large échelle plus fort que jamais—les épidémies de maladies liées aux virus Ebola et Nipah ont, par exemple, déjà mené à la fermeture d'écoles pendant de longs mois. D'autres crises, telle que les vagues de chaleur intenses liées au dérèglement climatique, mènent aussi à la fermeture d'écoles. Une recommandation fréquente pour amortir le choc (épidémique ou autre), pendant la fermeture et immédiatement après, est de s'assurer que les barrières financières sont amorties pour les élèves (voir par exemple, Hallgarten 2020). Notre étude invite à une grande prudence et à considérer de près la situation des enseignants.

En RDC, la réforme de la Gratuité semble avoir à la fois atténué et exacerbé les effets de l'interruption de la scolarité liée à la pandémie. Atténué d'une part parce que, dopés par la gratuité, l'effectif scolaire reste stable et les relations entre enseignants-fonctionnaires et parents ne semblent pas se dégrader entre la période précédant la pandémie et celle venant quelques mois après la première fermeture des écoles—contrairement aux inquiétudes. Exacerbé d'autre part parce que chez les enseignants, et surtout chez ceux qui ne sont pas enregistrés comme fonctionnaires, nous trouvons une grande incertitude quant à l'emploi et aux moyens de subsistance. Elle est générée par l'action conjointe des restrictions de rémunération imposées par la réforme et les restrictions de mouvement et d'enseignement, de facto des restrictions d'emploi, imposées dans le cadre de la réponse à la COVID-19. D'autres études montrent une augmentation du stress et de l'anxiété parmi les enseignants pendant la pandémie (Mahmud et Riley 2021); nous montrons que pour de nombreux enseignants non-enregistrés comme fonctionnaires et déjà fortement précarisés par la réforme, la situation est devenue intenable, et les pousse à quitter la profession. Notons aussi que, comme d'autres

études, trouvons également que le niveau d'engagement avec l'enseignement est le plus faible parmi les élèves les plus vulnérables (Asanov et al. 2021).

Ainsi, notre article montre le potentiel, mais aussi les limites, de l'abolition des frais de scolarité dans des situations de crise prolongée. Celle-ci ne peut pas tout dans un système qui repose encore en grande partie sur des arrangements locaux pilotés directement depuis l'école plutôt qu'au niveau (sous-)provincial et a fortiori national. Il s'agit principalement de la rémunération d'un personnel « d'appoint » non reconnu par l'Etat, mais néanmoins essentiel pour faire face à la charge de travail. Ces arrangements locaux donnent une flexibilité accrue aux écoles, essentielle pour faire face à des crises multiformes et prolongées, particulièrement aiguës dans les zones affectées par les conflits armés. Ainsi, derrière la question du personnel enseignant, se profile aussi la question de la flexibilité du système éducatif, essentielle à sa résilience en contexte de crise. Le retour à une certaine centralisation opéré par la politique de Gratuité fait, dans la pratique, perdre en flexibilité ce que l'introduction des frais de scolarité avait fait gagner.

Les limites sont aussi bien visibles dans ce que l'accès financier n'est pas tout, sans un investissement dans des choses aussi fondamentales que la mise à disposition de manuels scolaires ou de moyens de communication (y compris des radios), la continuité d'un enseignement est quasi impossible une fois rompu le lien présentiel. Enfin, l'abolition des frais de scolarité ne fait rien, à moins d'être accompagnée de mesures fortes, pour renforcer l'estime, le bien-être, et la motivation des enseignants qui sont des composantes essentielles pour qu'elles et ils puissent naviguer une crise comme celle de la COVID-19.

L'expérience de la COVID-19 est une crise inédite pour les écoles de l'est de la RDC : il est risqué de la comparer cette crise aux crises précédentes, par ailleurs très mal documentées dans une perspective micro et du point de vue des enseignants. Au niveau de la perturbation, la fermeture générale et longue des écoles est similaire aux grandes grèves des enseignants récurrentes dans le pays. Celles-ci causent des « années blanches » qui ont une incidence sur l'enrôlement scolaire (Nyongolo et Mbecke 2020). Mais la comparaison s'arrête là : les grèves mènent typiquement à une amélioration de la position des enseignants et il n'est pas question de maintenir un enseignement pendant leur durée. Les épisodes de violence amènent eux aussi à des fermetures d'écoles, mais il s'agit de crises de nature très différente. Enfin, les fermetures d'écoles pour cause sanitaire sont exceptionnelles et quand elles l'ont été, comme par exemple lors de l'épidémie d'Ebola au Nord Kivu, il s'est agi d'un nombre restreint d'écoles, pour une période limitée. La littérature sur ces expériences se focalise sur les leçons en termes

de prévention de la maladie à l'école et sur la nécessité de mettre en place de mécanisme de suivi des élèves afin d'éviter un décrochage (UNICEF 2019). À l'épreuve de la COVID, on voit bien que les écoles ont certainement développés plus d'outils pour travailler sur le premier point.

Les défis auxquels font face les enseignants de l'est de la RDC demeurent ainsi considérables. Si la politique de gratuité est susceptible de réduire les obstacles économiques à l'éducation exacerbés par le confinement lié à pandémie de COVID-19, il n'en demeure pas moins que des questions essentielles—dont l'embauche et le paiement des enseignants sous contrat non-permanent—doivent être résolues. Sans cela, il est probable que la réintroduction des frais de scolarité versés par les parents d'élèves, déjà observée dans de nombreuses écoles à travers le pays et également décelée dans nos données, ne redevienne pas la norme.

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ANNEXE

Tableau A1 : Echantillon de la deuxième enquête

	Echantillon de la deuxième enquête	% de l'échantillon de la première enquête trouvé dans la deuxième enquête
Echantillon des élèves dans la deuxième enquête		
<i>Echantillon d'élèves filles</i>	344	51%
<i>Echantillon d'élèves garçons</i>	293	61%
<i>Nombre total d'élèves</i>	637	56%
Echantillon des enseignants dans la deuxième enquête		
<i>Echantillon d'enseignantes</i>	175	81%
<i>Echantillon d'enseignants</i>	448	84%
<i>Nombre total d'enseignants</i>	623	83%

Note : Notre étude se concentre sur 55 écoles sélectionnées par Save the Children pour un autre projet éducatif dans les territoires d'Uvira et de Fizi. Les écoles que nous avons sélectionnées ne sont donc pas aléatoires, ni représentatives au niveau national. Lors de la première enquête en 2019, nous avons échantillonné 752 enseignants. Les élèves de l'échantillon ont été choisis au hasard, en fonction de leur sexe, dans chaque école. Nous nous sommes entretenus avec 13 élèves par école. Lors de la deuxième enquête en 2020, notre objectif était de réinterroger les mêmes enseignants et élèves avec lesquels nous avions parlé en 2019 afin d'obtenir des données longitudinales pour les deux groupes. Le tableau A1 indique le nombre d'écoles, d'enseignants et d'élèves de la seconde enquête par rapport à la première. Pour les élèves, le taux d'attrition était de 44 %. Nous utilisons un panel comprenant 623 enseignants.

Tableau A2 : Caractéristiques des écoles étudiées

	Uvira		Fizi	
	Moyenne	Ecart-type	Moyenne	Ecart-type
L'école a été accréditée (Oui=1 Non=0)	1.00	0.00	0.96	0.20
L'école a été enregistrée par le SECOPE (mécanisé) (Oui=1 Non=0)	0.87	0.34	1.00	0.00
L'école a été incluse dans la masse salariale publique (budgetisée) (Oui=1 Non=0)	0.83	0.39	1.00	0.00
Il y a de l'électricité dans l'école Non=0 Oui=1	0.13	0.34	0.04	0.20
Nombre moyen de salles de classe utilisées	16.13	6.77	12.54	6.25
Nombre total moyen d'enfants inscrits dans cette école avant la fermeture de l'école COVID-19 en mars 2020	984.18	367.47	953.12	517.98
Nombre moyen d'ethnies des élèves dans les écoles	7.57	4.29	6.04	2.68
Nombre moyen d'enseignants NU/NM au moment de l'entretien	3.17	4.44	5.65	9.10
Nombre moyen d'enseignants Mécanisé mais non rémunéré au moment de l'entretien	1.04	3.39	0.23	0.86
Nombre moyen d'enseignants Mécanisé et rémunéré au moment de l'entretien	13.70	9.02	9.50	4.01
Nombre moyen d'enseignants avec des contrats à court terme au moment de l'entretien	0.26	0.69	1.42	5.89
Nombre moyen d'enseignantes dans cette école au moment de l'entretien	5.78	3.46	3.85	2.74
Nombre moyen d'enseignants dans cette école au moment de l'entretien	12.35	5.31	11.15	5.58
Nombre moyen d'enseignants dans cette école au moment de l'entretien	18.13	7.07	15.00	7.76

Tableau A3 : Caractéristiques des enseignants étudiés

	Uvira		Fizi	
	Moyenne	Ecart-type	Moyenne	Ecart-type
Age moyen en années	42.92	14.00	36.39	11.42
Sexe (Féminin=0 Masculin=1)	0.69	0.46	0.76	0.43
Nombre moyen de personnes vivant dans le ménage	6.87	2.98	7.64	3.43
Nombre moyen de personnes vivant dans le ménage âgées de moins de 14 ans et de plus de 60 ans	3.63	2.17	4.61	2.28
Nombre moyen de pièces dans le ménage	3.31	1.28	3.15	1.41
L'enseignant a toujours vécu dans ce village depuis sa naissance (Non=0 Oui=1)	0.78	0.42	0.77	0.42
L'enseignant a un handicap (Non=0 Oui=1)	0.90	1.13	0.79	1.10
L'enseignant est un directeur par intérim (Non=0 Oui=1)	0.03	0.16	0.05	0.21
L'enseignant est directeur par intérim (Non=0 Oui=1)	0.01	0.11	0.02	0.13
L'enseignant est un acte de performance (contrat à court terme) dans cette école uniquement (Non = 0 Oui=1)	0.01	0.11	0.00	0.05
Enseignant est Acte de performance (contrat à court terme) avec contrat à durée indéterminée dans un	0.00	0.05	0.00	0.05
L'enseignant est Acte de service (Non=0 Oui=1)	0.01	0.10	0.00	0.05
L'enseignant est Nouvelle Unité - Non Mécanisé, début de carrière d'enseignant (Non=0 Oui=1)	0.16	0.37	0.26	0.44
L'enseignant est Nouvelle Unité - Non Mécanisé, a déjà changé d'école (Non=0 Oui=1)	0.03	0.18	0.02	0.15

Tableau A3 : Caractéristiques des enseignants étudiés (cont.)

	Uvira		Fizi	
	Moyenne	Ecart-type	Moyenne	Ecart-type
L'enseignant est Mécanisé et non rémunéré (Non=0 Oui=1)	0.03	0.16	0.02	0.13
L'enseignant est omis (Non=0 Oui=1)	0.01	0.09	0.01	0.08
L'enseignant est mécanisé et rémunéré (Non=0 Oui=1)	0.75	0.44	0.69	0.46
L'enseignant est un bénévole (Non=0 Oui=1)	0.00	0.00	0.01	0.08
L'enseignant est un enseignant stagiaire (Non=0 Oui=1)	0.00	0.00	0.00	0.00

HOME LEARNING FOR CHILDREN IN LOW-INCOME CONTEXTS DURING A PANDEMIC: AN ANALYSIS OF 2020 SURVEY RESULTS FROM SYRIA AND THE DEMOCRATIC REPUBLIC OF THE CONGO

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ABSTRACT

COVID-19-related school closures and the need for millions of learners to learn at home created additional pressures for parents and caregivers who were suddenly responsible for their children's education, often with limited support or resources. When schools closed, a flood of home learning materials and activities circulated online, but too few of these solutions focused on the home learning needs of learners with disabilities in low-income contexts, where online learning is rarely an option. The Enabling Education Network and Norwegian Association of Disabled developed guidance materials for all learners that encouraged appropriate, achievable, and low-stress learning activities in easy-to-read and visual formats, which are now available in online and printed formats. These materials were informed by an online survey that captured a snapshot of the extent to which home learning support and resources were provided, and recorded the perspectives of parents, families, and education professionals about learners' situations in 27 countries in the months leading up to July 2020. In this article, we focus on survey responses from the Democratic Republic of the Congo and northern Syria that describe the inclusive home learning provision available. We compared these findings with responses from other countries and identified four key areas of learning that emphasize the importance of localized approaches to inclusive education, drawing on community networks, and positioning teachers and parents as important community resources for education in emergencies.

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INTRODUCTION

The Enabling Education Network (EENET) is an information network that promotes community-based approaches to inclusive education. It encourages information-sharing among teachers, parents, and decisionmakers in resource-poor environments and amplifies the voices of stakeholders doing innovative work (Corcoran 2020).¹ EENET's activities center on our theory of change and contribute to the overall desire of enabling “more girls, boys, women and men to actively participate in quality, inclusive education and learning opportunities throughout their lives” (Lewis 2016).

As EENET team members, our contributions toward making this change focus on three domains: collaboration, exchange, and influence. For example, the network is partially funded through consultancies, which focus on participation and grassroots voices in inclusive education. What we learn from our consultancy projects connects with our longer term information-sharing aims (Corcoran 2020). EENET consultants from northern and southern contexts collaborate through the network, our consultancies, and informal information-sharing. This helps us identify and address inclusive education gaps and needs, share information between contexts, develop new resources, and work together to influence change in education policy and practice. Our approach to enabling home learning provision, which centers on our theory of change, is based on this foundation.

When COVID-19-related school closures created the need for millions of learners to stay at home, the EENET team began to meet more regularly in order to support each other as we switched to working remotely. We shared and reflected on what we were observing as education systems responded to the pandemic, both in our own contexts and globally. We began to identify problems with how home learning was being interpreted in different settings. First, learning at home was a big change for most learners and their families. Some felt it was an opportunity to try new things and spend more time together, but it was nonetheless stressful for many parents and caregivers, who felt pressured to help their children continue learning, often with limited support or resources (e.g., Richardson 2020; Rigby 2020). Secondly, when schools closed, home learning materials and activities flooded the internet, television, and radio (e.g., News Agency 2020; Lord 2020).

¹ Inclusive education is a constantly evolving process of change and improvement within schools and wider education systems to make education more welcoming and learner friendly. It is about changing education cultures, policies, and practices so they are flexible enough to accommodate any learner (e.g., with or without disabilities; who identifies as a nonconforming gender; is from a different ethnic, language, religious, or financial background; is of any age; or is facing health, migration, refugee, or other vulnerability challenges).

However, these solutions had a limited focus on the home learning needs of learners with disabilities in low-income contexts, where access to television and radio, or to data and other equipment for online learning, is limited. Thirdly, we were concerned about the mental health and wellbeing of the learners, parents, and caregivers in these contexts.

Collaboration is EENET's first domain of change. Inclusive education can only be achieved if individuals and organizations work together and combine their complementary skills, experiences, and resources. For example, parents and communities can play central roles in children's learning before and beyond their formal school careers (Lewis et al. 2019). Collaborative partnerships between families and education professionals are particularly important to children's learning, especially learners with disabilities, who often need their parents to advocate more for their inclusion (e.g., Bailey et al. 2006; Lasater 2016). However, effective partnerships depend on having joint learning opportunities and frequent communication, and all partners must value and share their knowledge and skills with each other equitably and openly (e.g., Chu 2018).

While parents and caregivers are generally interested in children's learning, they can lack confidence in their ability to support this learning or may find that their opinions are not welcomed by educators (Cashman, Bhattacharjea, and Sabates 2020). The COVID-19 pandemic quickly repositioned parents to have primary roles in their children's education (Packman 2020) and provided a unique (if unwanted) opportunity to learn from this new position. In the short term, parents and caregivers needed guidance that would enable them to support their children's home learning. In the long term, the pandemic refocused the importance of developing family-school partnerships between education providers, parents and caregivers, and the local community.

EENET's second domain of change involves helping people to document and exchange "their experiences of developing more inclusive education systems and schools" (Lewis 2016). Learning from each other's experiences enables us to improve our own work. Consequently, as part of a Norwegian consortium program called Together for Inclusion, EENET and Norwegian Association of Disabled (NAD) collaborated to develop easy-to-read and visually appealing home learning guidance materials in printed and online formats. We wanted to prioritize the production of hard-copy materials and worked closely with local distributors to create localized solutions to the challenge of disseminating materials during the period when social distancing was required. To do this, however, we needed to understand the contexts in which the materials would be used.

To inform the development of home learning guidance materials that would be relevant across global contexts, we developed a short online questionnaire that was translated into 14 languages. More than one thousand respondents from 27 countries completed the survey. Corcoran and Pinnock were part of the team that developed the survey. The former is an academic research advisor, the latter an EENET consultant working on joint projects with NAD. They worked with Twigg, a research intern from Manchester Metropolitan University, on the analysis of the responses.

The findings provide a unique snapshot of the respondents' experiences and their observations on the support provided for home learning in these 27 countries in the first six months of the pandemic. The respondents identified as parents, teachers, staff members of nongovernmental organizations (NGOs), and/or ministry or government officials. Although we were focused on the experiences of learners with disabilities, the respondents did not confine their responses to these learners and described the home learning provision (resources and additional support) that learners had access to.

In this article, we focus on the responses to the French and Arabic translations of the online questionnaire, which contribute to EENET's third domain change, "to support people to be more effective at influencing policy and practice change in education" (Lewis 2016). All of the French-speaking respondents ($n=52$) were from the Democratic Republic of the Congo (DRC), and 38 of the Arabic-speaking respondents lived and/or worked in northern Syria. Both countries have been affected by protracted conflict, and DRC has also experienced a series of Ebola outbreaks in recent years. Our focus on these countries, therefore, offers insights into the home learning provision available in countries with previous experience in developing education in emergencies interventions. We share our findings on what the respondents identified as the benefits, challenges, opportunities, and barriers to supporting home learning. We look at the extent to which the home learning provision catered to learners with disabilities—if indeed it did so at all—and examine the role parents and local community networks played in enabling home learning support within an education in emergencies context. We offer recommendations for how to strengthen education systems and preparedness for future crises.

A HISTORICAL CONTEXT OF COVID-19 UP TO JULY 2020

DRC and Syria have both been affected by protracted conflict. DRC, which is experiencing one of the world's most persistent humanitarian crises, is said to have the largest number of internally displaced people of any African country, 5.2 million (UNICEF 2021). Syria, due to its decade-long civil war, is experiencing the

worst refugee crisis in the region since World War II (McNatt et al. 2018). At least 13.5 million people have been displaced by the conflict, including 6.7 million who have fled the country and are now living as refugees (UNHCR 2020a). Before the pandemic, education in emergencies had been in place in both countries for some time, with well-established education clusters, which are interagency coordinating mechanisms for agencies and organizations with expertise in education-based humanitarian response in contexts of internal displacement. However, growing food insecurity, weakened and weakening health and education outcomes and systems, and economic shocks left large numbers of people in both countries highly vulnerable to the multiple negative effects of the COVID-19 pandemic (UNICEF 2020; USAID 2021).

When the surveys were conducted for the EENET/NAD project, multilateral and international NGOs were working with government and local partners to deliver a range of education and protection interventions in the autonomous region of North and East Syria, where all survey respondents from that country resided. We do not include any details on these organizations; the respondents from both countries completed the survey anonymously, so we cannot associate their responses with named organizations in either of them.

DRC

Areas of DRC have experienced instability and conflict for decades. In the eight months before June 2020 (when the survey was online), conflict resulted in 1,300 civilian deaths and 110,000 displaced people (OHCHR 2020), in addition to the million-plus displaced in previous years (e.g., UN OCHA 2017). DRC nonetheless made significant progress in regard to education, raising primary education completion rates in the country from 29 percent in 2002 to 70 percent in 2014. However, it is still among the countries with the highest number of out-of-school children and also faces challenges in terms of education quality and inclusion. The DRC Education Sector Plan (2016-2025) focuses on expanding access and improving governance generally, and on the provision of support and education to populations displaced by conflict. This plan includes a focus on “the development of a programme to promote inclusive and special education for vulnerable learners” (RDC 2015, 47; translation from French), but no specific definitions of “special” and “inclusive” have been provided.

The first COVID-19 cases in DRC were identified in March 2020 (WHO 2021), which the questionnaire respondents said led to a government-declared state of emergency and the forming of a multisectoral national pandemic strategy

committee. The lockdown, which was first enforced in Kinshasa, became countrywide toward the end of March. Restrictions were imposed at the borders, and airline flights from countries where people were infected with COVID-19 were suspended. Congolese citizens returning to the country were advised to self-quarantine for 14 days. Schools, universities, restaurants, and places of worship were shut, and gatherings of more than 20 people were prohibited (Reliefweb 2021).

The DRC's fragile healthcare system has long been overburdened by civil conflict and other epidemics, such as multiple outbreaks of Ebola, which limited its capacity to conduct COVID-19 testing and sampling. In addition, an inadequate number of health workers and limited medical and personal protective equipment left the country ill-equipped to fight the pandemic.

SYRIA

After a decade of political and socioeconomic unrest and related conflict, Syria's infrastructure was under significant strain even before the outbreak of COVID-19 (Gharibah and Mehchy 2020). In early March 2020, the government began to close land borders around the country in order to prevent transmission of the virus to the areas of autonomous administration in North and East Syria (Huang et al. 2020). Fearing that infection could enter these areas from the government-held areas, opposition groups tried to limit the movement of people at checkpoints along the front line in northern Syria.

As survey respondents confirmed, the reality of the virus was widely accepted, but a lack of access to and appropriate community education around preventative methods, diagnosis, and treatment created suspicion in the communities. For example, officials were suspected of downplaying the number of cases. Stigma against those who contracted COVID-19 and an overwhelmed healthcare system prevented people from getting tested, resulting in the underreporting of cases (Mohsen et al. 2021). The ministry of education announced that lessons in public and private schools would be suspended starting on March 14. Travelers from countries affected by COVID-19 were barred from entering Syria, even if they had residence permits or visas from Syrian diplomatic missions. Syrian citizens who did not display symptoms of the virus could enter the country if they underwent a two-week quarantine.

RESEARCH DESIGN

In April 2020, EENET and NAD decided to develop guidance materials for parents, caregivers, and families of children with and without disabilities. The materials were designed to encourage appropriate, achievable, low-stress learning activities using the time, skills, and resources available in families. They would initially be distributed through existing EENET and NAD project partnerships in a small number of African countries, eventually achieving wider distribution through EENET's global information-sharing network. To ensure that the materials addressed unmet needs and reached the most excluded children, we needed to find out what provisions were already in place for supporting home learning and how easily families could access and use them. To inform the development of the materials, we wanted to know how children's learning was being supported at home while schools were closed, and what the biggest barriers were to learning at home, especially for children with disabilities.

We conducted an online survey to provide a snapshot of home learning situations around the world from the perspective of parents, families, and those who know them well. The project team collaborated remotely to develop a short, easy-to-answer survey that could be completed quickly by parents who were juggling the oversight of their children's education, working from home, providing for their families' basic needs, and/or had limited data access. The questions (for more information, see Corcoran, Pinnock, and Twigg 2020a, 2020b) were designed to generate a combination of quantitative and qualitative data and focused on

- how schools were affected by the pandemic;
- if schools were closed and learners were received education support at home, what this support looked like and who provided it;
- how learners were engaging with the home learning provision and how they were reacting to the situation;
- how parents and/or guardians felt and whether they were receiving advice or practical support to help with home learning;
- whether learners with disabilities received home learning provision appropriate to their needs; and
- what respondents thought were the best ideas being used in their countries/ areas to support home learning.

The questionnaire in English was uploaded onto the SurveyGizmo platform on May 1, 2020. Over the next few weeks, translated versions in 13 other languages (Acholi, Arabic, Armenian, Bahasa Indonesia, French, Kiswahili, Luganda, Malay, Portuguese, Runyankole, Russian, Spanish, and Ukrainian) were uploaded and remained live until the end of June 2020. The languages chosen reflected the contexts in which EENET and NAD were involved in ongoing projects, and on the language skills of EENET consultants and EENET/NAD friends who volunteered to translate the questionnaires. The links to the questionnaires were found on the EENET website and shared using EENET's social media accounts, emails to network members, and direct messages to colleagues working for other organizations in the field of inclusive education. The survey was completed by more than one thousand respondents from 27 countries in 10 languages.

In DRC, snowball sampling was key to the survey's success. The link to the questionnaire in French was sent directly to a colleague working for a community-based organization in Bukavu, who shared it with contacts across the country. It was completed by 52 respondents in South Kivu Province, North Kivu Province, and Kinshasa (in descending order of frequency). The link to the Arabic survey was shared via email and social media to EENET's growing Arabic language community (see Qwaider 2018). Of the 40 respondents, who represented three countries, 38 came from northern Syria. An additional respondent from Syria completed the English-language questionnaire, bringing the total number of respondents from Syria to 39.

The landing page for the questionnaires provided a brief overview of the project and clearly outlined how their completion of the survey equated with giving their consent. EENET's contact details were included in case respondents later wished to withdraw their consent. No personal information was requested beyond the respondent's country and any information they chose to provide in relation to this. Responses to the questionnaires were downloaded from the SurveyGizmo platform and transferred to Excel spreadsheets (quantitative data) or Word tables (qualitative data). The data was redacted to remove any identifying information. Only the anonymized data was kept for analysis purposes. The raw data files were deleted once the transfer, translation, and redaction had taken place.

To provide an overview of each country's situation, the data was analyzed thematically, country by country, question by question. The responses to each question were coded for specific themes evident in the detail provided by the respondents and categorized accordingly. The initial rapid analysis was published in the form of open-access reports on the EENET website (e.g., Corcoran et al.

2021a, 2021b). In the following sections, we share our findings from a further analysis of the responses from DRC and Syria. We acknowledge the limitations of the data, given that respondents were invited to participate in the survey through their local networks. The responses therefore are mainly from people working in the NGO and/or education sector. We do not have data from parents in these two countries who could not read or access the internet.

HOME LEARNING PROVISION IN DRC

Respondents to the questionnaire in French described themselves as parents (n=35), NGO workers (n=21), social workers (n=12), teachers (n=6), consultants (n=3), university lecturers (n=2), and education officials (n=6), or as government officials (n=3), who were able to report on the whole country as well as on their own situations. This is reflected in the responses below.

Schools were completely closed during this stage of the pandemic (May-June 2020), and children were confined to their homes and communities. Two respondents stated that a few schools were operating partially. There was general concern that the school closures would cause children to be left behind and would “constitute a danger for them and for the community because some of them have become delinquent.” Others commented that

children and parents are in dire straits when it comes to their intellectual lives. For some children, the parents take action to make them review course notes every day. Others spend hours on television and in games.

At home, where most of them are idle, they do nothing and their parents do not take care of them. For lack of occupation, some walk around without an objective. Others circulate in the street and are confused with children in particularly difficult situations.

According to 72 percent of the respondents in DRC, no home learning support or material resources were provided after the schools closed. Only 9 percent (n=5) said that, to their knowledge, some materials and remote lessons (e.g., through television and radio) had been made available. Support for home learning was delivered by provincial education authorities and varied from area to area. Respondents working for these authorities or for NGOs reported that discussions were under way to develop remote lessons and education recovery plans. Although

these interventions had begun in some areas, there was little practical progress for most families. With support from international development partners, the ministry of education broadcast television and radio lessons for learners at the early years level upward and provided online course materials.

The respondents were generally not positive about the support provided, and they felt the provincial governments did not have sufficient capacity to organize effective home learning. Several said that teachers had not agreed to provide remote teaching:

...it is expected that teachers will use some media chosen by government to teach children at home, and academics will deliver online education. This mechanism is very badly understood by many observers, parents, teachers, and even children and students, especially on the feasibility or the practical application of this mechanism.

Respondents in all three locations mentioned that international NGOs and the government had developed materials to support home learning, but most were not available in hard-copy formats. Those working for the national ministry of education office reported that hard-copy materials were distributed, but most other respondents stated that they had not seen any: “No printed documents handed over, no electrical power to follow the broadcast lessons.” Another explained that learning was

impossible with distance education, there is no power, not all families are able to have a television set at home without an internet connection. This teaching is reserved only for the children of the rich.

The DRC respondents made several concrete recommendations to improve the education response to the pandemic, which focused mainly on access to resources, for example:

- Extending school meal programs to meet needs of families affected by the lockdown
- Providing learners with educational supplies, batteries, and/or electricity to enable them to access home learning provision (this includes access to televisions), and

- Ensuring maximum protection from COVID-19 by providing school staff members and learners with access to washing facilities, masks, and alcohol sanitizers, and distributing handwashing basins.

PARENTS' EXPERIENCES

Several DRC respondents expressed frustration, particularly a small number of parents living in areas where schools were closed and life was disrupted by the shutdowns, even though the level of COVID-19 infections was low. Many felt that the government was unable to coordinate the programs needed to deliver relevant home learning provision to most of the population. Some parents who had access to the internet, radio, and television reported being happy to teach their children at home; a small number said they had received course materials online: "The government posted the course online and it gives a little satisfaction since we have a basis to be able to accompany our children as they study at home."

However, most respondents expressed concern for families across the DRC who had no access to these resources, and about the lack of coordinated support for education. Having no information on when schools would reopen created additional worries, and some noted that "children are at home without any supervision or follow-up from our government."

Many parents felt that home learning provision was "a scam" because many children had no access to television, internet, or radio, and they lacked the textbooks and other materials required for home learning. The findings also highlighted the inequality of the home learning provision; 14 percent of respondents mentioned that some parents had hired private tutors and 8 percent described how they had purchased resources online.

A DRC respondent who worked at an NGO explained that the parents they were in contact with

...want their children to be supervised regardless of any condition... because they are really unable even to find the means of survival for their children. Most of them are widowed women... and the others have physical impairments linked to conflict, also characterized by the extreme poverty inherent to post conflict zones.

Survey respondents in DRC expressed an overwhelming sense of frustration at the lack of infrastructure for home learning and the failure to target resources to those who needed the most support. There was general dissatisfaction with how the school closures compounded the survival and safeguarding challenges faced by children and families; the safeguarding challenges faced by most children with disabilities were noted to be even worse.

A variety of teaching and learning materials were developed by NGOs and their development partners in the four months after the school closures began. However, families' lack of money to pay for power or equipment and the lack of government coordination in distributing hard-copy materials were identified as major barriers to using these materials.

LEARNERS' EXPERIENCES

All the DRC survey respondents were adults, and the learners' descriptions are predominantly from an adult point of view. The respondents were concerned about unsupervised children's safety and "delinquency." It was unclear whether more children were homeless due to the pandemic, but several respondents working for organizations that focus on street-connected children reported that their numbers were increasing due to "parents' inability to look after them during the day."

Respondents frequently reported that no provisions had been made in home learning plans for students with disabilities, and they were not aware of any adaptations to home learning materials for learners with various impairments. As one commented:

The government did not think about this category of learners with disabilities. And children studying in preschools receive no educational support other than what their parents offer as a family. Children with disabilities are not even listed. We are not interested in the disabled, they are totally forgotten.

IN SUMMARY

The data from DRC suggest that respondents holding high-level positions in the education system were aware of home learning support plans, but stakeholders at lower levels were not seeing these plans translated into action. There was limited autonomy for the development of home learning initiatives at the local level, and these initiatives were more visible in areas where international NGOs were active before the pandemic.

HOME LEARNING PROVISION IN SYRIA

Most respondents from Syria were based in the autonomous region of North and East Syria and therefore presented insights into this area rather than the country as a whole. Like those in DRC, many described themselves as working for NGOs (n=13). Other respondents described themselves as parents (n=10), teachers (n=14), consultants (n=1), education officials (n=6), and a school committee member (n=1). Twelve respondents stated that their children or children they know had disabilities.

As in DRC, schools in Syria closed in response to COVID-19, creating a centralized approach to the delivery of home learning provision was similarly problematic. However, there were clear examples in Syria of interventions that supported learners, especially those with disabilities. For example, the government provided general educational programs on television, which were supplemented locally with support provided through social media.

MAINSTREAM SUPPORT AND PROVISION AND RESOURCES

After deciding to close, most government schools in Syria did not provide home learning support. Respondents were concerned about the lack of options and resources available to students. Some stated that they had received a number of resources in printed form, which others described as underutilized or not distributed. Parents suggested that organizations should provide printed materials to enable home learning, and that they should invest in preparing teachers to support learners' engagement with the home learning platforms provided.

Other respondents described how they were supported by teachers, and each other. They shared advice about supporting children to continue their education remotely, using mobile phones to access video learning tools. These parents expressed their gratitude. One commented that "we received support in completing our children's instruction remotely using our mobile phones...that were of great benefit to children." Another noted that "the plan was successful, and the goal was to compensate for some educational loss." Providing context for this support, one teacher explained that "we received tips on how to use the camera and shoot the right lessons...the results were excellent in keeping kids out and learning."

The survey responses suggest that this provision was not universal and related only to local programs delivered by NGOs, as one parent noted: "There is a significant weakness in the possibilities and resources available...teachers cannot provide remote lessons using means like Zoom or Google Classrooms." Echoing other

respondents, this parent highlighted how most children did not have reliable internet, which rendered the online home learning experience ineffective. Some parents suggested that there should be more material support at the government level for continuing the education of children who are marginalized because of their difficult living conditions. At the local level, parents wanted printed materials delivered to homes, material support for the continuation of educational projects for children in camps, and safe centers for disabled children.

The consensus was that organizations providing home learning support should strengthen program implementation by providing stakeholders with the resources they need to keep children in contact with the education community, particularly children with disabilities. Respondents recommended providing the following:

- A robust network with an electronically equipped curriculum, to support learners with limited access to technology
- A database for schools and scholars that organizes broadcast television and radio programs by code and distributes printed transcripts
- Good-quality internet subscriptions that enable learners and parents to communicate directly and share learning content with teachers
- A comprehensive electronic platform for all materials, with all lessons explained by competent teachers; parents and learners can be referred to this platform should a crisis arise
- Communication between schools and learners about the use of digital media to support education at home, and
- Crisis tools that enable schools to communicate with students and support teaching aids, and curriculum-specific videos.

SPECIALIST PROVISION AND RESOURCES

Respondents in some areas mentioned that “night schools” were in operation in Syria. The schools took advantage of the hours when electricity supplies were more reliable and internet signals less strained. The respondents did not provide details on how these school sessions were managed or what education levels they catered to, beyond the need to connect remotely. The night schools were coordinated by NGOs in the region.

Teachers created groups on platforms such as WhatsApp to provide guidance for parents, direct engagement with students, and follow-up on night school sessions or on the lessons provided on television and radio. Respondents said these groups did not give the same quality results as online lessons delivered directly by teachers on platforms such as Zoom, but they nevertheless plugged a gap where access to night schools and other online services was limited.

In the early months of the pandemic in the Al Raqqa region, NGO-funded learning and community centers continued to provide for pupils with disabilities. Parents were contacted by these local community centers via social media. Groups set up on platforms such as WhatsApp were used to exchange content (images, videos, and audio) and support their children's learning. This content included targeted support, such as signed videos for Deaf learners.

One respondent noted that the education centers were equipped to support a small number of learners with different disabilities, which they described as audio-visual, motor, and cognitive, but there was otherwise no support: "The future-oriented [center] was the only one that provided educational services for children with disabilities, but unfortunately it was closed after the fourth month for lack of support." Despite the apparent effectiveness of the centers, they were suspended due to a lack of funding.

NGOs in Syria created home learning content that was welcomed by parents and children, but respondents noted that "some initiatives from some self-support groups did not work." Parents highlighted the difference between children being "present" in the education centers and home learning, and that children with disabilities had been "lost" after the centers closed. As one parent noted, "The quality of education is better at the centers due to the direct access to teachers and 'connectionless communication.'"

Once the centers were closed, learners with disabilities no longer received education support, but parents did try to keep self-help groups going through social media. A key takeaway from the Syrian respondents is the importance of including learners with disabilities, even in crisis contexts. As one respondent explained: "The focus on children's daily routine and the granting of educational and recreational activities can be applied to students with special needs to develop their knowledge and practical skills."

PARENTS' AND LEARNERS' EXPERIENCES

The parents' responses about learning remotely at home were mixed. Some students had not received supporting materials to accompany sessions provided through television, radio, and online. One parent, in contrast, noted their children's "state of satisfaction with home learning, especially with the fear of current conditions."

Focusing on learners' experiences and engagement with home learning, parents reported that their children were frustrated, grumpy, and sad that the schools had closed. However, their comments implied that these feelings were due to the social isolation caused by school closures, rather than to the limited access to education: "They are frustrated that they tend to play and learn with their peers and that is not currently available."

Some parents expressed a sense of gratitude for the home learning provision they had access to:

"Children have benefited dramatically in their education."

"I have a state of satisfaction with home learning, especially with the fear of current conditions."

"Education is a basic need, but a human being will be a happy person to receive learning in any way...with this gratitude and the children's desire to learn, comes a drive to find creative ways to learn."

One respondent noted that when learners engaged with the alternative learning provision, they responded with new confidence in their learning. A small number of respondents reported that their children were happy to still be receiving support and were not affected by the school closures. However, parents were concerned by the limited potential for academic progress offered by the provision:

"[Learners] who do not have access to mobile phone or internet lag behind."

"The idea is not to say it is a successful experience, but a failed one."

“But the children themselves have shown a great desire for remote learning support.”

Parents in Syria understood the value in the continuity of education, and they naturally worried about how detrimental it would be for their children to be without access to education provision for long periods of time. This was especially so when the provision available required children to learn autonomously and parents felt they lacked the teaching know-how to support this learning.

IN SUMMARY

The respondents in this country all came from the autonomous region of North and East Syria. Lacking a centralized approach home learning provision, NGOs and other education providers offered localized solutions and support that included learners with disabilities. Home learning initiatives were more successful where local community networks and school/home relationships were already in place before the pandemic situation developed.

COMMON EXPERIENCES AND UNIQUE OPPORTUNITIES

The home learning provision described by respondents in DRC was different from that described by respondents in Syria. However, there were some similarities, such as the use of television to deliver centralized home learning provision. In the following sections, we identify four key lessons learned from our analysis of the survey responses from Syria and DRC and compare them to the findings from respondents from other countries, and to the wider literature on learning during the COVID-19 pandemic.

1. Closing schools worsened children’s exclusion and heightened risk. In both countries, school closures increased existing divisions between groups of learners. Some parents, for example, were unable to rely on the child care that schools usually provided. Consequently, they either lost household income and the ability to provide food by staying home to care for very young children and/or children with disabilities or health problems, or they had to seek work outside the home, which put their children’s safety at risk. The poorest learners and their families were most affected by such decisions, which in DRC led to an increased number of children on the street. Parents reported that school closures added significantly to their stress, particularly as it reduced their ability to keep their children safe while they sought work. Their frustration appeared to relate to the uncertainty

about when schools would reopen and, when home learning support and resources were not available, what might be provided for learners in the meantime.

Despite the challenges facing educators in DRC and Syria as they made the shift to support learning from home, or in some cases were left without pay and were unable to support learners at all, home learning did get up and running relatively quickly. However, the delivery of education via television, radio, and online platforms was not ideal. The poorest families lacked the equipment and the means to pay for electricity, data, or channel fees, and were unable to access these programs.

The parents who had to work or had limited education themselves had the least time, confidence, and materials to support their children's learning on their own at home. In addition, the centralized education programs did not consider all children's learning needs. Many learners—for example, those with disabilities—were unable to access the new content. This perception of widening inequality that was linked to both the school closures and the lack of targeted support for marginalized children was reflected in survey responses from all 14 countries (Corcoran et al. 2021a, 2021b, 2021c, 2021d). This has also been highlighted in other analyses of education in low-income countries affected by the pandemic (e.g., Save the Children 2020).

2. Context, connectedness, and collaboration make a difference. Although both countries faced complex challenges during the pandemic, the survey responses from Syria were markedly more positive than those from DRC. The sense of despair and powerlessness in many responses from DRC was not matched in the Syrian responses, where respondents frequently described the useful educational support that was reaching families, including those with children with disabilities. Our survey analysis suggests that local connectedness and collaboration around education were key factors in the successes reported in Syria. For example, education was meaningfully decentralized, which enabled individual regions to make the decision to shut down schools and to communicate the details clearly to parents. The stronger local communication between education authorities and families may help to explain why survey responses from Syria expressed less overall frustration than those from DRC.

An important point about the findings from Syria is that, despite a lack of resources, some regional education authorities in Northern Syria were able to get technical and practical support from international NGOs that were operating locally. As such, they could provide additional support for home learning. For

example, hard-copy home learning materials were delivered relatively rapidly. In contrast, respondents in DRC implied that the education authorities were waiting for home learning resources to be developed by international NGOs in partnership with the central government.

In Syria, information was shared online through existing and new WhatsApp networks. Some of these networks were set up by schools or NGOs to encourage home learning and used by parents to support each other once NGO funding ran out. WhatsApp was used to share learning activities, discuss students' needs, give parents practical information and support, and distribute educational materials. While some respondents in DRC reported using WhatsApp to contact private tutors, active information-sharing networks for members of a school community or NGO program did not feature in the survey responses.

In Syria, NGO-supported education centers provided specialized support to children with disabilities through their existing relationships with these students' families. This involved some in-person visits but also remote advice through WhatsApp and similar platforms. A key feature of educational information and support being shared via the internet in Syria seems to have been small local groups that circulated information and provided assistance based on the needs of specific children. Such support networks were also described by respondents in Kenya, Chile, and Zanzibar (Corcoran et al. 2021c), specifically in relation to teachers connecting with their students and providing a point of contact for group and individual support. WhatsApp has also been used for teacher training and support during the pandemic (Stir Education 2021). The relatively low data use required by platforms such as WhatsApp and Facebook (and the availability of data bundles specifically aimed at these apps in some countries) may explain the popularity of these tools.

Although many people in DRC could not afford the internet connection needed to support online education networks, there are useful reflections to be drawn from DRC about how people use and share information when the schools are not operating. Existing small-scale networks between people may be a good way to ensure that marginalized children's education needs are met. Forming and nurturing effective family-school partnerships that involve the wider community is one way to create such networks.

3. Teachers: A community resource when schools are closed. Comments from DRC highlighted that “many teachers were at home and the government did not have the capacity to organize them.” This contrasts with the positive accounts of networking with teachers in Syria and suggests that teachers should be treated as important resources for home learning in their own communities, especially for the most excluded children. According to respondents from Syria and other countries that participated in the survey (Corcoran et al. 2021a, 2021b, 2021c, 2021d), some teachers provided significant support for children with disabilities and/or health issues. These teachers had a clear mandate to look out for the interests of children with disabilities because they were employed by NGO-funded specialist centers (as in Syria) or in schools that targeted learners with special educational needs (as in Chile). In the UK, children with special educational needs plans (which outline how additional support is to be provided for their learning) and the children of key workers were able to receive in-person teaching at school during the pandemic, while their peers learned at home. When teacher support was not available in DRC and other countries, particularly Zanzibar (Pinnock 2020), the parents of children with disabilities expressed feeling cut off from help and being desperately worried about their children’s health and education.

Reflecting on suggestions from the respondents in Syria and DRC, and on responses to the questionnaires from other countries, there is an argument for the financing of mobile phones and call and data bundles. For example, a respondent from Indonesia, who replied to the English-language questionnaire, described how households were provided with a stipend, via the schools, to pay for internet access. As many teachers have mobile phones (Porter et al. 2015), we suggest that initial funding provided to teachers to cover call and data costs would have better equipped them to reach out to learners and their families by phone, collect information on the most acute support needs, and offer advice to keep children engaged in learning.

Teachers may then have been able to suggest learning activities to parents by phone and act as distribution hubs for hard-copy materials in their immediate community. Local school leaders and teachers could have shared their phone numbers as a first step in developing local networks. Using schools as hubs for information-sharing through the phone network could have been supported even where an internet connection was not available. This would have required rapid and innovative resourcing, but it also could have been a useful area for aid partners to focus on.

4. Using our findings to develop home learning materials. One key observation from the online survey related to parents' and guardians' confidence in supporting their children's learning at home. Many expressed their willingness to do what they could to help their children, but they were concerned about their limited literacy and digital literacy levels, as well as their limited access to resources such as textbooks, data, electricity, television, radio, or internet. The survey findings from all countries confirmed that hard-copy home learning materials in local languages were very much needed.

Consequently, the materials developed by EENET and NAD (see <https://www.eenet.org.uk/inclusive-home-learning/>) focused on boosting caregivers' confidence and helping them to understand how everyday activities in the home can become learning opportunities. These materials needed to be used easily by households with limited or no access to other media but also could be used to supplement television and radio learning. When the EENET/NAD materials were distributed, people in the immediate community who had better literacy skills (including older children) were encouraged to help communicate the content to others.

The stress parents and caregivers reported experiencing around their basic survival and their children's educational losses led the team developing the EENET/NAD materials to focus on messages that would build parents' confidence as home educators and help to reduce their stress. Several respondents commented (Corcoran et al. 2021a) that WhatsApp was not effective for engaging early years learners, who needed physical literacy and numeracy stimuli, particularly in households that did not have their own literacy materials. Hard-copy materials are therefore especially important for families with younger children, even if electronic media are available.

The EENET/NAD materials were printed and distributed in Uganda, Somalia, Zambia, and Zanzibar. Local partners and staff members from other NGOs funded by Norwegian donors identified various distributors, including community-based organizations or education centers that were well known and connected to the communities. Following social distancing guidelines, they were able to reach small groups of householders and explain the purpose of the materials. The materials were concise and lightweight to allow for wider distribution. There was a double-sided poster with images on one side and key messages on the other, and a detailed activity booklet containing pictures and activity instructions.

The package enabled family members to engage in learning activities with their children even if no other resources were available. Guidance was given on how to vary the activities, and activities were designed to be frequently repeatable. In 2020, the online versions of these materials were downloaded 1,622 times from the EENET website (EENET 2021). At the time of writing, EENET consultants are conducting a review for NAD of the project's process and results as part of the monitoring and evaluation of the Together for Inclusion programme.

CONCLUSION: WHAT COULD BE DONE BETTER NEXT TIME?

The survey respondents commonly criticized the lack of material support provided to learners while the schools were closed—not only of learning materials but of support for child safeguarding and survival. They emphasized how much the lack of tangible resources disadvantaged the children and families with the fewest educational resources in their homes. These families could not fill the gaps in learning, child care, and safety created by the school closures, especially for learners with disabilities or health issues who had additional healthcare and rehabilitation needs.

The survey findings suggested that respondents in Syria were more resilient to the school closures than those in DRC. Their resilience appears to have been rooted in pre-existing education support networks in the school communities that involved parents through direct communication, and in Syria's regional education authorities' decisionmaking and coordinating capacity. The Syrian respondents' recommendations for future crises prioritized the importance of collaboration and support. This resonates with the first domain of EENET's theory of change; quality inclusive education and learning opportunities require collaboration, and stakeholders must be encouraged to work together to design, implement, and reflect on inclusive education initiatives (Lewis 2016).

The provision of home learning using mass media is likely to reach only the households with the most resources. Further research (e.g., through household surveys) would help to determine the proportion of households in crisis settings that lack electricity and are unable to access television, radio, and internet. We should assume, therefore, that multiple communication channels are needed to support home learning for all.

We also need to better understand which information and mutual support networks are used in particular contexts, especially for groups with low levels of participation in education. School leaders, school committee members, and teachers need tools to become active within those networks while schools are

open. They also need to strengthen family-school partnerships and community “education resilience” to prepare for potential school closures. Teachers should be incentivized to think of themselves as education activists in their home communities, as well as in their schools’ catchment areas, and be encouraged to work with parents to develop collaborative approaches to teaching and learning (Ainscow, Booth, and Dyson 2006). When teachers are at home, school leaders could motivate them to identify children who need extra support, such as those with health or disability challenges, and to advocate for this support. This might require a significant shift in responsibilities within the education leadership (Alexiadou 2011; Engelbrecht et al. 2016), but it is a target worth aiming for.

To keep children engaged in foundational learning when schools must close unexpectedly, it is vital that rapid access to hard-copy learning materials be provided, along with related guidance and instructions for parents. This will make it more likely that students will return to schools when they reopen. Waiting for curriculum-specific home learning materials to be produced increases the risk that children will not continue their education. Might there be opportunities to distribute existing learning materials to keep children engaged in basic literacy and numeracy while the new materials are being prepared? Given the large geographical area of the DRC, having more small-scale local development and/or distribution of educational materials at an early stage of the pandemic would have been beneficial. What entity outside the education system could have supported this? For example, could local print shops have been given data and funds to download and print existing graded readers?

Approaching education in emergencies in this way can involve finding and supporting people who can promote education through existing local support and information-sharing networks. Taking this kind of bottom-up approach could help practitioners and decisionmakers recommend future efforts to deliver home learning provision that would reach more marginalized children faster. As Lacey and Viola (2019) suggest in their work in DRC, working to strengthen local education through community-led models that are focused on self-sufficiency can bring sustainable benefits to schools.

EENET’s theory of change highlights the ongoing importance of maintaining support for hard-copy resources for marginalized learners and communities, despite the fast-moving digitization of education and communication. Our survey findings (Corcoran et al. 2021a, 2021b, 2021c, 2021d) and the review of the EENET/NAD home learning project and materials (EENET 2021) reinforce this, and we suggest that developing local distribution hubs for teaching and learning materials in conjunction with community organizations and NGOs would be particularly helpful in the event of future crises similar to the COVID-19 pandemic.

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Research projects involve many hands to make them a success and this project was indeed a team effort. The surveys, and the home learning guidance materials they informed, grew out of conversations among EENET team members and NAD staff members as we watched media coverage of the evolving situation in our network members' home countries. Several EENET consultants volunteered to join a home learning project advisory board and enabled the survey to expand beyond the small, rapid analysis afforded by the project budget. EENET friends in various countries volunteered to translate the questionnaire—or to copy edit the translations—into the 14 languages, and many others shared the survey links with their own networks. There are too many people to name here, but we have tried to include contributors' names in the data reports on our website (<https://www.eenet.org.uk/inclusive-home-learning/>).

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SCAPEGOATING THE USUAL SUSPECTS? PANDEMIC CONTROL AND THE SECURITIZATION OF QUR'ANIC EDUCATION IN NORTHERN NIGERIA

HANNAH HOECHNER AND SADISU IDRIS SALISU

ABSTRACT

While insights into the effects the COVID-19 pandemic has had on formal schooling are still patchy, even less is known about the pandemic's impact on nonformal education systems, including institutions of Islamic learning. In this paper, we explore the nexus between pandemic control and the securitization of Qur'anic education in northern Nigeria; that is, the framing of Qur'anic schools, teachers, and students as security threats that necessitate tough responses. Security concerns have long dominated perceptions of Qur'anic schools in this region, which has been plagued by sectarian and interreligious violence. Qur'anic students often have been cast as future hoodlums and easy recruits for radical groups and depicted as vectors of disease, even as epidemiological evidence remains scarce. In this paper, we argue that security framings have proven highly adaptable in the context of the COVID-19 pandemic. We examine how perceptions of Qur'anic students as dangerous legitimized the forced clearance of schools and student deportations. Drastic interventions have also bolstered perceptions of COVID-19 as a hoax and a plot by politicians to further their own agendas. Data for this paper come from 14 verbal diaries recorded in Kano, Nigeria, from April to June 2020, nine interviews with Qur'anic teachers and students affected by school clearances, and our analysis of Nigerian newspaper reporting.

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INTRODUCTION

While insights into the effects the COVID-19 pandemic has had on “formal” secular schooling are still patchy, even less is known about its impact on “nonformal” education systems, including institutions of Islamic learning.¹ In this paper, we step into this gap to explore the nexus between pandemic control and the securitization of classical Qur’anic education in northern Nigeria; that is, the framing of Qur’anic schools, teachers, and students as security threats necessitating tough responses.²

To date, education scholarship has paid limited attention to Islamic education institutions. Scholars and policymakers often consider the students of Islamic schools, notably those schools whose curricula do not include secular subjects, as being “out of school” (d’Aiglepierre and Bauer 2018; Sanusi 2017).³ Moreover, their research efforts have concentrated primarily on how these students could be integrated into formal, secular education systems, rather than on understanding the Islamic education systems on their own terms (Hoechner 2018). The study of Islamic education institutions has mostly been the preserve of historians, anthropologists of religion, and scholars of Islamic studies, who have highlighted their dynamism and diversity (Hefner and Zaman 2007; Launay 2016). However, education scholars have increasingly recognized that faith-based schools can increase access to education by making education palatable to groups that are reluctant to engage with secular schooling, and by stepping in where states fail to make adequate provision for public education (Boyle 2019; Harber 2014). This makes Islamic education institutions highly relevant to education in emergencies, yet the existing literature on this topic has tended to focus narrowly on violent conflict and presumed questions of radicalization and militancy (Fair 2007; Winthrop and Graff 2010). This has contributed to the securitization of such schools, which we explore in this paper.

Health crises have been said to create “a special ethnographic window on the structural fault lines in the society and the nation-state” (Shepler 2017, 452), an insight applicable to the COVID-19 pandemic. Societal rifts are often reflected in the “profoundly political sphere” (Cohen et al. 2021, 368) of education, notably in times of crisis. It has been argued that responses to the COVID-19 pandemic not

1 The terms “formal” and “nonformal” have been criticized for propagating a false distinction while privileging the experience of the “industrializing West”, thus perpetuating ethnocentric biases (Froerer 2012, 370-71).

2 To avoid the loaded term “traditional” (see footnote 8), we refer to the schools we studied as classical Qur’anic schools or simply Qur’anic schools. We describe their characteristics in more detail below.

3 What counts as “school” and who counts as “in school” or “out of school” is contested and political.

only have been “imbued by...legitimizations and delegitimizations of particular knowledges” but also have revealed “whose futures and life opportunities we value and whose we do not” (368). In this paper, which is situated at the nexus of scholarship on education, medical anthropology, and securitization, we scrutinize how a long history of marginalization and stigmatization as a security threat has made Qur’anic students in northern Nigeria vulnerable to being framed, and treated, as a viral menace in the context of the COVID-19 outbreak.

Drawing from the notion of securitization, we explore how policymakers and the media have depicted Qur’anic students, *almajirai* (singular: *almajiri*) in the Hausa language, as vectors of disease and a threat to wider communities, even as epidemiological evidence to substantiate such a framing remains unavailable.⁴ The classical Qur’anic schools we focus on in this paper are patronized mostly by the rural poor in northern Nigeria, a predominantly Muslim region with Muslim political leaders. The schools have long been loathed by better-off urbanites and reform-oriented Muslims, notably those of a pro-Salafi leaning, and by many southern Nigerians, most of whom are Christian (Hoechner 2018). Against the backdrop of northern Nigeria’s history of sectarian and interreligious violence, the *almajirai* have frequently been cast as foot soldiers for violence and ready recruits for radical groups (e.g., Soyinka 2012). In the context of the COVID-19 outbreak, old anxieties about Qur’anic schools and their students have morphed into new shapes.

Perceptions of Qur’anic schools and their students as a viral threat have legitimized the forced clearance of these schools and the deportation of students back to their home states at the height of the pandemic. Misgivings about COVID-19 have been rife in northern Nigeria since the beginning, and many people suspect that politicians exaggerated the severity of the disease to further their own agendas (Hoechner 2020). In this paper, we explore how the securitization of Qur’anic schools and the resulting drastic actions taken against them have nurtured such suspicions in the Nigerian state of Kano and bolstered perceptions of COVID-19 as a hoax and a political plot.⁵ This again underlines the political nature of education interventions, which are intricately connected to the political histories and relationships on which they bestow meaning and in whose light they are read. Given their symbolic significance as markers of whose futures and life chances are—or are not—valued by the powers that be (Cohen et al. 2021, 368), education interventions are particularly significant for being able to win—or to lose—the people’s trust.

4 We gratefully acknowledge intellectual inspiration from Charles Nweke (2021), who pioneered the use of a securitization lens to understand the dynamics of Qur’anic education in Nigeria.

5 With a population of ten million, Kano is northern Nigeria’s most populous state.

PANDEMIC CONTROL AND SECURITIZATION OF QUR'ANIC EDUCATION IN NORTHERN NIGERIA

Data for this paper come from verbal diaries recorded by 14 individuals in Kano from April to June 2020 via WhatsApp, from nine interviews with Qur'anic teachers (*malamai* in Hausa, singular: *malam*) and almajirai who were affected by the forced school clearance, and from our analysis of Nigerian newspaper reporting. The Kano State government was not the only one to crack down on Qur'anic schools; in fact, the decision to close these schools and “repatriate” almajirai to their states of origin was also made by the members of the Northern Governors Forum, a consultative body composed of the governors of all northern states (*Daily Trust* 2020a).⁶ According to our review of newspaper reports, the measures taken in Kaduna State were at least as hostile toward Qur'anic schools as those in Kano State; the Kaduna governor Nasir Ahmad El-Rufai,⁷ for example, threatened parents who enrolled their children as almajirai with a two-year jail term (*Daily Nigerian* 2020). However, while the dynamics we observed in Kano likely reflect developments in other states, it is beyond the scope of this paper to explore them in depth.

The next sections situate this paper in the literature, describe the Qur'anic education system in more detail, outline our methodology, and provide an overview of the COVID-19 outbreak in Kano. We then turn to the Qur'anic school closures and what journalists and politicians have referred to as almajiri “repatriations” or “evacuations,” juxtaposing the rhetoric of supporters of such measures against the experiences of Qur'anic teachers and students. The final sections reflect on the implications of these episodes for the students concerned, the pandemic response, and the longer-term relationships between state authorities and society.

SECURITIZATION, ISLAMIC EDUCATION, AND THE PANDEMIC

The notion of securitization has been proposed as a way to draw attention to the powerful effect that framing a particular issue as a security threat can have. Buzan, Waever, and Wilde (1998) argue that an issue is securitized if it “is presented as an existential threat, requiring emergency measures and justifying actions outside the normal bounds of political procedure” (23-24). They say that an issue becomes a security matter “not necessarily because a real existential threat exists but because the issue is presented as such a threat” (24). In short, what counts as a threat is socially constructed. However, when powerful actors present an issue as a threat, the relevant audiences do not necessarily buy into such a framing. Recent

6 Several states, including Borno, Yobe, Jigawa, and Zamfara, later decided not to deport the almajirai.

7 El-Rufai was first elected governor of Kaduna State in 2015 and confirmed in office in 2019.

work has highlighted the idea that successful securitization depends on these audiences “subscrib[ing] to the threat image presented” (Balzacq 2019, 334), but the audiences may be fragmented and may not react uniformly to the arguments (Léonard and Kaunert 2011, 63). In this paper, we highlight how different members of the Nigerian public responded to efforts to further securitize Qur’anic schools, which reflected preexisting societal fault lines.

Scholars of securitization have traced the way security agendas have been broadening to include issues that historically had “fall[en] well outside traditional notions of what constitute security issues,” including those related to religion and health (McInnes and Rushton 2011, 116). Various authors have mobilized the notion of securitization to scrutinize the treatment of Muslims in a post-9/11 world, and to highlight how the framing of Islam as a significant menace has legitimized increased scrutiny and control (Croft 2012; Cesari 2013; see also Ghaffar-Kucher 2009). Fewer authors have explored how and why Islamic education has come to be perceived and treated as a security challenge, even though the presumed links between Islamic schools, radicalization, and militancy have preoccupied various scholars (Fair 2007; Winthrop and Graff 2010). An exception is Starrett (2006; see also Nweke 2021), who traces the conflation of Islamic schools with terrorism in the United States back to American “commonsense understandings of causality, rationality and the purposes of education” (122). These understandings assume that school experience, rather than broader political experience, defines people’s worldviews, giving credence to the notion that “they hate us because they teach their children to hate us” (122).

A range of authors have studied how security agendas have come to influence public health responses to infectious diseases. They demonstrate how socially constructed ideas about what constitutes a threat determine when, how, and to whom aid is provided (Benton and Dionne 2015; McInnes and Rushton 2011). Relatedly, medical anthropologists have stressed that narratives seeking to explain the outbreak of an infectious disease often piggyback onto longstanding social and political divisions and inequalities (Richards 2016), which helps us understand who becomes the object of securitizing discourse. Farmer (1992) highlights how Haitians were cast as major culprits in the spread of HIV infections in the United States, even though Western tourists had in fact brought the disease to Haiti. The false accusations built on “preexisting [racist] ‘folk models’ of Haitians” as being filthy, poor, disease-ridden cultists (187). These insights urge us to pay attention to the preexisting tropes from which threat narratives can be constructed. The next section introduces the classical Qur’anic education system and explores recurrent tropes about its students.

QUR'ANIC EDUCATION IN NORTHERN NIGERIA

The Qur'anic schools we explore in this paper cater to boys and young men from primary school age to their early twenties. The students go to live with a religious teacher, a malam, to study the Qur'an, sometimes traveling a significant distance to be with a particular scholar. Qur'anic schools operate largely outside the purview of the state and without any government support. Most almajirai are from poor rural families, and the Qur'anic schools do not have the means to provide for their upkeep. The older students do petty jobs or work as farmhands, but many young students instead beg for food and money. Many urbanites consider the begging almajirai a nuisance (Hoechner 2018).

Qur'anic schools rarely charge fees. Students are instead expected to reciprocate for the education they receive by contributing their labor and paying long-term allegiance to their teacher, which makes the schools accessible even to the poorest. Most teachers are themselves products of the Qur'anic education system, which includes similar schools across the West African Sahel. Girls may attend the Qur'anic schools as day students, but they do not leave home to live with a Qur'anic teacher. Threat narratives around Qur'anic schools have generally focused on the male students (Hoechner 2018; see also Nweke 2021).

In precolonial times, Qur'anic schools produced a literate elite. However, their prestige and political influence began to decline when secular education was introduced under British colonial rule, a trend that continued in the 1970s when Islamic reformers began to establish "modern" Islamic schools that taught a broader range of subjects in a more formal setting.⁸ Families that patronize classical Qur'anic schools today value them for the Qur'anic knowledge, character training, and life skills they believe these schools impart; they also often can't afford other types of education (cf. d'Aiglepierre and Bauer 2018).

Negative stereotypes about Qur'anic schools date back to colonial rule in the region (see, e.g., Ware 2014 on Senegal) and received a boost in the second half of the 20th century, when reform-oriented and pro-Salafi Islamic movements accused the schools of mixing culture and religion and called into question their religious credentials. In Nigeria, perceptions of Qur'anic schools have further deteriorated since the Maitatsine crisis of the 1980s, when members of an Islamic sect, widely believed to be Qur'anic students (Lubeck 1985), rose up against the police. Since

8 Launay (2016, 3) notes that categorizing "educational systems as traditional or modern is a feature of an ideology of modernity intrinsically tied to the kind of education that colonizers of whatever stripe tried to impose on their subjects."

2009, the rise of the insurgency group Boko Haram in northeastern Nigeria has frequently been linked to Qur'anic schools and their students (Hansen 2016). While it has been documented that some almajirai have joined the insurgency, Boko Haram, which opposes the government as well as secular education, has recruited members from a range of education backgrounds (Mercy Corps 2016).

For many southern Nigerians, and for many Christians across Nigeria, the almajirai have come to epitomize the perceived ills afflicting Muslim northern Nigeria, including rampant poverty, illiteracy, and alleged religious extremism. Similarly, many better-off urban Muslims in the North feel that the almajirai embody the supposed social backwardness and religious obstinacy of the rural poor (Hoechner 2018). Threat narratives often invoke the deprived conditions of the almajirai's upbringing and claim that these conditions compromise their ability to resist the presumed attraction of radical ideas, easy cash, or the opportunity to revenge past mistreatment (e.g., Soyinka 2012). Interestingly, during the pandemic, the deprived conditions in Qur'anic schools were also invoked to stereotype them as hotbeds of COVID-19 infection and vectors of disease transmission.

The almajirai were the only social group targeted for government-led mass removals, which built on a history of government attempts to keep such schools in check that began in the colonial period. In recent decades, several northern state governments, including that of Kano under Governor Abdullahi Umar Ganduje,⁹ have attempted to rein in Qur'anic schools by enacting bans on street begging (*Kano Focus* 2020). Supporters of the Qur'anic education system have condemned such measures as an attack on a centuries-old religious institution and cited them as proof of continued bias against Qur'anic study that dates back to colonial times. This again highlights the political nature of education.

METHODOLOGY

Hoechner and Salisu collected the data for this paper. Hoechner is a German woman, and Salisu is from Kano, where he lived during the data collection. Hoechner was based in the United Kingdom during the data collection and interacted with participants mostly via WhatsApp voice messages. She lived in Kano in 2009, 2011, and 2018 for a total of 15 months, where she conducted research on Qur'anic education. She met most of the verbal diary participants (see below) in 2009 and 2011. She is fluent in Hausa, the region's lingua franca. Salisu

9 Ganduje was first elected governor of Kano State in 2015 and confirmed in office in 2019.

is a native Hausa speaker and a Qur'anic school graduate. As such, he is conversant with the cultural and religious sensibilities of the more conservative segments of society, which can otherwise be difficult for researchers to access. He coordinated the data collection locally and liaised with the research participants via telephone and face-to-face.

Some of the data for this paper come from verbal diary entries recorded by 14 individuals in Kano State via WhatsApp voice messages from April to June 2020. Those who kept the diaries were invited to share their experiences and thoughts on particular topics related to the COVID-19 pandemic. The diaries were not designed to focus specifically on developments concerning Qur'anic schools but on capturing a broad range of experiences around COVID-19 and the measures taken to contain it. The 14 diaries contain more than 24 hours of recordings.

The sampling was informed by several considerations. First, we sought to capture the experiences of poorer members of society, whose perspectives are often less visible in the public domain and on social media platforms, due to their limited literacy in the Latin script, limited knowledge of English, and limited access to communication technologies. All participants self-identified as *talakawa* (Hausa) or poor commoners.

Our second aim was to ensure that data were collected across geographic locations, ages, genders, and households in order to capture an array of experiences. Our sample included participants based in rural parts of Kano State (three participants) and in various urban neighborhoods (eleven participants), including deprived areas in the city outskirts. We included women and mothers (four participants) and married men and heads of household of middle age (three participants), and young men in their twenties and early thirties (seven participants). All our participants belonged to different households.

Finally, we selected participants from among our close contacts to ensure trust, which was essential, given the politically sensitive nature of the research. Six of the young men participating in the research had taken part in a participatory film project Hoechner pursued in 2011 as part of her PhD research (Hoechner 2015) thus they knew her and her research well. Funding from the University of East Anglia COVID-19 Response Fund enabled us to buy smart phones, as well as regular phone credits and internet data for our participants.

We decided to conduct additional semistructured interviews specifically focused on the experiences of Qur'anic teachers and their students in the context of the forced school clearance taking place in April and May 2020. While our verbal diary

sample included two Qur'anic teachers, one Qur'anic teacher's wife, and seven recent graduates, none of them had been directly affected by the forced clearance. We therefore recruited additional respondents using our existing contacts as a starting point, and Salisu then used snowballing techniques to recruit further interviewees. Salisu, as an observer, attended four gatherings organized by Qur'anic teachers who opposed the clearance, and he recruited further respondents there. He conducted a total of six in-person interviews with teachers (lasting 20-30 minutes each) and three interviews with students (lasting 10 minutes each) directly affected by the forced clearance. All the students were male, in their late teens and early twenties, and from schools whose teachers Salisu also interviewed. Hoechner also conducted a phone interview with a human rights activist who had visited Karaye, a camp in Kano State where almajirai were held.

All the people from whom we collected data objected to the framing and treatment of the almajirai as a security threat. We relied on media accounts and government statements to document views of Qur'anic schools as a menace in the context of the COVID-19 pandemic. We collated these sources by reviewing the press releases published on the Kano State government website and by collecting newspaper articles using the keyword searches "almajiri," "corona," and "COVID" from the websites of the *Daily Trust* (Abuja), *Premium Times* (Abuja), *Punch* (Lagos), and *HumAngle* (Abuja), which resulted in more than 130 hits. We also took social media posts into account in our analysis, including "trending" newspaper articles. We transcribed and translated the interview recordings and relevant WhatsApp voice messages from Hausa into English. Hoechner analyzed the data through repeated close reading and open coding in NVivo, paying attention specifically to perspectives on COVID-19 and related government measures, and to the ways Qur'anic schools and students were framed.

Our findings are limited in that we did not speak to government officials or members of the urban middle and upper classes, instead relying largely on the media discourse and government press releases to document the securitizing discourse. We were not able to observe repatriations firsthand or gain access to the camps where the almajirai were held. Our sample is fairly small and includes only respondents based in Kano State, with whom we spoke in the immediate aftermath of the evacuations. We hope that future research can shed light on the dynamics in other states and explore the longer-term implications of this episode, both for the relationships between Qur'anic students and teachers and state authorities, and for the more general perspectives on COVID-19 and related health measures.

FINDINGS

THE COVID-19 OUTBREAK IN NIGERIA

As of August 2022, Nigeria had not experienced particularly high rates of COVID-19-related morbidity and mortality, despite having a dense and highly mobile population; it had registered just over three thousand COVID-19-related deaths.¹⁰ As both testing capacity and people's willingness to get tested have been limited throughout the pandemic, the number of diagnosed cases is a poor approximation of the actual number. While the true toll is likely higher, during most of the pandemic the country has not seen overflowing hospitals or cemeteries (but, see below), which defies the racialized tropes about African societies' impending collapse that were circulating in early 2020 (Benton 2020). The reasons for Nigeria's resilience are not yet fully understood and the impact of new COVID-19 variants remains to be seen. It is likely that the country's youthful demographics—43 percent of the Nigerian population is age 14 or younger (World Bank n.d.)—played a role.

Nigeria experienced a first COVID-19 wave that peaked in June-July 2020, followed by a second wave that peaked in January-February 2021. While some protective measures remained in place well into 2021, such as working at home for some government officials, highly disruptive measures such as blanket stay-at-home orders and market closures were abandoned after the first wave, given their devastating economic impact (Human Rights Watch 2021).

During the early phases of the pandemic, many watchful eyes were on Kano State, northern Nigeria's economic hub and most densely populated state, which, as expected, emerged as an epicenter of the pandemic in April-May 2020. Its first case of COVID-19 was confirmed on April 11, 2020, before any in the other northern states.¹¹ Kano State experienced a brief period of excess deaths in April 2020, when deaths among the frail and elderly surged. Most of these deaths were not diagnosed as COVID-19, but it seems likely that community spread of the virus was at least a contributing factor, along with the intense heat, the emotional and economic stress caused by the lockdown, and the disrupted access to health care (Adebowale 2020). No further episodes of excess deaths have been reported, and many people in Kano have since come to view the virus as a minor threat compared to other infectious diseases, in particular, among young people. By August 2022, Kano had registered just over 5,000 confirmed cases of COVID-19 and 127 COVID-related deaths.

10 See <https://covid19.ncdc.gov.ng/>.

11 See <http://covid19.ncdc.gov.ng/state/>.

While the disease and death burden of the pandemic have remained comparatively small in northern Nigeria, the measures taken to contain COVID-19 during the first wave significantly disrupted social and economic life in Kano and created significant hardship. Interstate travel was suspended from mid-April 2020 through early July, although the borders remained somewhat porous (Kwaifa 2020). A stay-at-home order was in place for most of the period from April 16 to July 2, 2020; markets and places of worship were ordered to close on most days. In a context where more than 68 percent of the population lives in multidimensional poverty (OPHI 2018) and many depend on their daily earnings to feed themselves and their families, it was quickly apparent that the government could only see a strict lockdown through if it was prepared either to provide adequate help to all those in need (which it didn't) or to use significant force against its people (cf. Nnochiri 2020).

The lockdown in Kano soon stopped being enforced consistently, but it continued to disrupt economic activity and to create opportunities for the security forces to collect fines or bribes from those in breach of the regulations. A series of daylong suspensions of the lockdown resulted in vastly overcrowded markets, as everybody rushed to stock up on provisions. All this together suggests that the measures the state government implemented ultimately did little to stop the virus from spreading, despite the hardships they created. The surge in undiagnosed deaths mentioned above corroborates this conclusion.

PERSPECTIVES ON COVID-19 AMONG KANAWA

The participants of the verbal diary project felt the restrictions imposed on them were both erratic and injurious, as well as evidence of the government's callousness toward poor people's needs (cf. Human Rights Watch 2021). Their experiences highlighted the mismatch between the security priorities pursued by policymakers and politicians and ordinary *Kanawa*, the residents of Kano, many of whom are poor. COVID-19 did not manifest tangibly in most people's daily lives, the episode of excess deaths discussed above excepted, but this was relatively short-lived and limited to a few urban neighborhoods. Rumors soon spread about COVID-19 being fake, or at least exaggerated. Aminu, a diary project participant in his twenties, explained that people came to doubt the government's intentions, as it did little to alleviate the hardships inflicted on them by the stay-at-home order:¹²

12 We have changed the names of respondents to protect their identity.

PANDEMIC CONTROL AND SECURITIZATION OF
QUR'ANIC EDUCATION IN NORTHERN NIGERIA

Hunger is a disease for which there is no medicine apart from food, but the government refused to give people food, and refused to let them go out and find food, so then we understood: the government is pursuing a certain path because it has its own agenda. Until now people have doubts...some people say the government is doing this to get money, some people say this is done to reduce Nigeria's population, some people say it's the Europeans who have given a contract; you'll hear everybody [talking]. (Aminu, diary entry)

The suspicions Aminu described highlight the complex historical and political backdrop against which the COVID-19 pandemic unfolded in Kano, including a history of skepticism toward global public health measures. A controversial trial of the meningitis drug Trovan, which Pfizer carried out in Kano in 1996, left 11 children dead and several others disabled (Garba and Paquette 2021). This undermined the people's trust in the "big pharma" companies and in global health actors more broadly. The drive to eradicate polio in the early 2000s was troubled by widespread fear, fanned by religious and political leaders, that the vaccines were intentionally contaminated with antifertility agents and HIV in order to decimate the Muslim population (Renne 2010; Yahya 2007).

Also today, interventions seen to originate in the West or to be encouraged by non-Muslim outsiders, including the World Health Organization, rekindle memories of colonialism and trigger questions about the motivations underpinning them, especially those targeting diseases perceived to be minor in comparison to other neglected health risks, notably malaria and measles (Renne 2010). Several participants in the diary project noted that the response to COVID-19 was disproportionate to the actual threat it posed, which corroborates the point that audiences don't necessarily buy into the threat narratives presented to them (Balzacq 2019). Saidu, a participant in his early thirties, questioned why the government was focusing so much on COVID-19 and not doing more about malaria, which kills so many people.

Widespread perceptions that Nigerian politicians are self-interested and corrupt further hampered the public's receptiveness to particular threat narratives (cf. Human Rights Watch 2021). According to a 2018 Pew Research Center survey in Nigeria, 72 percent of respondents agreed with the statement that "most politicians are corrupt" (Tamir 2019). Such negative perceptions were also evident in our data. Several of our participants voiced the suspicion that the government deliberately

exaggerated the danger presented by COVID-19 in order to access relief funds.¹³ Hauwa, a female participant in her forties, explained that, in her view, politicians manipulate health information for their own gain:

When there is a cholera outbreak, or around the time when malaria harms people, you see, the government is using this as an excuse, because they will keep getting aid moneys... That's why you will see they will keep giving information until no one understands anymore what their truth is. (Hauwa, diary entry)

In the remainder of this paper, we will demonstrate how the government's rough handling of Qur'anic schools during the pandemic further fueled these suspicions. While certain audiences, including journalists and people commenting on the social media, embraced the framing of Qur'anic schools and their students as a viral threat that required a tough response, the poorer Kanawa represented in our research, many of whom have a strong affinity with Qur'anic schools, were not easily swayed by such tropes. The securitizing moves merely confirmed their belief that the government was taking advantage of the pandemic to pursue its own agenda.

QUR'ANIC SCHOOL CLOSURES AND REPATRIATIONS

Formal schools in all of Nigeria remained closed from late March until early October 2020 (Dundu 2020b). On March 25, the Kano State government also issued a directive for religious schools to suspend their operations (Ibrahim 2020), but it did not reach all Islamic teachers. After the governor announced an impending seven-day lockdown on April 14, many Qur'anic teachers were asked to send their students home immediately. Many malamai did so or at this point had already sent their students home, while others left the decision up to their students. Some malamai ignored the request and continued to operate within a context of suspicion about both the reality of COVID-19 and the government's intentions toward Qur'anic education.

On April 20, the Kano State government announced that it had "moved to decongest Almajiri schools, as arrangements have been finalized for the official evacuation of Almajiri pupils to their respective states/local government for onward reunion with their families" (Dundu 2020a). The next day, the Northern Governors Forum unanimously agreed that classical Qur'anic education in all

¹³ See Benton and Dionne (2015, 228), who describe rumors that circulated in Liberia about medical personnel spreading Ebola on behalf of politicians keen to receive foreign aid.

northern regions should be halted and students sent home to be enrolled in secular schools in their home towns and villages (Adebajo 2020). According to the Kano governor, more than two thousand students had been returned to their home states by May 1. Other northern states also announced the repatriation of a significant number of almajirai (*Daily Trust* 2020a).

In late April, the news broke that several of the almajirai deported from Kano, then the epicenter of the COVID-19 outbreak in northern Nigeria, had tested positive for the virus (*Daily Trust* 2020a). This resulted in states refusing to accept any new almajirai, leaving in limbo those already taken to holding centers or isolation camps. For several weeks afterward, newspapers and the social media were alight with commentaries on the repatriations. Some people voiced concern about the wellbeing of the young people being squeezed into buses and trucks and hauled across the country in the middle of a pandemic, when all but essential interstate travel was banned (Onyeji 2020). The dominant theme, however, was fear that the almajirai were carriers of COVID-19 and would now spread the disease to previously unaffected areas.

The timing of these positive test results is likely to have fanned people's fears. Community spread of COVID-19 was likely well underway in Kano State by the time of the repatriations, but no population group other than the evacuated almajirai was systematically tested. This reinforced the sense that infection rates among the almajirai were higher than in the average population. As a matter of fact, it is impossible to know whether the Qur'anic students were more likely to be carriers of the disease than, say, health workers or security staff, most of whom manned the checkpoints without any protective gear.

Eventually, a motion introduced in the house of representatives called on the federal government to stop northern governors from deporting almajirai (Ayitogo 2020). On May 12, Nigeria's Presidential Task Force on COVID-19 advised the governors to suspend the interstate movement of almajirai, arguing that it breached the travel ban (*The Citizen* 2020). In the next section, we explore in greater depth the media and political rhetoric surrounding the almajirai during the period described here.

VECTORS OF DISEASE?

Before COVID-19 even reached northern Nigeria, the almajirai were discussed as vectors of disease, as exemplified by Dahiru's (2020a) article published April 1 on the media platform HumAngle:

The risk of one Almajiri contracting COVID-19 is tantamount to infecting thousands of people in geometric progression...If one of the Almajirai contracts the deadly virus, that would be a kind of the *nunc dimittis* for the herd of the Almajiri pupils.¹⁴ Put also into consideration the number of cars in traffic they rub their skins on [when begging].

As hinted at before, such discourse gained traction when some of the almajirai sent back to their home states tested positive for COVID-19. Several media outlets, including major newspapers, carried articles with dramatic headlines, such as “COVID-19: An Almajiri Time Bomb Waiting to Explode in Jigawa” (Dambatta 2020) and “The Almajiri Invasion of Southern Nigeria” (Nwokeoma 2020). The latter headline refers to the alleged arrival of “truckloads” of almajirai in the southeastern states, which led to outcries over a presumed nefarious northern plot to “export coronavirus Almajiris index cases to the South-East” (Nnachi 2020), and points to ongoing regional and interreligious tensions. Security concerns pervaded even apparently sympathetic responses to the forced removals by endorsing the framing of the almajirai as a security issue and echoing notions of disenfranchised and mistreated almajirai being easy recruits for radical and violent groups. The *Daily Trust* (2020b) quoted a child rights advocate:

It was very wrong to ship these children out of the states. They should have rehabilitated them; it would have been an opportunity to do so and give them psycho-social and medical support...We are producing potential kidnappers and robbers; they have absolutely nothing to lose.

Older anxieties about Qur’anic schools and their students clearly lurked just beneath the surface, ready to be invoked to bolster specific positions in the ongoing debate about the “correct handling” of the almajirai during the COVID-19 pandemic.

Initially, the official rhetoric of the Kano State government presented the forced clearance of Qur’anic schools as a practical solution to a technical problem—that is, the crowding in Qur’anic schools and students’ difficulty accessing food during lockdown—and eschewed intimations of the political nature of this move. Government spokespeople struck a somewhat more combative tone after experiencing pushback over the forced school clearance and, notably, the

14 Presumably the author uses the expression *nunc dimittis* here in the sense of “go out and mingle.”

PANDEMIC CONTROL AND SECURITIZATION OF
QUR'ANIC EDUCATION IN NORTHERN NIGERIA

conditions in which the almajirai were kept after being removed from their schools (see below). Kano State's commissioner of education then went on the radio to reassert the government's position, referencing older fears about the almajirai being easily recruited to take part in riots and political violence:

These children, most of the ones you see, if there is an uproar, they are at the forefront as they have nothing to lose, this isn't their state, that's why I assure you there is no way of going back on this system that the Kano State government put in place. (Muhammad Sanusi Sa'id Kiru, translated from Hausa)

The commissioner went on to threaten with expropriation anyone who let almajirai stay on their property (e.g., in deserted or uncompleted buildings). He also warned that "every child's father whom we told to send his son to [government] school among these children, if he refuses to send him, we will take him to court and ensure that he goes to prison" (translated from Hausa). The next section offers accounts from insiders of the Qur'anic education system about the clearance of the schools, including descriptions of the harsh measures taken against the almajirai in the wake of being framed as a viral or security threat.

EXPERIENCES OF QUR'ANIC SCHOOL CLEARANCE AND ISOLATION CAMPS

I am crying like never before because of the way that the almajirai have been removed from their schools in the middle of the night. They come wake up the boy, telling him "corona," take him, throttle him, while he has only boxers and his shirt on him, some are taken away without their shoes, so hearing this kind of news is making me sad. (Gwani Abubakar, Qur'anic teacher, interview)

Salisu's interviews with other malamai and almajirai corroborated the description of the almajiri evacuations quoted here. In all the cases we documented, schools had been cleared by armed officers (identified by our respondents as either police or Hisbah, the religious police) in the middle of the night, when students, neighbors, and potential bystanders were asleep, presumably to avoid pushback. The students weren't given any time to dress or gather their belongings before being shoved into buses, in some cases at gunpoint:

When they came, they had guns ready in their hands, they wake you up from sleep, if you say you will not enter the car,

he will say he will shoot you or he will say, he will hit you with [the gun]. (Mustapha, Qur'anic student, interview)

The strong-arm nature of the school clearance described here brings to mind previous violent incidents in Nigerian schools, notably the middle-of-the-night mass kidnappings of students by Boko Haram insurgents in the northeast (Human Rights Watch 2016) and by bandits in the northwest (Yusuf 2021). It also echoes policing tactics more widely applied to presumed public enemies, such as suspected Boko Haram supporters (Amnesty International 2015).

All accounts from our participants concurred that no social distancing protocols were in place during the school clearance, and that neither hand sanitizer nor facemasks were made available to the students, even though officials said the evacuations were carried out to protect the almajirai from COVID-19 infection. Most of the almajirai evacuated from Kano were taken to one of three isolation centers set up in National Youth Service Corps camps in Karaye, Kuru, and Gabasawa in preparation for their planned return to their home states. Video footage that emerged from the Karaye camp, which is said to have held more than one thousand children at one point, shows children sitting close to one another on the ground, none of them wearing facemasks (Dahiru 2020b). While many of the children were reportedly tested for COVID-19 at the camp, it took several days for the results to come back, including positive ones. Given the absence of preventative measures, COVID-19 infections could easily have spread in the interval.

The picture that emerged from Karaye suggests that no proper arrangements had been made to accommodate such a large number of children. Food, water, and sleeping mats were at times scarce, and Gwani Ismaila, a Qur'anic teacher who went to visit the camp, in an interview expressed his frustration with the situation: "Since the government came all the way to our school to scoop up [the almajirai], it should look after them 100 percent, but at the place, food for the children is scarce."

Given the poor conditions and lack of clarity about what was to happen next to the almajirai, most notably after neighboring states had closed their borders to the repatriations, some children took matters into their own hands, climbed the wall, and ran away. However, given the remoteness of the camp (Karaye is some 45 miles from Kano City), some of them struggled to find their way home:

What disturbs us most with this problem regarding Karaye...
the workers don't look after the almajirai, they let some of

PANDEMIC CONTROL AND SECURITIZATION OF
QUR'ANIC EDUCATION IN NORTHERN NIGERIA

them climb the wall at the back and run away, doubtlessly a bit over one hundred people, and up till now that we speak, we haven't found some of our almajirai, we don't know where they are. (Gwani Ismaila, Qur'anic teacher, interview)

This troubled both the malamai and the almajirai's parents, as reported by one of our diary participants who was in close contact with teachers whose schools had been cleared:

The parents are worried...I know one man who came at least around seven days in a row, he always came from their town,... and he came to the malam's place here to find out what the situation is. (Gwani Bashir, Qur'anic teacher, diary entry)

When the federal government ordered that the repatriation of almajirai be suspended and the neighboring states shut their borders to them, the Kano State government soon found itself in a bind, as it could no longer return the almajirai to their home states. While there was no official communication about what would happen to the almajirai who had already been evacuated and were now in isolation camps, the malamai whom Salisu interviewed confirmed that some students were returned to their Qur'anic schools, some were taken to their parents (notably those living in Kano State), and some were missing for some time before they found their way back to either their malam or their parents. The whole episode, including the middle-of-the-night evacuations at gunpoint, the absence throughout of proper COVID-19 precautions, and the lack of proper care at the isolation centers, including feeding the students, raises stark questions about who—and whose interests—the government measures were meant to protect. Our respondents were in little doubt about the answer to these questions. This is what we turn to next.

FUEL FOR SUSPICION AND COVID-19 SKEPTICISM

After decades of fraught relationships with state authorities, insiders of the Qur'anic education system and their sympathizers had little confidence that the government was acting with their best interests at heart, and they refused to be compliant with government securitizing messages. Our respondents were unequivocal that the Kano State government was taking advantage of the COVID-19 pandemic to pursue an existing agenda regarding Qur'anic education, as Gwani Abubakar, a Qur'anic teacher, explained in an interview: "So, honestly, as we see it, the

government made use of this opportunity because anyways it wants to destruct the Qur'anic schools where the Qur'an is studied altogether."

Hauwa, the mother and wife of a Qur'anic teacher, also questioned whether foreign actors had a hand in the developments:

There are those who don't want to see people studying the Qur'an, that's why they advise the governments in northern Nigeria to prohibit Qur'anic education. The governments then accepted this advice, maybe they were given money, we don't know, and then they seized this opportunity to prohibit Qur'anic education. (Hauwa, diary entry)

While skepticism about the threat of COVID-19 preceded the forced clearance of the Qur'anic schools, it was likely exacerbated by the evacuations among the poorer Kanawa, notably those affiliated with the Qur'anic schools, as Aminu, a participant in his twenties, pointed out:

Especially now, people have started voicing suspicion that maybe our leaders have invented this disease, they exaggerated it, maybe their intention is to see by what means they will be able to bring about the end of almajiri education in our region here, northern Nigeria. (Aminu, diary entry)

In addition to critically questioning the government's intentions, some of our participants who accepted that COVID-19 did pose a real threat also questioned how sensible the adopted measures were in terms of the wider pandemic response. Hauwa, quoted above, argued that by focusing on the almajirai the government was missing the point:

See, the thing that disturbs people [is that] people are going hungry, and look at the deaths that are happening, they are always increasing [referring to the surge in undiagnosed deaths in April 2020]. The help that they are giving, it doesn't reach those in need as it should...They should focus their attention on what they should do to resolve this disease, not on the issue of the almajirai. (Hauwa, diary entry)

Sani, one of the almajirai Salisu interviewed, pointed out the flawed logic of assuming that only the almajirai were potential carriers of COVID-19: "This is not just. If they

PANDEMIC CONTROL AND SECURITIZATION OF
QUR'ANIC EDUCATION IN NORTHERN NIGERIA

wanted to protect everyone, then they would also evacuate the city dwellers [*yan gari*], or they should get the testing kits and test everyone at his place.”

Government rhetoric about the presumed benefits their measures would bring to the almajirai was met with skepticism. Aminu, himself a former almajiri, doubted that the almajirai would indeed be able to access quality secular education after reuniting with their rural parents:

This thing will give rise to many problems...the government doesn't keep the secular schools that it has in the villages in a good state either, it doesn't support them, they study in wretched conditions, especially now that they say they have removed more [almajirai] and brought them, so you see all of this is adding problems and worry. (Aminu, diary entry)

One of the malamai was similarly critical of government announcements of a special school designed to accommodate 900 almajirai in Kano:

They said there are three million almajirai in Kano...However many they said, we know that they are many, they are more than 900, so now if they take these 900 and put them in this school, what will become of all the others?...If they will prevent them [from studying in Qur'anic schools], they should tell them what will become of them. (Gwani Abubakar, Qur'anic teacher, interview)

Finally, our research participants said that getting rid of the almajirai would have negative consequences for the wider community, notably by preventing them from doing collective supplications, which many Kanawa consider an important source of protection, including against disease:

If they really wanted to find a solution for this pandemic, they would not be scooping up almajirai and taking them back home, they would come and distribute some money to buy food or provide food so they stay and keep making *du'a* [purposive prayers]. By God, this pandemic would have become history...But you see, our leaders, they have adopted the Western system and think this is what will help them out, but for us Muslims, there is a system Allah set out for us. (Gwani Shu'aibu, Qur'anic teacher, interview)

This account highlights the fact that some knowledge systems have been given precedence over others in the pandemic response (Cohen et al. 2021, 368).

CONCLUSION

To date, little is known about the impact the COVID-19 pandemic is having on nonformal faith-based education institutions, which have received limited attention in the scholarship on education in emergencies. In this paper, we have explored how Qur'anic schools and students were perceived and treated in Kano, northern Nigeria, during the first wave of the COVID-19 pandemic, using the notion of securitization as an analytical lens. Although Islamic education has been framed as a security threat in both policy discourse and academic scholarship since 9/11 at the latest, the social and political dynamics that have facilitated these securitizing moves have rarely been studied explicitly. We have argued that Qur'anic students in northern Nigeria have been cast as vectors of disease and a biological threat, even in the absence of epidemiological evidence. A securitized framing has been aided by longstanding misgivings about Qur'anic education in the region, which build on prejudice against the rural poor and are furthered by sectarian, interreligious, and regional tensions. Rightly or wrongly, Qur'anic students have for decades been associated with religious and political violence in Nigeria. We have explored how framings of Islamic education institutions as a security threat have proven both tenacious and versatile in the context of the COVID-19 pandemic, which has allowed drastic action to be taken against Qur'anic students. By engaging the securitization literature in conversation with the Islamic education scholarship, we hope to encourage further debate about the role security agendas play in the perception and treatment of Islamic schools.

In empirical terms, we have explored the implications of the interventions that targeted Qur'anic schools in Kano State for the students concerned, for the pandemic response, and for the longer-term relationships between state authorities and society. Today, almajiri education is still officially banned in Kano, but this ban has not been enforced since June-July 2020. In fact, more than two years on, Qur'anic education in Kano State has returned to its prepandemic state. However, this does not mean that the whole episode was inconsequential. Teachers, students, and their parents and communities will likely remember how those involved with Qur'anic schools were treated, thus further undermining an already fragile trust in politicians and state actors. Weakened trust jeopardizes not only the prospects for education reform and the integration of Qur'anic schools into the public education system, it also bodes ill for the response to future health emergencies. As we have demonstrated, the

harsh treatment of the almajirai boosted existing suspicions about the government's agenda around COVID-19. What emerged clearly from our study in policy terms is that governments are ill advised to treat acute health emergencies as an opportunity to settle highly political questions in a top-down way.

What is more, our study confirms other scholars' finding that, while "trust is crucial" (Enria et al. 2021, 2) for a successful pandemic response, it is not won in an instant: "citizens' experiences of specific interventions and their perceptions of the institutions delivering them are shaped by social, political and economic structures and historical trajectories." In this paper, we have highlighted the fact that education interventions are tightly entwined with longer political histories and relationships that imbue them with meaning, and on which they bestow meaning in return. Given the symbolic importance of education as a space where priorities are expressed about whose future counts (Cohen et al. 2021, 368) and where societal and political fault lines are laid bare, education interventions may indeed constitute a particularly sensitive domain in which governments may want to tread carefully. As we emerge from the pandemic, an important lesson to carry forward is that building trust requires "a commitment to care that extend[s] beyond the emergency context" (Ryan, Giles-Vernick, and Graham 2019, 7). This is critical, most notably for those who, like the almajirai, are routinely excluded from such care.

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THE 2020 PANDEMIC IN SOUTH SUDAN: AN EXPLORATION OF TEENAGE MOTHERS' AND PREGNANT ADOLESCENT GIRLS' RESILIENCE AND EDUCATIONAL CONTINUITY

ANNE CORWITH AND FATIMAH ALI

ABSTRACT

On March 13, 2020, the government of South Sudan implemented emergency lockdown measures in response to the COVID-19 pandemic. Fears that the pandemic would reverse efforts by the government and civil society to keep girls in school were realized and reported incidences of teen pregnancy increased. Prior to the pandemic, early marriage and teen pregnancy in South Sudan were already of extreme concern, as the country reported the seventh-highest child marriage rate in the world. Countrywide data from 2019 indicated that only 34 percent of the students who sat for primary exams were girls. We conducted this qualitative study to explore the resilience factors that adolescent mothers and pregnant adolescents relied on during the COVID-19 lockdowns in Maiwut Town, South Sudan, to enable them to return to school and continue their education. Our research revealed that, despite struggling to meet their basic needs, receiving weak support from their social networks, and experiencing violence and persistent negative gender roles, these adolescent mothers and pregnant adolescents exhibited resilience in their aspirations to return to school and become financially independent. By centering this research on the voices of this vulnerable population, we are able to recommend what we argue are more effective and targeted interventions for organizations that are working in this and similar emergency contexts.

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INTRODUCTION

The 2020 novel coronavirus (COVID-19) pandemic had unprecedented scope and impact as it shut down businesses, disrupted government functions, and closed schools. Writing for the United Nations Educational, Scientific and Cultural Organization (UNESCO), Giannini and Albrechtsen (2020) warned that “COVID-19 school closures around the world will hit girls hardest.” It was feared that the school closures would lead to increasing “drop-out rates[,] which will disproportionately affect adolescent girls, further entrench gender gaps in education, and lead to increased risk of sexual exploitation, early pregnancy and early and forced marriage” (Selbervik 2020, 2).

In South Sudan, with an estimated 2.2 million children out of school, most of them girls, the issues of teen pregnancy and early marriage were already of extreme concern before COVID-19 (UNICEF 2021). According to UNICEF (2020a) global databases, 52 percent of girls in South Sudan were married before age 18—9 percent before age 15. Prior to the pandemic, the adolescent fertility rate (live births per 1,000 women ages 15-19) in South Sudan was decreasing consistently and in 2018 it stood at approximately 60 in 1,000 live births (World Bank 2020). Since gaining independence in 2011, South Sudan has struggled with nascent governing structures, a weak economy, civil war, and extensive gender-based violence (GBV). The pandemic created further challenges in an already fragile situation. When the government instituted emergency measures, such as closing businesses, government offices, and schools, there was fear that the pandemic would reverse the gains made in addressing these issues, which was quickly validated by the higher number of teen pregnancies reported within months of the lockdowns (UNICEF 2020b). During the school closures, which lasted up to 15 months, the education response to COVID-19 was an effort between international organizations, the government of South Sudan, and civil society organizations. All these entities worked to safeguard the gains made in education access and enrollment over the last decade and to keep vulnerable groups, including teenage girls, from dropping out of school. A qualitative study conducted by Oxfam International in 2021 supported these concerns, finding that an increase in poverty, early and forced marriages, domestic burdens, and teen pregnancies was likely to lower girls’ chances of returning to school. According to UNICEF (2021), the number of children out of school due to COVID-19 increased by 2.1 million, around 900,000 of them girls.

In this paper, we focus on the voices of adolescent girls interviewed during the COVID-19 pandemic lockdown in Maiwut Town, located in South Sudan's Upper Nile State. We explore factors of adolescent resilience, as expressed by the girls, that will help them return to school and continue their education while pregnant and/or as mothers. We juxtapose this exploration with the perspectives of their community. Maiwut Town is situated approximately 75 miles west of Gambella, Ethiopia, and is accessible only by unimproved roads (Aqua-Africa 2019). Research conducted in 2019 by Aqua-Africa describes Maiwut family units as large, with an average of 7.5 members living in households predominantly led by women (61%). Obtaining an education is viewed as important, and upwards of 80 percent of boys and girls under age 15 attend school (MoGEI 2019; Aqua-Africa 2019). However, countrywide data from 2019 indicate that primary school girls made up only 34 percent of the students who sat for exams, which just 75 percent of them passed, in contrast to 83 percent of boys (UNICEF 2021).

The majority of the adolescent girls and pregnant teenagers in Maiwut who participated in our study communicated that they felt pressured to marry or faced GBV. Moreover, their contact with their family and community support networks was limited due to the lockdowns, and they had increased difficulty meeting basic needs. Despite the steep odds against them, these girls showed great resilience as they aspired to return to school and become financially independent. By centering their voices in this research, we provide a previously unexplored look at the needs of this vulnerable population. We offer recommendations for organizations and donors working in this and similar emergency contexts, which we hope will inform the development of more effective and targeted interventions and contribute to a marked improvement in these girls' lives.

LITERATURE REVIEW

The research for this study was conducted at the beginning of the COVID-19 pandemic, which presented a largely unprecedented situation. However, the pandemic's possible impact on education, especially in resource-poor countries, had certain parallels to the Ebola outbreak in West Africa from 2013 to 2016. Therefore, this literature review examines the impact school closures and disrupted education had on teen pregnancies in countries affected by Ebola. It also looks at responses to the outbreak from the perspectives of the institutions operating in the region, including governments, nongovernmental organizations (NGOs), and international organizations. Lastly, it highlights the research literature on

the characteristics and measurements of the resilience shown by adolescent girls who experience pregnancy and motherhood.

SCHOOL DISRUPTION AND ITS IMPACT ON TEEN PREGNANCIES DURING EBOLA

Research conducted in emergency contexts provides several examples of the impact disrupted schooling has on teenage pregnancy. Bandiera et al. (2019) leveraged the Empowerment and Livelihood for Adolescents club, a World Bank intervention to promote girls' empowerment in Sierra Leone, to track the impact the Ebola epidemic had on 4,700 women in treatment and control villages. They found that, in the highly disrupted control villages where teenage girls spent significantly more time with men than in the treatment villages, out-of-wedlock pregnancies rose by 11 percent. However, in the treatment villages, where the presence of the club enabled girls to have less exposure to high-risk sexual encounters, the effects of the disruption were almost completely reversed.

The impact the Ebola crisis had on adolescents was both varied and interconnected. In 2015, child welfare agencies in Sierra Leone conducted a study called Children's Ebola Recovery Assessment in nine districts of Sierra Leone, in which 1,100 boys and girls discussed the effects the crisis had on their lives. The children identified the school closures as a detriment not only to their learning but to their protection and social interaction. Specifically, the school closures were considered one of the direct causes of teen pregnancy, as girls were forced to engage in transactional sex due to a lack of money to buy basic necessities (Risso-Gill and Finnegan 2015). A 2015 Irish Aid and UNDP study on Ebola similarly found that sexual violence increased due to school closures, as they made girls increasingly vulnerable to sexual abuse by older men and to being forced to have transactional sex; moreover, the girls lacked judicial recourse for crimes committed against them, such as rape.

The turbulent and conflict-ridden histories of West African nations and the embedded nature of structural violence against women contributed to the teen pregnancy epidemic. Due to this persistent violence in Liberia and Sierra Leone, there was a "feedback loop" whereby any kind of disaster increased the level of violence perpetrated against girls and women (Onyango et al. 2019). The chaos that was created by the Ebola-related school closures and lockdown-associated economic hardship increased girls' vulnerability. Yasmin (2016) found that the number of rapes spiked as boys and men were quarantined at home, and girls who lost parents to the disease were forced to seek protection from older men or were pulled out of school to work. Onyango et al. (2019) found that the loss

and trauma girls experienced in this time of extreme chaos included the drastic alteration of family structures and school shutdowns; increased teenage pregnancy was a result of this chaos.

INTERVENTIONS IN RESPONSE TO INCREASING TEEN PREGNANCIES

The scope of the problems caused by the Ebola outbreaks led to the galvanization of the international organizations and governments working to mitigate the issues. Some responses by various institutional actors were counterintuitive. For example, the government of Sierra Leone introduced a policy that banned visibly pregnant girls from attending school or sitting for the national exams. They feared that other students' interaction with these girls would lead to more adolescent pregnancies (Amnesty International 2016). Onyango et al. (2019) found a similar situation in Liberia, where girls were prevented from, or opted out of, attending daytime school, due to being stigmatized by their teachers.

International organizations that worked on the ground in the countries hit by Ebola worked to create interventions that would help to slow the increase in teenage pregnancies. UNFPA and UNICEF undertook what was arguably the largest response to the punitive government policies in Sierra Leone, ultimately assisting upwards of 14,500 pregnant adolescent girls (Mason 2016). In collaboration with the government, UNFPA established 330 learning centers across the country to cater to the pregnant girls who were not allowed to attend regular schools. These learning centers were supposed to act as a bridge to mainstream schooling, the expectation being that, after delivering their babies, the girls would reenroll in regular school. The project provided adolescent pregnant girls with health information, antenatal care, safe delivery, and postdelivery care, along with psychosocial care for those affected by GBV (UNFPA 2015).

Researchers evaluating the institutional response in these countries found the policies and interventions to be lacking and that the response lagged behind the crisis. The researchers downplayed structural factors, such as the transactional sex that led to teen pregnancy, and instead focused on sensitization campaigns centered on girls' behaviors. Even here, the burden of pregnancy in the teenage years was laid squarely at the feet of the girls themselves. This pseudo-empowerment asked girls to adhere to a chaste lifestyle as they pursued their education, which was rarely possible under the circumstances of their everyday lives. This policy focus on sensitization campaigns that were more suited to stabilizing power dynamics than to changing them helped governments and donors avoid addressing the

structural causes of teenage pregnancies during the outbreak (Menzel 2019; Denney et al. 2017; Onyango et al. 2019).

In the South Sudanese context, international organizations conducted some research to inform interventions for teenage girls. In 2016, HealthNet TPO and UNICEF published *Promoting Positive Environments for Women and Girls: Guidelines for Women and Girls Friendly Spaces in South Sudan*, which provided guidance for creating spaces where girls felt physically and emotionally safe. In November 2017, the International Rescue Committee published a report titled *No Safe Place*, which provided data on intimate and partner violence in South Sudan. The report spoke to the continuum of violence girls have experienced during the country's protracted crisis (Ellsberg et al. 2020). However, these reports and guidelines did not anticipate the impact of lockdowns and restrictions imposed by a pandemic.

PREGNANT ADOLESCENTS' RESILIENCE

For this study on pregnant adolescents' and adolescent mothers' resilience, young mothers are defined by the World Health Organization as individuals from age 15 to 19 (Ahorlu, Pfeiffer, and Obrist 2015).

In a recent Plan International study, Lee-Koo and Jay (2018) identified significant gaps in the research available on adolescent girls' experience and capacity to deal with crises, especially within the humanitarian sector. Studies conducted in the United Kingdom and the United States found that pregnancy and motherhood can be a positive experience that strengthens a young mother's resilience, if the teenager has strong, positive relationships with their family and partner, and access to economic and growth opportunities (Clarke 2015; Weed, Keogh, and Borkowski 2000). These studies explored the protective factors that enhanced these teenagers' resilience after becoming pregnant and/or their ability to adapt to and cope with the challenges of being a young mother. However, the teenagers and families in these studies have access to resources currently unavailable in challenging contexts like South Sudan (Ahorlu et al. 2015; Clarke 2015; Weed et al. 2000).

The research Plan International conducted in South Sudan identified three areas that helped adolescent girls navigate the conflict and instability occurring in the country at the time: family cohesion, access to education, and resilience. In the study, resilient adolescent girls are described as "demonstrating the agency to positively shape their worlds" (Lee-Koo and Jay 2018, 2). By building protective relationships with their families, mentors, and peer networks, these girls "share

and deploy the resources, skills, and knowledge that they have acquired to provide for their own and others' well-being" (2). The girls identified having access to education as important to their ability to strengthen their resilience and navigate the difficult conditions they were facing. However, the pandemic created conditions that hindered their ability to pursue their education. A qualitative study conducted by Kane et al. (2019) from 2012 to 2016 in Wau Town in South Sudan's Western Bahr el Ghazal State indicated that girls exercised their agency by choosing to become mothers, and to marry and establish their own homes. In this study, girls' agency was presented as their choosing to marry, yet their choice was influenced by socioecological factors, such as cultural pressure, wanting to be valued as an adult, and escaping abuse. Although parents valued their daughters' education, they did not view teenage pregnancy, early marriage, and dropping out of school as a concern, as they assumed the husbands would provide for their daughters (Kane et al. 2019).

Individual resilience has been defined as having adaptive capacities and capabilities that help an individual respond positively to traumatic events and crises (Panter-Brick et al. 2018; Obrist, Pfeiffer, and Henley 2010). However, research on resilience is coalescing around the understanding that individual resilience is composed of multiple dimensions that exist within a socioecological framework that affects an individual's ability to adapt and thrive (Panter-Brick et al. 2018; Ungar 2013; Obrist et al. 2010). As Ungar (2013, 255) points out, adolescent resilience is better represented by a socioecological lens that looks at those who "control the resources that facilitate psychological well-being in the proximal processes (e.g., making education accessible; promoting a sense of belonging in one's community; facilitating attachment to a caregiver; affirmation of self-worth) associated with positive development in contexts of adversity." For this research, we place adolescents who are confronted with complex crises, including violent conflict, sexual assault, poverty, forced migration, and food insecurity, in this socioecological setting. The transition from adolescence to adulthood is a key time for children, as they learn to navigate their psychological, biological, emotional, social, and cognitive development (Panter-Brick et al. 2018). Pregnancy and motherhood further complicate this transition.

Research to identify and measure the factors of adolescent resilience within a socioecological framework focuses on three areas: individual, social, and contextual (Panter-Brick et al. 2018; Gartland et al. 2011; Ungar 2013; Obrist et al. 2010). The individual factors that boost a teenager's ability to overcome adversity include having a sense of optimism, a perceived sense of control, the

knowledge and skills to adapt to changing circumstances, a sense of meaning or purpose in life, and a willingness to help others. The social factors that support adolescent teenagers' resilience include having strong and supportive relationships within the family and the community, and with peers. The resilient teenager has someone who takes an interest in her welfare and provides support, and her social networks help her navigate her circumstances to obtain her needs. The resilient teenager also may identify a role model to emulate. Lastly, she feels a connection with and willingness to help her community. The contextual factors can include cultural traditions, pressures, and perceptions, including how education is perceived within the community (Panter-Brick et al. 2018; Gartland et al. 2011; Ungar 2013; Obrist et al. 2010). To explore the extent to which young mothers and pregnant adolescents are able to determine their future, meet their own and their babies' needs, and continue their education, it is key to look at their social networks' capacity and willingness to support them. Based on this socioecological framework of adolescent resilience, our study explored the perspectives of young mothers and pregnant teenagers living in Maiwut, South Sudan, on their agency and resilience to continue their education.

METHODOLOGY

When conducting research on resilience, scholars recommend first identifying the population being researched and how that population views the adverse circumstances they are facing. Researchers then must identify the timeframe in which the aspects of resilience will be explored and the desired outcome (Ungar 2013). Reyes, Kelcey, and Varela Diaz (2013) speak to the importance of conducting qualitative research when collecting data on gender issues, and of the cultural nuances within the context being studied. Based on this guidance, we structured a qualitative case study around two adolescent resilience frameworks, the Multi-Layered Resilience Framework and the Child and Youth Resilience Measurement Framework. Our aim was to explore the perspectives of young mothers and pregnant adolescents toward the resilience factors that supported their drive to continue their education (Gartland et al. 2011; Ungar et al. 2008). The research follows the methods of Lee-Koo and Jay (2018, 5), in that it "seeks to place adolescent girls as both the source of knowledge and the primary analyst of their lives and experiences." Creswell (2013, 24) describes this form of inquiry as "pragmatic," where the "goal of research is to rely as much as possible on the participants' view of the situation."

DATA COLLECTION AND ANALYSIS

We conducted our study from December 2020 to June 2021 in Maiwut Town, South Sudan. We piloted the interview protocols in December 2020 to address translation and interpretation issues and revised them as needed. The field research team from the Adventist Development and Relief Agency in South Sudan used critical case and stratified purposeful sampling to seek research participants from the community (Creswell 2013). Adhering to South Sudan's COVID-19 safety protocols, the field research team conducted 49 in-depth, semistructured 90-minute interviews with a cross-section of three populations: 15 adolescent mothers (AM) ages 16 to 19 who had at least one child and showed a commitment to continue their education; 14 pregnant adolescent (PA) girls ages 15 to 19 who became pregnant during the pandemic and were expecting their first child; and 20 others who were considered the adults most knowledgeable (hereafter AMK) about the teenagers' status. To understand the socioecological structure the girls live within, we asked the girls who they lived with and who they felt provided them the most support. Of the 15 AMs, 7 said they lived with their husband or their husband's family. Of the 14 PAs, 10 stated that they lived with their husband or their husband's family. However, when asked who they feel provides them the most support, only three AMs said they felt their husbands supported them, as did only two of the PAs. Both groups of young women indicated that their own family supported them the most. Three of the young women reported having been raped, and one was forced to marry her rapist.

The field research team transcribed and translated into English hand-written interview notes and sent them electronically to the authors, who then analyzed the data. Once this stage was complete, the authors communicated with the field research team to address a deviation from the research protocol; despite clear guidelines to have female team members conduct the interviews, 14 interviews had been conducted by male team members. As a result, we dropped these interviews, and the field research team then identified 14 more adolescent participants, conducted the interviews, transcribed and translated the responses, and sent the new data to the authors. Upon receipt and review of the data, follow-up questions were posed to the field researchers on the ground to clarify certain items. Finally, a member check was conducted with the field research team to ensure that the English-speaking authors understood the data correctly. The authors proceeded with their analysis by searching for common and divergent themes and generating recommendations.

LIMITATIONS AND ETHICS

The research was limited by COVID-19 safety protocols, language differences, and access to technology. Travel restrictions, social distancing, and masking requirements hindered the smooth progress of the research, but the field research team followed the safety precautions required in South Sudan. The authors, who were located in the United States and comprised the university research team, met virtually with the field research team in South Sudan to review protocols and ethical requirements, and to check on progress.

Because the researchers were exploring sensitive topics, such as GBV, with adolescent girls, the research team outlined measures to protect and support the girls, who voluntarily choose to participate. The South Sudan Ministry of General Education and Instruction (MoGEI) granted its permission to conduct the research, and the research proposal was approved by the University of Maryland institutional review board.¹ All local research staff members signed the Adventist Development and Relief Agency's child protection agreement, and all interview participants were informed about the research and signed consent forms. Consent to participate in the research was required from a parent, caregiver, or guardian for all adolescent girls under the age of 17. Only female researchers were to conduct the interviews with the AMs and PAs. To the extent possible, the interviews were held in a safe location that protected the girls' confidentiality. All interviewees were assigned codes and pseudonyms to protect their identities and maintain their anonymity. Lastly, resources were made available to adolescent participants who required counseling referrals and/or support.

ANALYSIS AND FINDINGS

To discuss the resilience factors young mothers and pregnant adolescents exhibit in order to pursue their education, it is important that we first discuss the myriad challenges they face (Obrist et al. 2010; Ungar 2013). These challenges are grouped into three categories: unmet basic needs and need for support, a lack of agency, and a lack of physical safety. Although these challenges existed before the pandemic, COVID-19 exacerbated them enormously. We then examine the expression of the girls' resilience in keeping with individual, social, and contextual factors.

¹ South Sudan's Ministry of General Education and Instruction approved this research. However, some scholars suggest that research permission should come from the Ministry of Health. It is recommended that future researchers consult both ministries regarding research approval.

CHALLENGES

The first set of challenges pertains to the girls' unmet basic needs and need for support. Almost all the pregnant adolescents and young mothers were from poor households with limited economic resources. The onset of the pandemic exacerbated this problem and cut off access to the support networks the girls typically relied on. Young mothers expressed having difficulty breastfeeding their babies, due to the lack of sufficient nutrition and health care. With the increased emphasis on handwashing and cleanliness to reduce spread of COVID-19, a lack of soap created further stress.

AM: "My major concern is my baby. There is no food to feed the baby. The doctor stopped me from breastfeeding my baby due to my poor health."

AM: "[Due to COVID-19] I was forced to stay home and can't work due to restrictions. It is difficult because I can't provide for my children."

The young mothers pointed out that the lack of basic needs created a domino effect; for example, if they or their babies fell ill, there was no one available to care for the baby. The young mothers said they had to drop out of school to care for their babies and secure their basic needs.

AM: "Having a child when one is not prepared is difficult. It caused me to miss attending alternative education regularly because sometimes the baby is sick."

Despite their aspirations to continue their education, the girls were expected to be the sole caretakers of their children and to be responsible for significantly time-consuming domestic responsibilities, including fetching water, cooking, and cleaning their home. The AMs and PAs indicated that they received minimal support from their husbands and/or their husbands' families. A few girls stated that they had help from their mother, other family members, or friends. However, the COVID-19-related lockdowns hindered the support the girls normally relied on from family members and limited their socializing, making it more difficult to share in domestic chores, provide child care, and find a reliable food supply.

AM: "I have no support from my husband. I only have a little support from the family. Most of my time is struggling to work

to raise money for food, but it still isn't enough. My baby does not have enough milk because the family is starving."

PA: "The pandemic has hindered me. I cannot get the things I need to care for my baby. My relatives who could help me are locked down [due to COVID-19] far away."

Some mothers who were able to return to school said that they had to repeat a grade, as they had forgotten what they had learned. They mentioned the lack of economic resources to buy uniforms, sandals, books, and pens, which made it difficult to return to school. A few AMs mentioned the inability to obtain masks during COVID-19; this required them to maintain social distancing and made it difficult for them to hear the teacher or see the chalkboard.

AM: "The teacher requested masks. Since I cannot afford them, I am made to sit far away and cannot hear what is said. [Due to lockdowns and COVID-19 restrictions,] my brother cannot take me to Addis Ababa."

PA: "Even if there will be education, teachers will not be able to travel from their locations. It will be difficult to find opportunities to get money to buy school items."

The young mothers' and pregnant teenagers' responses about how they were viewed and supported by the schools was mixed. About half the respondents felt that the schools and teachers were supportive of the AMs and PAs, while others stated that there was no support.

AM: "Most schools are not concerned. Even some do not give advice to students or follow up with students up in cases of absenteeism. Nobody is concerned when they drop out of school."

PA: "The teachers sometimes stigmatize us. They say bad things about pregnant mothers. They sometimes tease us by saying, 'Go and cook for your husbands.'"

PA: "In the past the community discouraged education for girls, but I have seen changes. When schools are open, the community supports them."

The second major challenge for both teenage mothers and pregnant adolescents was their lack of agency. Agency in this context refers to the girls' ability to make decisions about their lives. Many of the participants said that they had to get married against their wishes to continue their education. Many of the girls commented that they were valued less than cows; their families married them off to obtain a dowry, which consisted of cows. Others specifically indicated that they were married because of the effects of the pandemic. Unlike the research conducted by Kane et al. (2019), which indicated that girls expressed their agency by getting married, the teenage mothers in this study reported that marrying and becoming pregnant as a result of the increasing hardships caused by the COVID-19 pandemic represented their lack of agency, as they had no control over whom they married or when they had children.

AM: "Our community does not value the education of girls. They raise us for resources, and we are forced to get married any time so that the family can get cows."

The lack of agency persists in their relationships with their husbands and new families. Many of the girls described experiencing exploitative household dynamics. One PA reported that, as a second wife, she did not receive any money because her husband was already supporting 11 children from his first marriage. One young woman felt pressured to obey her husband in order to be allowed to return to school: "I am preparing to be loyal to my husband by obeying his instructions so that I am allowed to go back to school and be educated." Most of the respondents expressed a lack of optimism and loss of hope about their future, and they felt they had no control over their lives.

PA: "I am hopeless and confused. I am not prepared to overcome the challenges."

AM: "COVID-19 led to the blockage of roads and closure of school. It caused me to get married, thinking that my husband will support me, but I am now frustrated."

The last theme apparent in the participants' responses was the lack of physical safety and exposure to GBV. One teenage mother reported that she was raped and, to avoid being shamed, she had to marry her rapist. Another adolescent mother said she wanted to attempt suicide when she became pregnant as a result of rape. A third reported that she convinced a friend not to kill herself after the person responsible for impregnating the friend abandoned her. Some of the

ADOLESCENT PREGNANCY, MOTHERHOOD, AND EDUCATION
DURING COVID-19 IN SOUTH SUDAN

women indicated that they were beaten at home if they did not acquiesce to being married. When the girls were asked where they felt safest, only one young woman out of the 29 interviewed said she felt safe with her husband; three others said they felt safe with a male member of the family. Most respondents indicated that they felt safest with their mother. Notably, only one teenager interviewed said it was her choice to become a mom.

AM: “I was not prepared for this condition. My parents went and beat me. They wanted to return me back to the old man because they said cows were already given. But I want to work hard and finish my education and improve my life in the future.”

AM: “One time my friend got pregnant and the person responsible abandoned her. My friend wanted to take her own life. I encourage her not to kill herself.”

PA: “I was the one who decided to be a mother. So I am prepared to face the difficulties of being a mother.”

**EXPRESSIONS OF PREGNANT ADOLESCENTS’ AND
ADOLESCENT MOTHERS’ RESILIENCE**

Against the stark backdrop of the COVID-19 pandemic and its exacerbating impact on poverty, entrenched and detrimental gender practices, and the study participants’ lack of optimism, the girls still exhibited characteristics of resilience. All of the young women recognized that obtaining their education is key to improving their future, and the future of their children. For the most part, the AMKs also acknowledged the importance of education. Almost all respondents were able to identify a young woman who had pursued her education and improved her own and her family’s living conditions. The following section looks at the individual, social, and contextual factors that influenced the AMs’ and PAs’ resilience to pursue their education during the COVID-19 pandemic.

INDIVIDUAL FACTORS

Even though the teenagers expressed a lack of optimism about their future, almost all of them also said they had a sense of purpose and an understanding that they would need to adapt to their changing circumstances.

AM: “I will do petty business, like brewing alcohol, to support my baby and my mother during weekends.”

PA: “Even though I [will] have a baby, I would like to continue with my education. I know life is difficult, but I will work hard.”

Although hindered by the COVID-19 lockdowns, the girls expressed their aspirations to continue their education, and several indicated that they would make money through “small business” and manage their time in order to do so. These strategies included selling products such as tea, the firewood they cut and gathered, or farm produce. Other girls, cognizant of their time-consuming caregiving work and domestic responsibilities, talked about completing their domestic chores early in the day or on weekends.

PA: “To overcome the challenges, I have to do my domestic duties early and plan well in the evening to have ample time to go to school.”

Many of the girls indicated that they had the personal characteristic of patience and an ethic of hard work and knew when to ask for advice. They also indicated a willingness to help others, such as their friends. The majority of the AMKs echoed the young women’s comments when identifying their individual characteristics, such as tolerance, patience, kind-heartedness, helping others, and being hardworking.

AM: “I have a spirit of accepting advice from experienced people. I am also patient because everything happens for a reason.”

Almost all the girls looked to other educated women as role models. In describing these role models, the girls said they considered education one extremely important tool the women used to achieve greater independence and autonomy. Some of the role models had continued their education while being married, while others left or divorced their husbands and returned to school, even while caring for their children. Many of the role models identified were now employed and supporting themselves and their families financially.

ADOLESCENT PREGNANCY, MOTHERHOOD, AND EDUCATION
DURING COVID-19 IN SOUTH SUDAN

AM: “Yes, one of my relatives dropped out of school due to forced marriage. She shortly made up her mind and returned to school. She is now highly educated and got a job. I like the way she made up her mind after facing the challenge and worked hard to overcome it. She is now supporting the entire community.”

SOCIAL FACTORS

An important aspect of adolescent resilience is an individual’s ability to find and secure resources, which is dependent on the capacity and willingness of her formal and informal networks to help provide for her needs, wellbeing, and access to education. In Maiwut, however, girls’ resilience is impeded by these networks’ lack of capacity and/or willingness to provide even basic needs. We found stark contradictions between the young mothers’ and pregnant teenagers’ perspectives on the social support they received, and the perspectives of the AMKs. A majority of the AMKs described supportive family and caregivers as husbands who provide advice and counseling, are cooperative, show love, care, and encouragement, and share in the household chores.

AMK: “A supportive husband or family would provide the basic needs for a wife and baby, including school. A husband should love his wife and cooperate with all members of the family.”

However, the majority of the girls stated that they were not supported by their husbands or their husbands’ families, and some said they were in abusive relationships. Despite this, most of the pregnant teenagers expressed a desire to continue their education, even as they acknowledged that being able to do so was limited by the lack of help with child care and domestic duties. In overcoming these challenges, the girls showed a great degree of self-reliance, and they often turned to their own family or a peer for support.

AM: “Cooking, collecting firewood, fetching water, smearing [mudding of] house. I have more responsibilities, but at least my mother supports me a lot and helps me with caring for my baby.”

AM: “I feel secure when I am living with my mother because my mother still loves me, and she is the only one struggling to support me.”

Healthy peer networks are a crucial aspect of adolescent resilience, and these peer networks exist for PAs and AMs in Maiwut. Most of the girls described having strong and supportive peer relationships that enabled them to both provide and receive support. The AMs and PAs spoke about providing advice to each other, sharing shoes, clothes, food, and school supplies, and helping to care for each other's children and with domestic chores. More importantly, a couple of the girls mentioned advising friends not to commit suicide or not to abort their baby.

AM: "My friends and I support each other with ideas to face the challenges of living with positive thinking."

PA: "I can fetch water, especially when my friends are not feeling well, and support in cooking food for them."

Girls' resilience depends on the strength and extent of their networks, and on the contributions they are able to make to their communities. All the young mothers indicated that they had a connection to their community and made some contributions, such as mudding the houses of the elderly, fetching water, collecting firewood, cooking, offering advice, sharing basic resources such as salt and soap, and participating in communal meetings. However, the young mothers also noted that having a child and additional domestic work, and having to care for their husbands and families, limited their availability to contribute outside the home. The pregnant adolescents said they had difficulty participating in community activities as their pregnancies progressed and they were unable to lift heavy items and do chores. With the onset of the pandemic lockdowns and social distancing requirements, many of the girls explained that they had to stay at home and that they missed the connection and support they received from the community.

AM: "When church was closed and I had to stay home, I was insulted and was always in deep thoughts. I'm happy now I can go back to church."

AM: "Before when there was a function, I would help as a youth [to] fetch water. But now I have children to take care of and don't have much time."

ADOLESCENT PREGNANCY, MOTHERHOOD, AND EDUCATION DURING COVID-19 IN SOUTH SUDAN

CONTEXTUAL FACTORS

The young mothers' and pregnant adolescents' resilience as they continued to pursue their education was also influenced by the cultural context in which the girls live. In Maiwut, the AMKs' perceptions and ideas about young girls and their access to education were in stark contrast to those of the AMs and PAs themselves. These contrasting perceptions made it difficult for the girls to navigate their situations and to obtain the support they needed to remain resilient.

The AMs and PAs expressed the view that their communities, schools, and teachers did not sufficiently value their access to education. The AMKs' responses indicated that they were aware of the importance of education and of the need for the community to support the AMs' and PAs' access to education, but they placed the burden on the adolescents by commenting that the girls should not get pregnant, should work hard, and should attend school.

AM: "Our teachers view teenage mothers and pregnant adolescents as stubborn people. As such, they do not waste their time with them."

Community views on girls' education, especially after marriage, were mixed, as expressed by the AMKs. Most acknowledged that education is important for girls as a key to a better future, and many identified female role models who had struggled to obtain an education and were now working to support their families. The respondents pointed to families that had been influenced by structures within refugee camps that encouraged girls to get an education, and to young women who exhibited agency and the determination to pursue their education. This indicates that there was a level of community understanding and valuation of education.

PA: "Education of girls is considered least important. The majority of the families raise girls for dowry. Parents who came from refugee camps are the ones that encourage girls to go to school."

AMK: "My sister completed her education after having a baby and is self-sufficient now. She doesn't ask me for money."

The AMKs also expressed an awareness of girls' need for support at home in order to attend school after becoming pregnant and getting married. Many participants stated that husbands and families needed to ensure that girls' basic needs, such as food and sanitation, were met, and that they were encouraged to return to school.

AMK: "My cousin was forced into marriage at 14 years old. She was sent back to her parents to have the baby—her mother cares for the baby. She decided to stay with her mother instead of returning to her husband and went to school. She graduated and is working at an NGO. Now she is supporting the family."

Therefore, there is a contradiction within the community, which, on the one hand, acknowledges the importance of girls obtaining an education and realizing their income potential while, on the other hand, trivializing girls' value by creating barriers to attending school, such as early marriage, limited resources, and a lack of support. Another example of trivializing girls' importance within the community was that only a few AMKs mentioned forced marriages, dowry obligations, or GBV as challenges that prevented girls from attending school. This lack of overall acknowledgement points to the degree of invisibility the girls experience, which is detrimental to their resilience.

AMK: "There are many teenage mothers in the community due to the cultural practice of forced marriage. The community should provide awareness campaigns to keep girls from dropping out of school after p-8 [primary school, 8th grade]."

AMK: "There is no contribution from the teenage mothers and adolescent mothers. Women's contributions are ignored in the community, especially [of] those who have not gone to school."

AMK: "Make community awareness programs and advise girls not to move at night or go for disco dances."

RECOMMENDATIONS

This study sheds light on the complex power dynamics within the structural gender practices in Maiwut, South Sudan. Adolescent girls are caught in a recurring cycle of poverty-induced dependency that results from a lack of basic necessities, such as adequate food, from their low social standing in the community, and from

entrenched detrimental gender practices, including forcing girls to marry for economic benefits and the normalization of GBV. Adverse external shocks like the COVID-19 pandemic increase the challenges these girls face. For the local and international organizations working in these complex spaces, the emphasis must be on increasing PAs' and AMs' capacity to absorb and adapt to external shocks. The most efficient and fruitful way to do this is to center the conversation on the needs of the girls as they express them.

MATERIAL NEEDS AND SUPPORT

Adolescent resilience is reflected in the girls' ability to get what they need from their social networks. Although the girls expressed that they share what they have, their networks' capacity to meet the girls' needs, in turn, was limited, especially during the COVID-19 lockdowns. The AMs identified their major needs for supporting their return to school as food, soap, dignity kits for proper hygiene during their menstrual cycle, and masks. They also asked for items for their babies, such as clothes and medicine. Several of the young mothers and pregnant teenagers indicated that providing school fees, books, pens, uniforms, shoes, clothes, and access to lights so they could study at night would encourage them to return to school. Another AM pointed to the importance of informing girls who dropped out of school that they could obtain support if they returned.

PA: "There is a need to provide in-kind support, such as school materials, dignity kits, and food, for education. Some parents cannot afford to help their children with school materials. Many teenagers have already dropped out."

AM: "In-kind support [is needed,] such as dignity kits, varied training for school children, improved training for teachers, invitation of community role models to talk, and the provision of books. Many teenage mothers found that support was only given to students who were in school and the only way to get support is by enrolling back in school."

A couple of the young mothers indicated it would be helpful to schedule classes at different times, either in the morning or the afternoon, which would enable mothers to tend to their children, domestic work, and businesses, and go to school. The young mothers also indicated that having safe and appropriate sanitation facilities and providing space to care for their babies or childcare facilities at the school would be helpful. Others asked for schools to be flexible so they would

have time to breastfeed and care for their babies. Interestingly, only a few of the AMs said they needed assistance with child care and domestic chores, yet several of the AMKs said they did.

AMK: "Give her freedom to do her school activities. Have family members do some of the work to give enough time to the teenager for school activities."

AWARENESS CAMPAIGNS

The teenage girls and the AMKs expressed an understanding of the importance of the girls' education and the need for awareness-raising campaigns. All interventions in emergency situations need to consider sustainability and long-term capacity-building; for example, sustained awareness campaigns on GBV should move away from narratives around girls' "good" and "bad" behavior and toward the systemic issues that result in early marriages and teen pregnancies. It is imperative that social campaigns which highlight the importance of girls and young mothers returning to school include the men from the community. They can do so by encouraging the men to support the girls in their lives by sharing in household chores, providing food and other basic needs, and being aware of the impact of GBV. Maiwut Town presents a great opportunity to involve the men and women of the community in creating more conversations and shifting perspectives on the value of the girls in the community and the causes of teen pregnancy.

AMK: "Give awareness training about the importance of education and danger of early marriage. Have girls become peer educators and educate elders."

SCHOOL ADMINISTRATION AND TEACHERS

The AMs and PAs in our study asked for improved counseling and psychological support that would encourage and support their return to school. This could be done by improving teacher training and acknowledging the girls' changing needs. They indicated that schools should identify girls who have dropped out and support and encourage them to return. The AMKs echoed these responses and added that, to improve education, schools should monitor attendance and provide more teacher training. From an education standpoint, helping teenagers and young mothers return to school requires strategies that help reduce their caregiving burdens. Accelerated education bridging programs that conform to

ADOLESCENT PREGNANCY, MOTHERHOOD, AND EDUCATION DURING COVID-19 IN SOUTH SUDAN

the national curriculum could ensure that learning lost during the school closures is mitigated and that the pathway to return and complete schooling is accessible, despite PAs' and AMs' difficult circumstances.

AMK: "Schools and NGO[s] provide help to teenage mothers to continue education, monitor attendance, provide school supplies, and give incentives for child care."

MENTAL HEALTH SUPPORT

One item not specifically mentioned by the adolescent girls or the AMKs but that is nonetheless imperative is counseling and mental health services, which should be provided along with other interventions. The interviews conducted for this study provide only a glimpse of the pervasive violence and trauma these girls have faced, including surviving rape, forced marriage, and the social stigma resulting from both. It is clear that the COVID-19 pandemic has exacerbated these young girls' trauma, as exemplified by their lack of optimism about the future and their thoughts of suicide. Transitioning to adulthood by having a baby adds complications and stress, not to mention the hormonal changes that occur. The AMs and PAs must be provided with safe spaces in which they can unpack their trauma with the support of qualified professionals, which will enable them to build the resilience they need to withstand additional shocks to their already inhospitable contexts.

THE COVID-19 RESPONSE

In April 2021, UNICEF partnered with donors, the government of South Sudan, civil society, and faith-based organizations to launch an aggressive back-to-school campaign that included specific programming for girls. These partners introduced catch-up programs for adolescent mothers unable to travel to school, which provided alternative forms of education and included a focus on skill development and psychosocial support (UNICEF 2021). Conditional cash transfers were implemented under the Girls' Education Program 2021 to encourage girls to return to their schools when they reopened after the COVID-19 closures. Approximately 500,000 cash transfers to alleviate financial hardship were approved (Girls' Education South Sudan 2021). UNESCO partnered with MoGEI to launch the "Education on Air" radio program, which targeted primary and secondary school children with the aim of mitigating their learning losses during the COVID-19 school closures (UNESCO 2022).

FURTHER RESEARCH

The research conducted for this paper highlighted several areas for further study. Reflecting on the comments the participants made about their role models, we feel it would be beneficial to explore the role models' degree of agency and their pathways to success. This could help clarify what pathways these young women could follow and provide new ideas for strategic interventions by institutions working in emergency contexts. We also recommended further research to explore the clear discrepancies between the community's expressed valuation of education for young women and their use of these girls as commodities to improve the community's and families' economic conditions. Another key direction for future research is to investigate the impact COVID-19 has had on the mental health of these adolescent girls who, given the emergency contexts that govern their lives, already appear to be burdened with significant trauma.

CONCLUSION

The resilience of adolescent girls living in emergency contexts is dependent on their having access to familial, community, and peer networks that help them absorb external shocks and withstand adversity. Our study reveals that adolescent mothers and pregnant adolescents in Maiwut Town, South Sudan, confront challenges to strengthening their resilience because they have little access to such networks and also have difficulty accessing educational opportunities. Interventions that target this group need to help them build resilience by meeting their needs and by giving them opportunities to strengthen the networks that buttress their individual resilience.

The seeds of strong familial and community networks for AMs and PAs exist in Maiwut. The organizations working to provide relief and improve these girls' quality of life need to help adolescent girls and young mothers return to school by strengthening the community and familial networks, which in turn can help these young mothers build their resilience and cultivate agency over their lives. Education's far-reaching results were eloquently captured by one AMK: "I think education is important because my daughter can help not just the family, but the community [and] the nation." Efforts made today to ensure that these young mothers and pregnant teenagers return to school will have great returns for their families, their communities, and their country.

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ADOLESCENT PREGNANCY, MOTHERHOOD, AND EDUCATION
DURING COVID-19 IN SOUTH SUDAN

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SCHOOL LEADERS' AND TEACHERS' PREPAREDNESS TO SUPPORT EDUCATION IN RWANDA DURING THE COVID-19 EMERGENCY

EMMA CARTER, ARTEMIO ARTURO CORTEZ OCHOA, PHILIP LEONARD,
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ABSTRACT

Due to the COVID-19 pandemic, all Rwandan schools were closed in March 2020; they started to reopen in November 2020. To understand the Rwandan schools' level of preparedness to teach remotely during this unprecedented emergency, and for the eventual return to school, we conducted phone surveys with school leaders and teachers in 298 secondary schools in August 2020. Drawing from knowledge mobilization theory and quantitative data, our results indicate that there were gaps in school leaders' and teachers' access to technology and training, and a lack of preparedness that could inform policy and practice in future emergencies. Our findings reveal that, before the pandemic, the male teachers in Rwanda had more access than the female teachers to both technological devices and online experience, and that the teachers from well-resourced schools were more likely than teachers from regular schools to own some kind of device to use for teaching. We found that the teachers whose school leaders had received guidance on how to continue education during the school closures were more likely to receive their support. Two additional findings were that younger teachers were more likely than the older ones to support their students during the school closures, and that the school leaders and teachers we surveyed believed that students from low-income families and rural areas benefitted the least from remote learning. These findings indicate that, in Rwanda, the level of preparedness to support schooling during the COVID-19 emergency was negatively affected by preexisting and ongoing inequalities in access to both material and nonmaterial resources.

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INTRODUCTION

The COVID-19 pandemic has been recognized as “an emergency of an unprecedented scale” (INEE 2020a). In reaction to the emergency and to limit transmission of the virus, countries around the world closed their schools. After the first COVID-19 case was diagnosed in Rwanda, the government announced that all schools would close; more than 700,000 secondary students stopped going to school on March 14, 2020 (Miks and McIlwaine 2020; Ministry of Education 2019). The schools remained closed until November 2020, when the upper primary and secondary schools began to reopen in phases (Ministry of Education 2020c). At the time of reopening, the start of the school calendar year was temporarily shifted from September to June, and the students were expected to return to the grade they were in before schools closed; in effect, they would start the school year over and repeat the first part of it.

School closings across the globe caused concern that unequal access to technology would affect some students' ability to continue their education, and that it would most affect those who had the least support at home and the fewest resources (Van-Lancker and Parolin 2020). The students in this situation would need the most teacher support. Little was known about how prepared school leaders and teachers had been before the pandemic to teach remotely, the extent and nature of the support they received during the school closures, or how prepared the schools were when they reopened.¹ We argue in this paper that research evidence on preexisting and ongoing inequalities in access to material and nonmaterial education resources, including technology, training, and guidance, as well as infrastructural conditions, can shed light on how prepared school leaders and teachers in Rwanda were to continue schooling during the COVID-19 emergency. We were able to explore these issues by building on the research we had conducted in Rwanda's secondary schools before the pandemic. The following three research questions (RQs) guided our exploration:

RQ1: To what extent were school leaders and teachers prepared for remote teaching?

RQ2: What aspects of school leaders' preparedness enabled them to support teachers, and teachers to support students, during the school closures?

¹ In this paper, school leaders include head teachers, deputy head teachers, deans of studies, and deans of teachers, which are recognized leadership categories in the Rwandan education system (Cheriyian, Leonard, Menon et al. 2021).

RQ3: How prepared were schools to reopen, and what challenges did school leaders and teachers find necessary to address when they returned to the schools?

We have framed this paper within the broader theory of knowledge mobilization (Cooper, Levin, and Campbell 2009; Levin 2011), which is the search to understand the connections between research, policy, and practice while seeing knowledge as a context-situated social process. Previous research following knowledge mobilization posits that “using research evidence should lead to more informed policy, higher-quality decisions, more effective practices, and, in turn, improved outcomes” (Cooper et al. 2009, 160).

We engaged with Rwandan teachers and school leaders in an effort to understand what preexisting conditions and available support enabled them to continue schooling during the pandemic, and what their main concerns were when the schools reopened. While their views cannot provide a complete picture, what these teachers and school leaders experienced during this challenging time provides invaluable data, given their direct contact with students, parents, and other education actors. Based on these key education actors’ perspectives, we aim to inform policy and practice by identifying areas where support, including material and nonmaterial aspects that contribute to continuing education, may be needed, and to uncover inequalities that may require action to tackle the present and future emergencies.

As INEE (2020a, 7) suggests, “crises often provide opportunities for positive change, and innovations developed for the pandemic response might prove useful in reaching marginalized communities in the future.” Burde et al. (2017) urge us to understand that responding to “emergencies” goes beyond meeting immediate needs and must also include providing ongoing support once the initial emergency appears to have passed. In that regard, we see this research as contributing critical knowledge to decisionmakers and other stakeholders that will help them plan for and cope with future emergencies (Cooper et al. 2009; Levin 2011).

Given the government initiatives to provide ongoing education during the school closures, Rwanda provides an interesting opportunity to explore how prepared school leaders and teachers were to support students during the COVID-19 emergency. When the schools closed, the Rwanda Education Board (REB) began broadcasting educational programs on national television and radio, and it launched a YouTube channel called REB eLearning that provided educational

content.² The REB also strengthened its online portal to support remote learning by providing teachers and school leaders with professional development in digital skills.³ We examined how school leaders' and science, technology, engineering, and math (STEM) teachers' prior experience with technology and their online experiences enabled them to engage with remote learning, as well as what support they received when the schools reopened.⁴ Our findings offer important lessons for future emergencies that require a shift to distance teaching and learning.

In the next section, we present a framing of this research relative to the existing literature and provide an overview of the study context. We follow with our research design, the study findings, and a discussion and conclusion, which include policy implications.

PREPAREDNESS IN THE CONTEXT OF COVID-19

Previous health emergencies, such as the Ebola and influenza outbreaks, offer important lessons on how to prepare education systems to provide remote education. However, such evidence is limited, particularly for emergencies on the scale of the COVID-19 pandemic (Hallgarten 2020; Hartenberger-Toby 2020; Srivastava et al. 2020). In this paper, we argue that research evidence on preexisting and ongoing material and nonmaterial inequalities, including access to technology, training, guidance, and infrastructure conditions, can shed light on how well-prepared school leaders and teachers in Rwanda were to continue schooling during the COVID-19 emergency. This important knowledge will help to inform policymakers and practitioners who seek to improve the preparedness and build the resilience educators need to provide ongoing education during future emergencies, and to do so in a manner that ensures education equality, fairness, and justice.

2 REB is one of six agencies within Rwanda's ministry of education. It has national oversight for delivering education at the preprimary, primary, and secondary levels, and oversees matters such as curriculum development, the development and management of teachers, and assessment, and the promotion of the use of information and communication technology in education; see <https://www.youtube.com/channel/UCCSm2s9wZC8B61ISlsUWg>.

3 See <https://elearning.reb.rw/>.

4 We gathered the perspectives of the Rwandan school leaders and the secondary STEM teachers we were engaged with before the pandemic as part of the Mastercard-funded Leaders in Teaching Initiative. We focused on these teachers because, prior to the school closures, the Government of Rwanda and donor organizations had emphasized the importance of STEM at all levels of education for the country's development (Ministry of Finance and Economic Planning 2000).

To gain an understanding of how these issues have presented in settings comparable to Rwanda, we reviewed the level of technological preparedness of schools in low- and lower-middle-income contexts to provide remote schooling, along with the related issue of teacher training. We also explored the emerging literature on the different types of support schools have received from multiple sources to help them cope with remote learning during school closures due to emergencies, including the coronavirus pandemic in low- and lower-middle-income contexts.

TECHNOLOGICAL PREPAREDNESS

Research conducted in low- and lower-middle-income contexts documents the lack of technology available for remote learning, particularly among students from less advantaged backgrounds and those living in rural areas (Tadesse and Muluye 2020; Vegas 2020; Nthenya et al. 2021). A large-scale review conducted in Africa (OECD 2018) identified critical gaps in access to technological devices and the internet. A UNICEF survey conducted during the COVID-19 emergency (Dreesen et al. 2020) estimated that approximately 75 percent of the sub-Saharan African population has no internet access. Researchers have also found vast inequality in the percentage of households that have a television, which is as low as 1 percent in rural Chad and as high as 76 percent in urban Guinea and Mauritania (Dreesen et al. 2020). The same report indicates that government responses to this lack of resources has included the distribution of radios in Somaliland and Burkina Faso and, in Burundi, preloaded lessons on memory cards that students can play on mobile phones. This report also indicates that, across the African continent, women are 70 percent less likely than men to own a smartphone and 34 percent less likely to have access to mobile internet. These differences in access to technology that favor men are also found in education settings, as is highlighted in a report on the need to strengthen STEM and information and communications technology education in sub-Saharan Africa (Gardner et al. 2018). This report also found that female teachers in Zambia, Mozambique, Uganda, Ghana, Tanzania, and Kenya are typically less well equipped with technology for teaching than male teachers. The authors argue that a targeted provision of technology resources to female teachers could enhance girls' learning opportunities and help narrow the gender learning gap in the region.

Although computers are increasingly important to the teaching profession for planning lessons and for preparing and downloading teaching materials (Van-Deursen and Van-Dijk 2019), recent studies have found that access to computers is less prevalent in low- and lower-middle-income contexts, particularly sub-Saharan Africa (Dube 2020; Adarkwah 2021b; Hallgarten, Gorgen, and Sims 2020). Research in Zimbabwe, for

example, suggests that only one in two teachers had access to a computer during the COVID-19 pandemic (Maphosa 2021). Others found that access to computers and the internet was provided primarily to schools rather than to individual teachers (Mutula 2003; Agyei 2021), which often made it difficult for teachers to access computers during the school closures (Maphosa 2021). In light of these findings, it is critical to gain an understanding of the preexisting and ongoing inequalities in access to resources for remote teaching in Rwanda, particularly to education technologies, given that this was one of the approaches to providing remote education in that country during the COVID-19 emergency.

PREPAREDNESS FOR REMOTE TEACHING

Having access to technology is not the only requisite for successful remote learning; teachers and students also must be able to use these technologies for educational purposes. Previous research on the use of technology in schools has emphasized the need to train teachers appropriately so they can use technology to promote successful student learning (Hennessy, Haßler, and Hofmann 2015; Selwyn 2020; Rubagiza, Were, and Sutherland 2011). In Rwanda, for example, Rubagiza et al. (2011) noted that the technology introduced in classrooms in the early 2000s lacked both appropriate teacher professional development and adequate support to enable students to get the most out of new innovations. Furthermore, evidence from the region posits that teachers' age is a barrier to their integrating online technologies into their teaching (Tedla 2012), as older teachers have generally been more resistant to using technology.

During the COVID-19 emergency, countries in sub-Saharan Africa used different methods of remote learning. Drawing from administrative and survey data collated by the Centre for Global Development at the onset of the pandemic, Vegas (2020) found that sub-Saharan African governments aimed to maintain communication with teachers during the school closures, and around one-third encouraged or required teachers to communicate with their students. For example, the Angolan government supported the continuation of schooling by maintaining communication with teachers through its educational television channel. In Nigeria, communication between education authorities with students and teachers was maintained primarily via radio and online content on dedicated websites. Education authorities expected teachers in Uganda and Zambia to develop "learning packages" that students could use to learn at home. However, Vegas (2020) found that, despite these efforts, teachers often lacked training in remote teaching. The inadequate training, particularly in distance learning, appeared

to be more acute in places where access to electricity and technology devices are uncommon (Adarkwah 2021a).

In May 2020, in recognition of this gap, the International Task Force on Teachers for Education 2030 identified training in online teaching as critical to continuing schooling during the COVID-19-related school closures (UNESCO 2020). Researchers also recognized the importance of providing flexible training sessions in order to accommodate the time teachers must dedicate to their household duties and caregiving, which has been particularly crucial for female teachers (Collie 2021; Klapproth et al. 2020; Lockee 2021; Adarkwah 2021b). During the school closures, however, decisionmakers often found it challenging to collect the data needed to help them choose the best approaches to teacher professional development (Jordan et al. 2021). We argue, therefore, that to target resources and training where they are most needed, it is essential to understand how prepared teachers are, should the need arise, to continue schooling remotely.

SUPPORT FOR SCHOOL LEADERS AND TEACHERS DURING THE SCHOOL CLOSURES

School leaders and teachers are likely to require support to continue schooling during school closures. For the purposes of this paper, we focus in particular on the guidance and knowledge schools in Rwanda received in order to continue schooling remotely during the COVID-19-related school closures, which came from a range of sources, including the government, charitable organizations, parents and communities, and peer teachers (Mitchell et al. 2022; Reimers and Schleicher 2020; Srivastava et al. 2020). At the start of the pandemic, school leaders and teachers also received guidance on how to prevent both the spread of the coronavirus—which typically consisted of reputable, science-based information about the virus—and the dissemination of fake news about COVID-19 (Bender 2020).

As a recent report from Rwanda (Al-Fadala et al. 2021) highlights, school leaders can play a crucial role in maintaining student engagement during school closures. The report stated that school leaders had been instrumental in coordinating with parents and communities to support remote learning during the school closures. In Ethiopia, school leaders working in urban areas and those who had access to a phone were more likely than others to receive government guidance on keeping education going during the school closures (Yorke et al. 2020). Teachers were more likely to receive the support they needed if their school leaders had received support and guidance regarding how to keep schooling going. Supporting school

leaders and teachers to keep schooling going during the pandemic remained important even after most schools had reopened.

In this paper, we argue that preparing to keep education going during an emergency involves more than knowing what material resources schools should have on hand; it also requires providing proper teacher training in distance learning and the use of technologies, plans for reaching students who lack access to online learning, support for their learning at home, and plans for reopening schools (Srivastava et al. 2020). Understanding how prepared school leaders and teachers were to provide remote education in Rwanda during the COVID-19 crisis, and their concern about what steps they should take when they returned to the classroom, provides insights into where education providers fell short and can help decisionmakers be better prepared to keep education going in future crises (Cohen et al. 2021; Rigall 2020; Vu and Savonitto 2020).

THE RWANDAN CONTEXT

To put into context how prepared Rwandan school leaders and teachers were to provide remote learning during the COVID-19 crises, and later to reopen the schools, we offer this brief overview of the state of secondary education before the schools closed. Enrollment in Rwanda's secondary schools is low: only 43 percent of males and 49 percent of females ages 12-13 were enrolled in secondary education in 2018 (EPDC 2018). In addition, girls are more likely to be out of school after age 16—the equivalent of the third grade of secondary school (high school junior in US schools), especially in rural districts (Laterite 2017; Menon, Leonard, and Nzaramba 2021). There also are gender gaps in the Rwandan teacher workforce; in 2017, for example, there was one female secondary school leader for every four male leaders (Cheriyen et al. 2021).

Prior to the pandemic, teachers' and students' competence in using technology was supported by equipping schools and teachers with suitable devices and training (Mushimiyimana 2021; Mugiraneza 2021; REB/MINEDUC 2015; Mastercard Foundation 2020; Ministry of Education 2016). Most secondary schools in the country were on the electric grid or had solar power before the school closures, but only 53 percent had internet access (INEE 2021). In 2011, the ministry of education introduced model "schools of excellence," which were better resourced than regular schools, including having laboratories, information and communications technology equipment, and libraries (Ministry of Education 2018).

Despite the Rwandan government's efforts to provide schools and teachers with adequate equipment and training, access to technology in Rwanda's schools (and households) remained limited, which presented a challenge when the need arose to provide remote education during the COVID-19 pandemic. Although radio access is nearly universal in Rwanda, a recent report showed that fewer than 50 percent of students used the radio to continue their education (INEE 2021). Moreover, only about 67 percent of households own a mobile phone and 8 percent have a television, and access to technology varies substantially between urban and rural areas. Home internet access is less than 30 percent across Rwanda and just 2 percent in rural areas, while computers are available in only around 3 percent of households (Kimenyi, Chuang, and Taddese 2020).

When the government of Rwanda encouraged the continuation of schooling during the school closures by providing lessons via television, radio, and online channels, we decided to explore how well prepared school leaders and teachers were to teach remotely. We also sought to understand whether school leaders and teachers had the support they needed to help their secondary students continue with their education and to ensure their return when the schools reopened.

RESEARCH DESIGN

In August 2020, we conducted phone surveys with individuals we had initially interviewed face-to-face in February and March 2020, before the schools closed. Given the restrictions on face-to-face interaction due to COVID-19, we considered that phone surveys were now the most appropriate data-collection method. We drew from previous research experience using phone surveys in low-income contexts where it was not feasible to collect data in person (Firchow and Mac Ginty 2020; Hoogeveen et al. 2014; Dabalen et al. 2016). We wanted to gain an understanding of these school leaders' and STEM teachers' level of preparedness to support students during the COVID-19-related school closures, and when the schools reopened. The participants were from 14 school districts in Rwanda where the Leaders in Teaching initiative is active (Figure 1). The data we collected previously provided evidence on teaching quality and student learning outcomes (Carter et al. 2021; Cheriyan et al. 2021).

Figure 1: Rwanda's 14 Districts Where Data Have Been Collected



We developed two precoded questionnaires, one for school leaders and one for teachers, which went through various stages of development and refinement.⁵ We finalized them after consulting with key stakeholders, including our partners who were implementing teacher professional development interventions as part of the Leaders in Teaching initiative. The Leaders in Teaching initiative is funded by Mastercard and counts on implementing partners based in Rwanda and learning partners based at the Research for Equitable and Accessible Learning Centre at the University of Cambridge.⁶ The questionnaires were all translated into the local language, Kinyarwanda, and the team members ensured that the questions accurately conveyed the intended meaning, that the terms and concepts were relevant in the Rwandan context, and that the language was simple and clear. Throughout the training and pilot activities, the team continued to refine the questionnaire translations by collecting feedback from the study participants and enumerators; in Rwanda, enumerators conducted the surveys with school leaders and teachers over the phone.

5 The questionnaires are available at <https://www.educ.cam.ac.uk/centres/real/researchthemes/teachingandlearning/leaders/>.

6 See <https://www.educ.cam.ac.uk/centres/real/researchprojects/ongoing/leaders-in-teaching-rwanda/>.

We used the surveys to collect information about the research participants' technological preparedness before the schools closed, such as their access to devices and their experience with remote teaching. We also collected information on the type of support teachers and school leaders had both received from the education authority and other local providers and given to their students during the school closures, on the challenges they anticipated upon the return to school, and on how prepared the schools were to reopen.

We obtained a research permit from Rwanda's National Commission for Science and Technology to proceed with data-collection activities. We also received approval from the University of Cambridge ethics panel to conduct our research. These ethical processes required us to obtain the participants' full consent and to assure them of their rights, including to withdraw from the study at any point if they so desired. We guaranteed the participants' confidentiality and anonymity by removing identifiable information from the written records and providing safe data storage in dedicated facilities.

During the global health emergency, many research projects used phone surveys to contact potential participants (UNESCO 2021; Ford, Porter, and Pankhurst 2021; Ford and Singh 2021; Yorke et al. 2021). Nevertheless, there are recognized downsides to the method. First, there is a risk of skewed results, as the respondents might overrepresent individuals who live in areas with phone networks and electricity and those who have access to a device. However, as we have noted, our sample included teachers and school leaders with whom we had contact prior to the pandemic, and we had an extremely high response rate. Second, it can be challenging to conduct research over the phone if the reception is not good, and it can be difficult to maintain a rapport with participants. Therefore, the length of calls must be carefully considered; we designed the surveys to ensure that calls were the recommended optimal length, just 25 minutes on average (Yorke et al. 2020; Gourlay et al. 2021).

Given our desire to reach a large number of individuals in order to compare respondents' experiences across their different characteristics, and being mindful of the length of the calls, we chose to adopt precoded questions. While we recognize that this limited the possibility of exploring participants' experiences in depth, it was more relevant to our purposes (see Yorke et al. 2021).

We aimed to interview all the school leaders included in a previous round of research; this included 309 school leaders and one teacher from each of the 309 schools. We already had records of respondents' characteristics, such as age, gender, years of experience, disability status, and highest education level, and we were able to link these data with their responses to the phone surveys.

Of the planned 309 interviews, we were able to conduct 298 with school leaders and 297 with teachers from the same schools (Table 1). This extremely high response rate is likely due to the research team having recently conducted surveys in the schools, so the connections already had been made. During the first round of in-person data collection, respondents provided their phone numbers and were informed that they would be contacted again for a short survey. The reasons for the small number of nonresponses included failed attempts to locate participants, participants declining the request, or their being unavailable due to travel and health issues. The results in this paper clearly cannot be considered representative of all STEM teachers and school leaders in Rwanda, but they do provide the perspectives of nearly 600 individuals from the 14 school districts where the Leaders in Teaching initiative operates.

Table 1: Distribution of Teacher Characteristics in the Sample and Sampling Frame

Characteristics		Sampling Frame (population, N=1564)	Sampling Targets	Actual Respondents N=297
Gender	Female	27%	50%	113 (38%)
	Male	73%	50%	184 (62%)
Disability	Yes	3%	10%	30 (10%)
	No	97%	90%	267 (90%)
Experience	0-8 years	49%	33%	117 (39%)
	9-15 years	40%	33%	116 (39%)
	+15 years	11%	33%	64 (22%)

Table 2 shows the distribution of school types the people in our sample worked at, which included schools of excellence and regular schools. As noted, the main feature distinguishing the schools of excellence from other schools is a well-equipped computer and science laboratory and a library. Given that schools of excellence are expected to be better equipped with technology and devices, such as computers, we anticipated that the teachers and school leaders from these schools would have been better prepared to use that technology to support students during remote learning and to engage in remote teaching and school leadership training. Therefore, we disaggregated our findings according to the type of school where

possible (Ministry of Education 2018; Khan, Leonard, and Sabates 2020). Note that the large proportion of rural schools in our sample (92%) is due to the fact that these schools are the focus of the Leaders in Teaching initiative.

Table 2: Distribution of Types of Schools in the Sample

School Characteristics		Proportion	Total
School type	School of excellence	13%	40
	Regular school	87%	258
Location	Rural	92%	274
	Urban	8%	24

ANALYSIS

Before conducting our analysis, we entered and cleaned the collected data using STATA. We began by calculating the descriptive statistics of key variables to respond to the three research questions. We then conducted simple t-tests and chi-squared tests to compare means and to examine categorical variables of interest, respectively. For example, we explored the preparedness of teachers and school leaders by gender, and between schools of excellence and regular schools.

We next used logistic regression to respond to RQ 2. With our first model (model A) we sought to understand what aspects of preparedness enabled school leaders to support teachers during the school closures; we controlled for the school leaders' demographic characteristics and the type of school:

$$\begin{aligned}
 Sch_lead_sup_i = \text{Log} \left(\frac{\pi}{1-\pi} \right) = & \alpha + \beta_1 Online_exp_i + \beta_2 Electricity_i + \beta_3 Comp_tab_i + \\
 & \beta_4 Internet_i + \beta_5 Radio_i + \beta_6 TV_i + \beta_7 Smart_phone_i + \beta_8 Feature_phone_i + \\
 & \beta_9 Received_guide_i + \beta_{10} CPD_i + \beta_{11} Sch_loc_i + \beta_{12} Sch_exc_i + \beta_{13} Gender_i + \beta_{14} Age_i + \\
 & \beta_{15} Disability_i + \varepsilon_i. \text{ (Model A)}
 \end{aligned}$$

In model A, the dependent variable $Sch_lead_sup_i$ is a dummy variable for whether a school leader supported their teachers during the school closures. Independent variables include those related to their preparedness: $\beta_1 Online_exp_i$ indicates whether or not the school leader had previous online experience; $\beta_2 Electricity_exp_i$ indicates that they access to electricity at home; and $\beta_3 Comp_tab_i$ notes that they had access to a computer or tablet. Access to the internet is denoted by $\beta_4 Internet_i$, and access to electronic devices that could be used for remote teaching is indicated as $\beta_5 Radio_i$,

β_6TV_i , $\beta_7Smart_Phone_i$, and $\beta_8Feature_Phone_i$. Other components of preparedness included having received guidance to continue schooling, $\beta_9Received_guide_i$, and participation in continuing professional development (CPD) during the school closures that could have supported their engagement with remote teaching: $\beta_{10}CPD_i$. Other background variables included whether the school was located in a rural or urban area, $\beta_{11}Sch_locat_i$; and school status—that is, regular school or school of excellence—was indicated by a dummy variable, $\beta_{12}Sch_exc_i$. $\beta_{13}Gender_i$, takes account of the school leader's sex; $\beta_{14}Age_i$, school leader's age group; and $\beta_{15}Disability_i$, is a dummy variable for disability status.

For the second part of RQ2, we used a dummy variable ($Teach_sup_i$) to explore whether or not teachers supported students during the school closures. For the independent variables, we included those mentioned for model A, adding $\beta_{16}Qualification_i$, to indicate whether or not a teacher had a bachelor's degree:

$$\begin{aligned} Teach_sup_i = \text{Log} \left(\frac{\pi}{1-\pi} \right) = & \alpha + \beta_1 Online_exp_i + \beta_2 Electricity_i + \beta_3 Comp_tab_i + \\ & \beta_4 Internet_i + \beta_5 Radio_i + \beta_6 TV_i + \beta_7 Smart_phone_i + \beta_8 Feature_phone_i + \\ & \beta_9 Received_guide_i + \beta_{10} CPD_i + \beta_{11} Sch_loc_i + \beta_{12} Sch_exc_i + \beta_{13} Gender_i + \beta_{14} Age_i + \\ & \beta_{15} Disability_i + \beta_{16} Qualification_i + \varepsilon_i. \text{ (Model B)} \end{aligned}$$

FINDINGS

We argue in this paper that research evidence from Rwanda on preexisting and ongoing material and nonmaterial inequalities, including access to technology, training, guidance, and infrastructure conditions, can shed light on school leaders' and teachers' level of preparedness to continue schooling during the COVID-19 emergency. The results show that prior online experience was uncommon among the participants; however, the better resourced schools and male teachers had, in general, more online experience than regular schools and female teachers. Access to computers or tablets was more prominent at schools of excellence and among school leaders and male teachers. We found that prior online experience, access to a radio, and having received guidance to continue schooling significantly predicted how well school leaders supported teachers during the school closures. Teachers in schools of excellence and those in the younger age groups were more likely to support their students during this period. When the schools reopened, school leaders and teachers were concerned that underprivileged students, who

tended to be overage, and weak learners would drop out. Teenage pregnancy was another serious preoccupation, and our participants suggested several ways the government could help to avoid these potential problems.

SCHOOL LEADERS' AND TEACHERS' PREPANDEMIC ONLINE EXPERIENCE AND ACCESS TO TECHNOLOGY

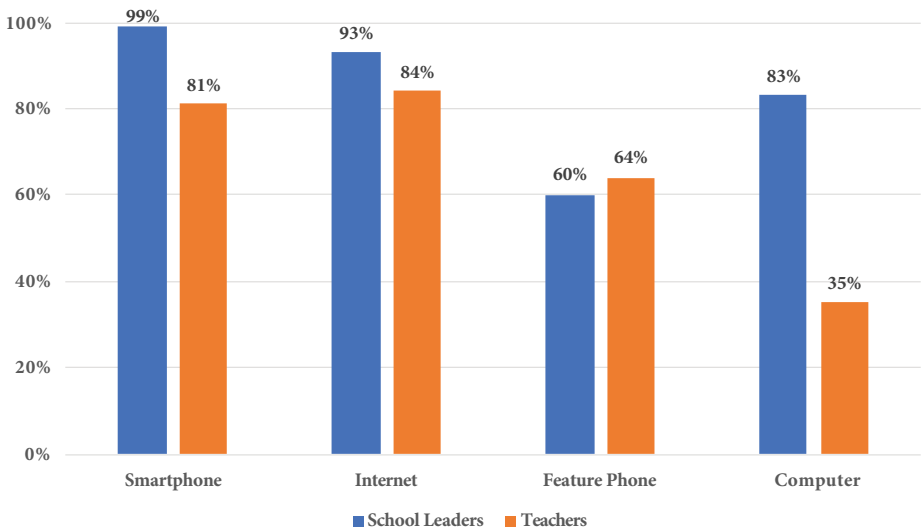
In this section, which focuses on RQ1, we provide descriptive statistics of our participants' online experience prior to the pandemic and the remote teaching technology they had access to.

We found that many of our participants did not have online experience prior to the pandemic, particularly teachers: only 17 percent of the teachers had this experience, as compared to 41 percent of the school leaders. Moreover, the teachers' online experience was not directly related to teaching but to professional development, such as taking online classes and receiving training on e-learning. More than two-thirds of the school leaders and teachers with prior online experience believed it had helped them adapt to remote learning during the school closures.

While there was no gender gap in the school leaders' online experience, the male teachers were significantly more likely to have prior online experience than the female teachers, 22 percent versus 9 percent ($\chi^2(1)=8.30$, $p=.004$). We did not observe any statistically significant difference in previous online experience based on the type of school, or among school leaders or teachers with a disability.

The extent of their access to technology before the school closures likely affected the school leaders' and teachers' ability to support students via remote teaching. Our findings show that most school leaders and teachers in our sample had access to smartphones, feature phones, and the internet, but only 35 percent of the teachers had access to computers or tablets (Figure 2), as compared to 83 percent of the school leaders.

Figure 2: School Leaders' and Teachers' Access to Information and Communications Technology Equipment



We did not find statistically significant differences in access to smartphones, the internet, or feature phones by teachers' or school leaders' gender or disability status. However, we did identify a significant and sizeable gender disparity in access to a computer or tablet: 40 percent of male teachers reported having access to these devices, compared to 27 percent of females ($\chi^2(1) = 5.00, p = .025$). Given that these devices were the expected means of providing remote teaching and learning, these gender differences raise important questions about whether female teachers, and teachers in general, had access to the technology they needed to support online teaching.

We also observed statistically significant differences in access to smartphones, the internet, and computers between teachers from schools of excellence and other schools (see Table 3). Teachers in the schools of excellence were better equipped than those in the regular schools. The differences were sizeable with respect to computer or tablet ownership; teachers in schools of excellence were twice as likely to own a device as those in regular schools. This is not surprising, given that schools of excellence were established to serve as models, including having such technology. However, this lack of access to technology could have created a divide in the level of support the better resourced schools could provide and that provided by the regular schools. Other research revealed that students from advantaged backgrounds are more likely than the underprivileged to attend

schools of excellence (Cheriyān et al. 2021), which could have widened the divide during the school closures.

Table 3: Access to Resources among Teachers from Schools of Excellence and Teachers from Regular Schools

Resources	Schools of Excellence	Regular Schools	Statistical Significance
Smartphones	95%	77%	***
Internet	98%	81%	***
Computer or tablet	65%	31%	***

*** indicates statistical significance at the 1 percent critical level

SUPPORT PROVIDED BY SCHOOL LEADERS AND TEACHERS DURING THE SCHOOL CLOSURES

To address RQ2, we report on the school leaders' preparedness to support teachers during the school closures, and on teachers' ability to support their students. We first identify the proportion of school leaders and teachers who provided support during the school closures, and then address any differences in the level of support according to gender, disability, school location, and type of school. To predict who provided support, we ran logistic regressions using several independent variables of preparedness, including prior online experience and access to devices.

Given that additional training might have enhanced remote teaching during the COVID-19-related school closures, we also explored what support and training were available to teachers when the schools were closed, such as guidance in how to continue schooling and CPD. We also controlled for characteristics of the schools and school leaders, and of the teachers. Building on this, we examined the relationship between the support school leaders gave teachers and the support teachers gave students, considering the various material and nonmaterial aspects of preparedness for remote education. Table 4 presents descriptive statistics of the dependent and independent variables in the two logistic regression models we used in preparing this paper.

Table 4: Descriptive Statistics of the Dependent and Independent Variables in the Logistic Regression Models

Variable	School Leaders	STEM Teachers
School leaders supported teachers	69%	-
STEM teachers supported students	-	42%
<i>Skills and technological preparedness</i>		
Online experience	41%	17%
Electricity	96%	86%
Computer or tablet	83%	35%
Internet	92%	82%
Radio	92%	91%
Television	81%	42%
Smartphone	99%	78%
Feature phone	59%	63%
<i>Available support and additional training</i>		
Received guidance to continue schooling	42%	33%
Engaged in CPD during the school closures	48%	31%
<i>School characteristics</i>		
School location (urban)	8%	8%
School of excellence (yes)	13%	13%
<i>Demographic characteristics</i>		
Gender (female)	19%	38%
Age 26-38	30%	30%
Age 39-44	32%	32%
Age 46-65	37%	36%
Disability (yes)	7%	10%
Bachelor's degree (yes)	-	38%

Of our participating school leaders, 69 percent reported providing support to teachers during the school closures, such as by sharing websites and other resources and encouraging them to participate in CPD. No statistically significant differences were found in the level of support provided relative to the school leaders' gender, disability, school location, or type of school. Of our participating teachers, 42 percent reported providing support to their students during the school closures. Again, we did not identify differences in the level of support provided relative to the teachers' gender, disability, or school location. However, 62 percent of the teachers in schools of excellence supported their students during the school closures, compared to 39 percent of the teachers in regular schools ($\chi^2(1)=8.06$, $p=.005$).

Table 5 presents the results of the logistic regressions of school leaders' support to teachers. The results show that having online experience prior to the pandemic and access to a radio were positively associated with a higher likelihood of school leaders providing support to teachers, significant at the 10 percent level. Having other technological devices, such as computers, tablets, and televisions, were not significantly associated with leaders' support of teachers. These results further indicate that school leaders who received guidance on how to continue schooling were five times more likely to support their teachers during the school closures, controlling for school and demographic characteristics.

Table 5: Logistic Regression Regarding Provision of Support from School Leaders to Teachers and Different Aspects of Preparedness

Dependent Variable: School Leader Support to Teachers (no/yes)	Odds Ratio
<i>Skills and technological preparedness</i>	
Online experience	1.78*
Electricity	.519
Computer or tablet	1.69
Internet	.772
Radio	2.54*
Television	1.30
Smartphone	.699
Feature phone	.891
<i>Available support and additional training</i>	
Received guidance to continue schooling	5.13***
Engaged in continuing professional development	1.54
<i>School characteristics</i>	
School location (urban)	.491
School of excellence (yes)	1.03
<i>School leader characteristics</i>	
Gender (female)	.908
Age 39-44	1.01
Age 46-65	.676
Disability (yes)	.783
Constant	.882 (1.65)
Observations	297
Pseudo R2	.1646

* p<0.10, ** p<0.05, *** p<0.01; robust standard errors in parentheses

Note: Age group reference category: 26-38

As for teachers' support of students, Table 6 shows that neither prior online experience nor access to technology significantly predicted a higher likelihood that teachers supported their students. Having received guidance on how to continue schooling and participating in CPD during the school closures were not significantly associated with teachers' support of students.

We found that teachers in schools of excellence were twice as likely as those in regular schools to support their students. The teachers in schools of excellence might have been better prepared and thus have had a higher degree of competence in using technological devices to teach and support students remotely, an advantage likely shared by their students. Our findings also revealed that younger teachers were more likely to support their students than their older counterparts.

Table 6: Logistic Regression Regarding STEM Teachers' Support of Students and Different Aspects of Preparedness

Dependent Variable: STEM Teacher Support to Students (no/yes)	Odds Ratio
<i>Skills and technological preparedness</i>	
Online experience	1.72
Electricity	.687
Computer or tablet	1.29
Internet	.740
Radio	1.80
Television	.768
Smartphone	1.35
Feature phone	.711
<i>Available support and additional training</i>	
Received guidance to continue schooling	1.52
Engaged in continuing professional development	.796
<i>School characteristics</i>	
School location (urban)	.783
School of excellence (yes)	2.21**
<i>School leader characteristics</i>	
Gender (female)	1.01
Age 39-44	.507**
Age 46-65	.489**
Disability (yes)	1.28
Bachelor's degree (yes)	1.25
Constant	.810 (.573)
Observations	296
Pseudo R2	.0738

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; robust standard errors in parentheses

Note: Age group reference category: 26-38

PREPAREDNESS FOR REOPENING SCHOOLS

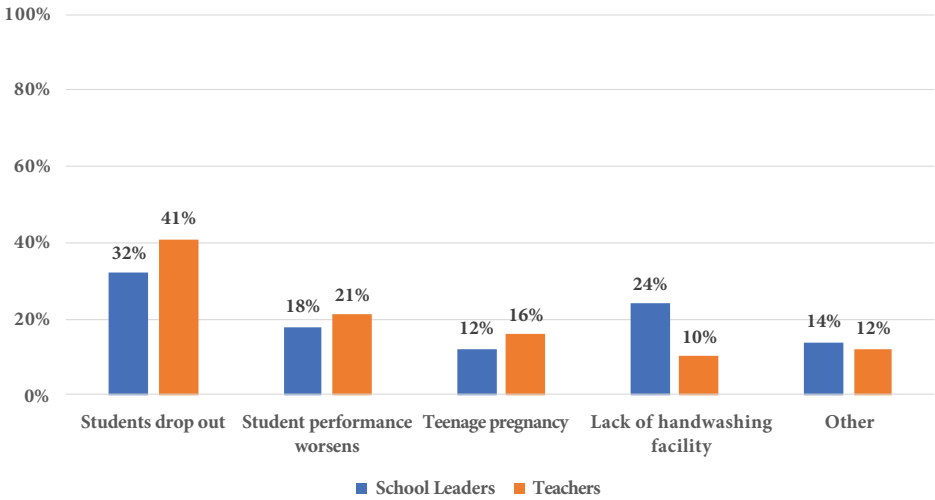
In this subsection, which addresses RQ3, we examine the schools' level of preparedness to reopen, including the opportunities and challenges they expected to encounter. Overall, 45 percent of school leaders believed their schools had the handwashing facilities (soap and clean water) needed to prevent the spread of COVID-19; 70 percent of those in schools of excellence indicated that they were so equipped, compared to 42 percent in the regular schools ($t=3.43$, $p<.001$). The REB's school reopening plan for Rwanda included constructing washing facilities in the public schools.

School leaders and teachers believed the best way to implement social distancing when schools reopened was to build additional classrooms. Acting on this recommendation, and in an effort to tackle possible overcrowding and the long distance some students had to travel to school, the ministry of education announced in June 2020 that it would construct 22,505 additional classrooms in Rwanda's 30 districts by September of that year (Ministry of Education 2020a; World Bank 2020). School leaders and teachers also suggested that classrooms be rearranged to keep students at a distance, such as putting chairs one meter apart and increasing the number available; offering half-day school shifts was another suggestion.

One-quarter of the school leaders reported having received training or official guidance in identifying early signs of COVID-19, the greater proportion of them in schools of excellence than in regular schools (33% versus 24%; $\chi^2(1) = 1.42$, $p = .233$). Rwanda's school reopening plan included the ministry of education and aid donors developing and implementing COVID-19 training for school staff members and students; this included taking measures to promote good hygiene, such as hanging posters to promote handwashing and spread awareness of COVID-19 symptoms.

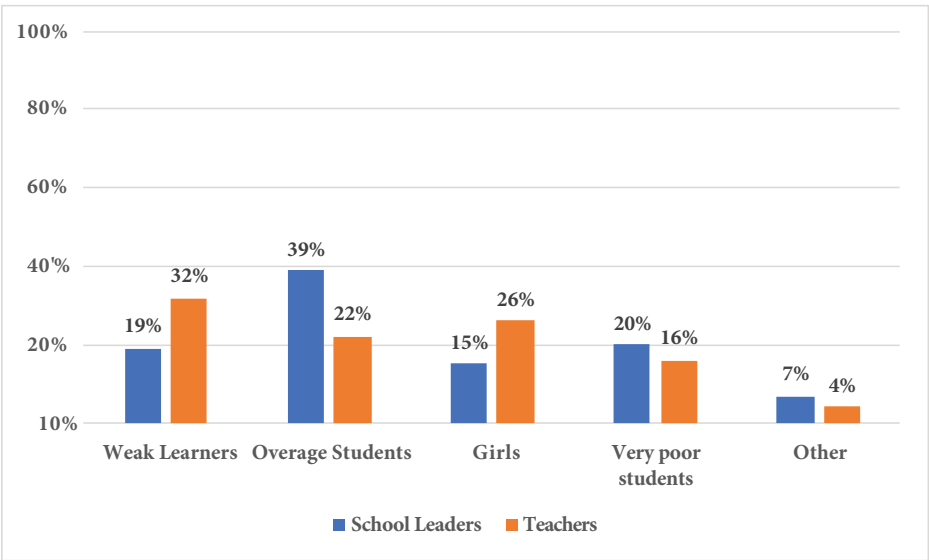
In total, 61 percent of school leaders reported having received government directives on implementing disease-prevention measures once schools reopened, and most also indicated that they would rely on these directives once schools reopened. Despite the health issues the ongoing pandemic would likely create when schools reopened, 92 percent reported that they had no nurse or health officer, and we could not find any information on the inclusion of health personnel to the schools.

Figure 3: Expected Challenges Declared by School Leaders and Teachers



The most common challenges school leaders and teachers said they anticipated included students dropping out, worsening student performance, and teenage pregnancy (Figure 3). In fact, 45 percent of the school leaders and 63 percent of the teachers believed that some students were not likely to return to school, in particular the overage students, weak learners, and girls (Figure 4).

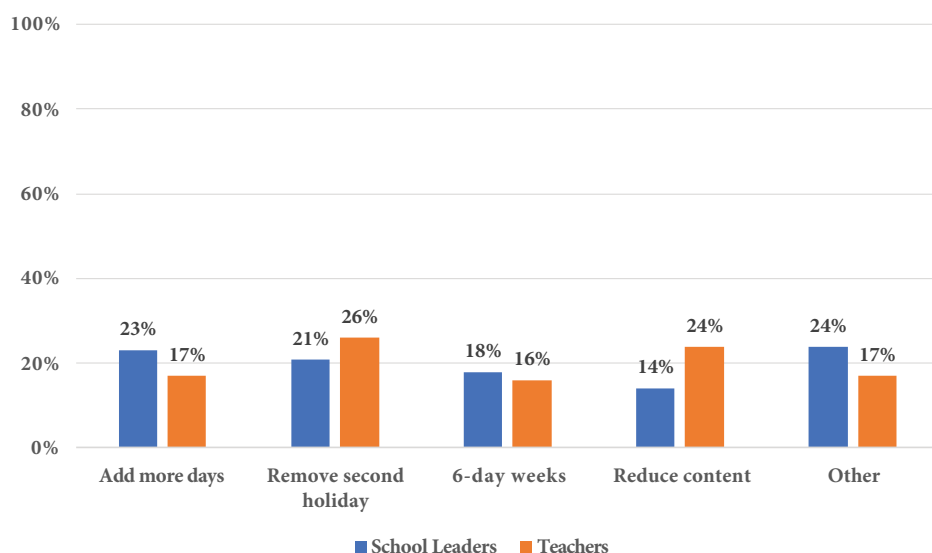
Figure 4: Groups of Students Most Likely to Drop Out, According to School Leaders and Teachers



School leaders and teachers alike believed that the school closures would affect two key areas: students' motivation to learn (44% and 39%, respectively) and student discipline (27% and 23%, respectively). The participants also believed that students' English proficiency and practical courses such as laboratory sessions would be affected negatively, although to a lesser extent. Moreover, approximately 58 percent of the school leaders and 59 percent of the teachers believed that students from low-income families benefitted the least from remote learning, which would likely affect their decision to continue their education once schools reopened. To address this problem, the REB reopening plan included procuring and distributing solar-powered radios and e-learning devices to lower-income families (Ministry of Education 2020b).

When we asked the research participants what actions schools could take to ensure that students would return to school, they suggested the sensitization of the local authorities, such as convincing parents to send their children back to school, allowing parents to stagger the payment of school fees, and having teachers follow up with students individually. Of the participants, 76 percent of school leaders and 68 percent of teachers felt that the sensitization of local authorities would be vital in bringing students back to school. They believed that the best strategy to catch up on missed school time would be to cancel or shorten the holidays and reduce the curriculum content (Figure 5).

Figure 5: Best Catch-Up Strategies According to School Leaders and Teachers



DISCUSSION AND CONCLUSION

Following the COVID-19-related school closures around the globe, many education systems opted to provide remote education. This required teachers and students to teach and learn remotely, a situation for which many of them were not prepared. In Rwanda, providing technology-mediated instruction was part of the government's approach to continuing education during the pandemic, which included providing guidance and training for teachers and school leaders on how to make this adjustment successfully. In this paper, we have drawn from knowledge mobilization theory, particularly with regard to how research evidence informed policy and practice in the context of school closures in Rwanda. We found a number of material (i.e., access to technology) and nonmaterial (i.e., training and guidance) resources that appear to be associated with school leaders' and teachers' level of preparedness to continue schooling and support education during the COVID-19 emergency.

The evidence suggests that school leaders had significantly more online experience than teachers, but that their experiences were mostly related to CPD rather than remote teaching. As pointed out in the literature, in cases where online teaching and learning are needed to continue schooling, they should be accompanied by relevant professional development that targets strengthening teaching (UNESCO 2020; Rubagiza et al. 2011; Selwyn 2020).

We also found that male teachers had more online experience than female teachers before the pandemic, which could be explained by the widely documented responsibility female teachers in sub-Saharan Africa have for both professional and household responsibilities (Collie 2021; Klapproth et al. 2020; Lockee 2021; Adarkwah 2021b). Thus, in line with prior research, our findings suggest that increasing online training for teachers would be beneficial, providing it is sufficiently flexible and culturally relevant to as many female teachers as possible (Lockee 2021; Jordan et al. 2021).

While most school leaders and teachers had access before the school closures to the kind of technology that can help to conduct remote schooling, including radios and cellphones, computers and tablets were less accessible. Access to devices was notably greater in the better resourced schools of excellence than in the regular schools, and male teachers had more access than female teachers. Our findings support previous studies in sub-Saharan Africa, which have found that differences in access to mobile phones, computers, and the internet favor males, including in education settings (OECD 2018; Gardner et al. 2018; Maphosa 2021). Limited access to technological resources, particularly computers, tablets, and the internet,

might be explained by the fact that these devices were provided to schools rather than to individual teachers during previous school reform efforts (Mutula 2003; Agyei 2021). Despite the prevalence of smartphones among Rwandan educators and in some secondary students' households (as also found by Dube 2020; GSMA 2015; Kimenyi et al. 2020; Adarkwah 2021b; Hallgarten et al. 2020), it is unlikely that smartphones alone can provide the support needed during school closures, as teachers need devices they can use to prepare lessons and design, download, and print materials (Van-Deursen and Van-Dijk 2019). Therefore, we argue that targeted access to computers or tablets would be beneficial, especially for female teachers and teachers from regular schools that are not well resourced.

Providing remote education that relies on technology requires that teachers be trained in using such resources for teaching and learning; however, our findings suggest that this type of CPD was limited during the school closures. We found further that fewer than half of the school leaders and less than one-third of the teachers in our sample received guidance on how to continue schooling during the school closures; a similar proportion engaged in CPD. These low numbers could indicate a lack of guidance and CPD on keeping education going, or that school leaders and teachers could not access it for other reasons, such as time constraints. Other studies indicate that female teachers had to cope with their professional responsibilities along with caregiving and family duties across different contexts, which might have prevented many of them from participating in CPD (Collie 2021; Klapproth et al. 2020). Thus, it would be beneficial for governments and other supporting organizations to provide CPD to those who could not participate during the school closures, with a particular focus on female teachers, who also are less likely than men to have had prior online experience.

Our exploration of school leaders' preparedness to support teachers indicates that they were more likely to do so during the school closures if they had prior online experience, had access to a radio, and had received guidance on continuing schooling. These findings resonate with recent literature on the vital role school leadership played in keeping schools engaged with their staff members and learning communities during the pandemic (Al-Fadala et al. 2021; Yorke et al. 2020). Notably, our study revealed a number of material and nonmaterial resources had helped prepare school leaders to support their teachers during the school closures. In this regard, the government of Rwanda and other stakeholders can play an important role during an emergency, for example, by providing the technological equipment and training that can enable school leaders to maintain communication with teachers, parents, and students.

When examining teachers' support of students during the school closures, we found that, while their skills and access to technology did not predict the level of support they provided, teachers from the better resourced schools of excellence were significantly more likely to support their students than those from the regular schools. This suggests that the regular schools need more direct attention to ensure that they have suitable facilities and, importantly, sufficient training to ensure that their teachers and students will be able to use devices for remote teaching and learning, should the need arise, as some have maintained in the broader literature (Hennessy et al. 2015; Selwyn 2020; Rubagiza et al. 2011). We also found that older teachers might require additional help to support students' learning using electronic and online means during the school closures. These results confirm previous research findings in Rwanda, which indicate that, since technologies such as computers were introduced in the secondary schools, the more experienced teachers who might also have administrative duties tended to use the electronic devices to fulfill these tasks instead of for teaching (Rubagiza et al. 2011). Evidence from the region posits that teachers' age is another barrier to their integrating online technologies into their teaching (Tedla 2012).

Only half of the school leaders in our study believed their schools were prepared to reopen after the COVID-19-related closures. They were concerned about the limited sanitation facilities, for example, and they thought they would need to build additional classrooms to allow the social distancing called for in the government plans (Ministry of Education 2020a; World Bank 2020). Moreover, few school leaders reported having received guidance on identifying early signs of COVID-19 and preventing the spread of the disease in the school community, which they considered vital to the schools' preparedness to reopen. Most schools also did not have nurses on site. While this is not uncommon in low- and lower-middle-income countries, the experience of COVID-19 raised the need to address this issue for future health emergencies (Al-Fadala et al. 2021; Vu and Savonitto 2020; Cohen et al. 2021; Rigall 2020). Apart from keeping the school community safe, having nurses on site might reduce the burden on teachers (Rose et al. 2021).

Both school leaders and teachers in Rwanda identified the overage students from poorer backgrounds and girls as being most at risk of dropping out; UNICEF and its global partners anticipated these threats at the onset of the pandemic (Bender 2020; UNICEF 2020; Miks and McIlwaine 2020). Our research further emphasizes that measures to contain COVID-19 while keeping vulnerable students in school are now needed more than ever. Given the uncertainty of whether and when remote teaching and learning are to happen again, governments and other decisionmakers could take action now so that overage poor students and girls are prioritized in

terms of giving them the technological resources and skills they need to keep engaged with their education, even from a distance.

Finally, our research highlights the need to provide female teachers with equal access to technology and training, and to pay particular attention to the school leaders and teachers working in the regular schools, which have more limited resources. Our research participants stressed a need for health and safety measures that not only prevent the further spread of the disease but help reduce the risks of dropouts, particularly among less well-resourced students. The findings from this study can inform decisions on how to prepare for future emergencies and help schools support their students during future closures, mitigate against adverse effects on their learning, and provide a safe learning space they can return to when circumstances allow (Vegas 2020; Azevedo et al. 2021; Kim et al. 2021; Spaul and van der Berg 2020; INEE 2020b). Knowledge mobilization theory indicates that policymakers, particularly those engaged with education reform, often must make decisions with limited resources, a lack expertise among their team members, and limited evidence on what might work best (Davies 2012). Our aim with this paper is to contribute evidence to support the Rwandan government's response to mitigate the effects on education of the COVID-19 emergency; above all, how to be fully prepared in terms of the material and nonmaterial resources that can help school leaders and teachers cope with future remote learning and education emergencies.

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IMPROVING SOCIAL-EMOTIONAL HEALTH: EXPANSION OF TEACHER AND STUDENT WELLBEING DURING THE COVID-19 CRISIS IN HONDURAS

CRAIG DAVIS AND GUSTAVO PÁYAN-LUNA

ABSTRACT

The Honduran education system was caught off guard when COVID-19 struck the country. With effectively no training or preparation and very few resources, educators across the country began providing distance learning classes in mid-March 2020. Overnight, educators faced significant obstacles in their quest to keep young people studying—teaching classes to students they could not see and engaging young people who lacked technology. Teachers and students began to experience social-emotional problems. This field note describes how the United States Agency for International Development’s Asegurando la Educación project transitioned in-person social and emotional learning (SEL) activities in 135 schools to provide virtual SEL support to hundreds of thousands of beneficiaries across the county. We outline the SEL interventions that contributed to the lowest national dropout rate in five years, and enrollment rates in Asegurando’s 135 schools some 5 percent higher than the national average. Finally, we believe this field note will contribute to the evidence base for how SEL can improve mental health and school retention during future crises.

INTRODUCTION

The Honduran education system was caught off guard when COVID-19 struck the country in mid-March 2020. In their quest to keep young people studying, educators across the country with effectively no training or preparation and very few resources began providing distance learning classes. Overnight, these educators had to deal with significant new obstacles, such as teaching classes to

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students they could not see and engaging students who lacked technology. Almost immediately, educators and students began suffering toxic levels of stress that negatively affected learning outcomes.

While the United States Agency for International Development's (USAID) project *Asegurando la Educación* (Ensuring Education) implemented effective, in-person social and emotional learning (SEL) activities, the project had never attempted remote implementation.¹ In an effort to transition the existing in-person SEL activities to distance learning formats that would meet the needs of 4,190 teachers and 84,376 students in 135 schools, the *Asegurando* team found cost-effective ways to provide SEL skills to hundreds of thousands of additional beneficiaries. Their efforts also contributed to the nation's highest retention rate in years.

This article contributes to the evidence base that describes how SEL can improve retention by reducing school communities' toxic stress during a pandemic, while also demonstrating how implementers can extend the reach of SEL models to a greater number of beneficiaries.

BACKGROUND

SEL EDUCATION AS A PROTECTIVE FACTOR

In emergency settings, SEL skills are critical tools for building resilience among children and youth. Research has demonstrated that SEL programs that promote students' emotional health can improve their coping strategies, academic performance, and completion and graduation rates. These programs, which also benefit teachers, can improve student attendance, engagement, and motivation. The resulting improvements in faculty and student mental health can lower their stress, anxiety, and depression (INEE 2016, 10-13; INEE 2018).

In 2017, *Asegurando* began working in 14 schools in the Honduran cities with the highest rates of violence and crime: Tegucigalpa, San Pedro Sula, Choloma, Tela, and La Ceiba. By 2019, the project had expanded into 135 schools with high rates of school-based violence—gender-based violence, bullying, drug trafficking, substance abuse, self-harm, and gang recruitment and intimidation—with the goal of strengthening education's role as a protective factor in students' lives.

¹ This article uses the term "social and emotional learning skills" to refer to particular abilities and competencies that are often identified by interchangeable terms such as "psycho-social skills," "social emotional skills," and "life skills," among others. See, for example, Yorke et al. (2021) and INEE (2016, 13).

In the face of this array of violent challenges, the project established its Safe Learning Spaces program with a foundation of dedicated educators who served as key social referents for young people (López, Ferrer, and Gutiérrez 2009). Findings from Asegurando's baseline School Safety Study (Asegurando la Educación 2018, 2019) substantiated the premise that education is a protective factor. Nearly 94 percent of the more than 11,400 students surveyed reported that they always or almost always felt safe in the presence of their teachers. Within the conceptual framework of child protection and education in emergencies, the project sought to consolidate the school as a safe space by providing physical, psychosocial, and cognitive protection; promoting a sense of hope and stability; offering access to social services; promoting conflict resolution; supporting gender equity and girls' empowerment; and enhancing wellbeing (INEE 2016, 5).

SEL played a central role in the transformation of school campuses from loci of violence to safe learning spaces. SEL helps to provide young people with many advantages, including better general mental and physical health, constructive interpersonal relationships, improved academic performance, and reduced at-risk behavior, such as substance abuse and criminal activity (Ortiz et al. 2020, 7). When students encounter violent environments in and out of school, SEL "can help children respond to difficult and unexpected situations in a calm and emotionally regulated manner" (Yorke et al. 2021, 4). Students with greater SEL skills also enjoy lower levels of stress and perform better academically (Edel Navarro 2003; López, Ferrer, and Gutiérrez 2009; Rodríguez-Leonardo and Peralta 2020).

ASEGURANDO'S SAFE LEARNING SPACES PROGRAM: PREPANDEMIC

In 2017, Asegurando gradually began improving school safety in order to boost enrollment and retention for the 84,376 students in 135 schools. The project implemented activities in the schools and cultivated in-person, professional relationships with principals, teachers, students, and parents/caregivers. Fifteen field staff members oversaw Asegurando's Safe Learning Spaces program, a package of 14 mutually reinforcing in-person interventions aimed at mitigating violence and creating healthier education environments. By the end of the 2019 academic year, 94 percent of participating school principals reported that their schools were safer than when the project started (Asegurando la Educación 2020).

ASEGURANDO'S SEL RESPONSE: PREPANDEMIC

Three key SEL strategies played a central role in the 14 interventions to create safer, healthier school campuses. First, the Teacher Wellbeing program focused on self-care and psychological first aid to reduce educator stress that was negatively affecting their students' motivation, wellbeing, and academic performance (Ramberg et al. 2020). Next, the sports-based SEL program fortified the five core competencies outlined in the Collaborative for Academic, Social, and Emotional Learning framework: self-management, self-awareness, social awareness, relationship skills, and responsible decisionmaking (CASEL 2020). Finally, Staying Positive, a 16-week program based on cognitive behavioral therapy, helped vulnerable youth improve their behavioral and education outcomes, self-awareness, self-control, and decisionmaking. In fact, findings from a prepandemic study suggested that, after completing Staying Positive, 71 percent of students became more motivated toward their studies, 65 percent exhibited improved behavior, and 59 percent increased their academic performance (Asegurando 2019). Educators' reduced tension, fewer fights, and improved interpersonal interactions contributed to the success of the program. Some 83 percent of Staying Positive students completed the school year, and 69 percent of those re-enrolled in 2020 (Asegurando la Educación 2020). Asegurando also developed the Executive Leadership Program for Principals, a program centered on principals that enabled them to experience basic SEL concepts firsthand.

COVID-19 AFFECTS STUDENT WELLBEING

In early 2020, COVID-19 began to have a negative effect on the mental health of students across the globe. Young people suffered from anxiety, frustration, depression, social isolation, and uncertainty about the future “at critical points in their emotional development” (Rodriguez-Leonardo and Peralta 2020; University of Notre Dame 2020, 6-7; United Nations 2020, 2). A study that analyzed the effects of this confinement in Italy and Spain found that 77 percent of parents reported that their children had difficulty concentrating, 39 percent demonstrated irritability and restlessness, 38 percent nervousness, and 31 percent had feelings of loneliness (United Nations 2020, 12). “The main sources of distress” for adolescents were “concerns about their family’s health, school and university closures, loss of routine and loss of social connection” (13). The University of Notre Dame (2020, 6-7) reported emotional health concerns about educators, students, and parents in Colombia very early in the pandemic.

Indeed, Honduran educators in the Asegurando schools reported an increase in child poverty, domestic and sexual abuse, emotional stress, and dropouts.² The suspension of in-person classes almost certainly left many students feeling the loss of education as a protective factor. No longer was the foundational figure of the teacher in the classroom serving as the central stabilizing social-emotional force as it had been before the pandemic. Like most of the rest of the world, Honduran students, teachers, and families were forced to navigate uncharted territory.

ASEGURANDO SEL ACTIVITIES: PANDEMIC

For the education community in Honduras, the COVID-19 crisis presented an emergency every bit as real and threatening as school-based violence; isolation, uncertainty, domestic violence, and greater economic strain all contributed to toxic stress. Asegurando and the country's ministry of education (MOE) launched a set of SEL activities specifically designed to reduce toxic stress and improve the learning outcomes of attendance, performance, and retention. By the summer of 2020, the project had undertaken several virtual SEL activities focused on helping children and young people stay in school, continue to learn, and advance toward graduation. Asegurando's key SEL interventions for teachers, students, and families became the foundation on which the MOE established SEL as one of the three essential pillars in its June 2020 report, *Safe Return to School in the Wake of COVID-19 National Strategy* (Secretaría de Educación de Honduras 2020). Like the rest of the education system, Asegurando had to “build the plane while flying,” which led to many new lessons learned. One of the earliest lessons had to do with providing online programming. On April 6, 2020—a mere few weeks after the lockdown went into effect—Asegurando, with outreach support from USAID and the MOE, launched its Securing Your Wellbeing campaign with a Facebook Live event titled, Facing the Changes with Self-Care. Unfortunately, the live event froze up a few minutes after the session kicked off, due to the low internet bandwidth in the home of the staff member facilitating it. As a result, the team started using Facebook Premieres, which are prerecorded sessions that incorporate live chats with the audience.

2 To monitor the evolving condition of educators and learners, including families' livelihoods, mental health, safety, school attendance, and learning, Asegurando conducted rapid surveys with 135 school principals via WhatsApp (with a 2/3 response rate).

IMPROVING TEACHER AND STUDENT WELLBEING IN HONDURAS DURING COVID-19

TEACHER WELLBEING

At the outset of COVID-19, increased responsibilities and toxic stress began taking their toll on educators in many countries, including Peru and Colombia (University of Notre Dame, Peru, 5-6; University of Notre Dame, Colombia 6-7). Teacher wellbeing was found to be essential to the healthy recovery of education communities (Chile 2020). As a result, Asegurando adapted the in-person teacher wellbeing program in Honduras to a virtual program that prioritized restorative practices (Secretaria de Educación de Honduras 2020, 22-23). It included a series of seven webinars and twelve short videos intended to empower educators to reconnect and rebuild eroded relationships, and to promote self-care and resilience in response to unhealthy levels of fear, loss, isolation, and anxiety. The team facilitated dozens of restorative discussion circles for educators, including one session for a vice minister of education and her cabinet. The successes achieved through these circles in restoring relationships and helping the education community recognize and talk about grievances sometimes came at the expense of Asegurando team members' own wellbeing. This was particularly true for team members who facilitated a large number of the sessions and/or were going through personal challenges themselves. The Asegurando leadership responded with corrective strategies, such as promoting self-care among staff members and training teachers to conduct the circles.

STUDENT WELLBEING

The need to strengthen SEL among students emerged as a priority early in the pandemic in many countries. For example, a study of 205 students ages 12 to 19 from 9 states in Mexico conducted during COVID-19 shelter-in-place measures demonstrated a correlation between higher levels of social-emotional skills and lower levels of stress among middle and high school students (Rodriguez-Leonardo and Peralta 2020). In Peru, UNESCO's Horizontes program responded by strengthening children's SEL, giving special attention to the needs of adolescents (University of Notre Dame 2020; UNESCO 2018).

In Honduras, Asegurando adapted key SEL components of its in-person, sports-based SEL and Staying Positive programs to produce 25 short videos designed to promote youth SEL as a way to improve retention. Called Influencer 504, the program invites youth to become the "best version of themselves."³ The MOE broadcast the videos on their official TV channels and social media platforms, which exponentially expanded the program's reach almost overnight. The project

3 Influencer 504 appealed to the young generation familiar with the term "influencer," referring to social media figures, and "504" as Honduras' international calling code.

also posted the videos on YouTube for easy access and established an Influencer 504 Ambassadors program with the MOE that identified a youth representative to promote SEL in each of the 18 departments (or states).

Naturally, many vulnerable students required additional one-on-one attention, such as those suffering from abuse, discouraged to the point of dropping out, or forced into exploitative labor. Some schools in Colombia scheduled appointments for psychological support through Facebook using Google Forms (University of Notre Dame 2020, 4). In Honduras, Asegurando adapted foundational elements of its in-person Staying Positive program into a youth and family telecounseling program operated by school counselors. An important element of the MOE's strategy (Secretaria de Educación de Honduras 2020, 24) was the use of telecounseling via phone and WhatsApp to work with youth on the brink of dropping out and their families to find solutions to keep the students in school. Counselors made referrals for psychological or social support when appropriate, helped adapt schedules, and offered other support. Perhaps more importantly, as the project team had learned in 2019, educators' most effective tool sometimes was listening. "When educators listen, at-risk students and families tend to respond more positively" (Asegurando la Educación 2020, 13). The telecounseling program, although it reached a smaller number of youth, proved effective in keeping vulnerable youth engaged and studying.

Younger students needed special attention. The Chilean MOE broadcast programs on Canal TV Educa Chile to help children ages two to eight confront emotions of shame, happiness, anger, and fear (Ministerio de Educación 2020). In Honduras, Asegurando incorporated Calming Corners, an SEL activity for younger children, into the MOE's strategy and expanded the intervention into shelters when the twin hurricanes Eta and Iota struck Honduras in November 2020 (Secretaria de Educación de Honduras 2020, 22). Throughout the 2021 academic year, Asegurando continued providing support to youngsters in hurricane-affected areas.

CASTING A WIDER NET

Asegurando had the most thorough impact when the team could engage educators, students, and parents in person and on a regular basis. The concentrated efforts to implement all 14 initiatives in a school will naturally yield the greatest results. Spending hours each day consulting, offering technical advice, problem-solving, and providing individual attention is preferable to a shorter, virtual engagement.

IMPROVING TEACHER AND STUDENT WELLBEING IN HONDURAS DURING COVID-19

Moreover, an eight-hour in-person workshop is likely to produce better results than a one-hour webinar.

However, switching from the delivery of in-person SEL activities to virtual platforms beginning in April 2020 offered an unprecedented advantage: access to a much larger target group. Before the pandemic, the project might reach dozens of schools in a region, or at best 135 schools across the five selected cities. After March 2020, seven TV stations across the country broadcast Asegurando's 30-second public service announcements. Whereas the project had limited implementation in five cities across three departments before the pandemic, by late summer 2020, Asegurando was reaching 198 cities in all 18 departments. Before COVID-19, the project implemented SEL activities in 135 schools in three of the country's departments, with a total enrollment of 85,000; by the middle of the 2021 academic year, SEL activities were reaching nearly 8,630 schools with a total enrollment of 1,112,634. While the instruction was not as impactful as in-person attention, the greater reach of Asegurando's SEL programming was a catalyst for introducing SEL concepts to education communities that had never even heard the term or received USAID education support. Suddenly, SEL became a priority for thousands of schools and their principals, teachers, learners, and families.

The in-person Staying Positive program reached 200 participants in 2019; in contrast, the three youth and family telecounseling webinars reached 3,600 counselors from 1,451 schools, with a total enrollment of 478,100 students.

Asegurando's in-person, sports-based SEL program, which was conducted in physical education classes that reached 6,240 students in 107 schools in three departments prior to the pandemic, evolved into the Influencer 504 program that had reached 500,000 viewers through national education TV channels and YouTube by the end of October 2021.

The Securing Your Wellbeing awareness campaign gradually expanded the circulation of SEL videos, messages, graphics, and posts to reach over six million people, including international audiences, through eighteen radio stations, seven TV stations, Facebook, Twitter, Instagram, and YouTube (Asegurando la Educación 2021).

RESULTS

The findings from a rapid survey of 101 principals and 382 teachers from the 135 schools participating in Asegurando, which was conducted in October 2021, suggest that SEL programming has served to reduce toxic stress, improve communication, resolve internal conflicts, and improve the retention of at-risk students. Some 91.1 percent of the principals and 92.4 percent of the teachers either agreed or strongly agreed that the Teacher Wellbeing and Restorative Circles programs had helped reduce toxic stress levels, while 90.1 percent of the principals and 92.2 percent of the teachers either agreed or strongly agreed that these interventions improved communication and helped to resolve internal conflicts in the schools. Equally important, 88.1 percent of the principals and 88.5 percent of the teachers either agreed or strongly agreed that these two SEL activities helped to reduce the school dropout rates of at-risk students.

When asked about SEL for students, 92.2 percent of the principals and 94 percent of the teachers either agreed or strongly agreed that, in most cases, the Influencer 504 SEL program helped improve the mental health of youth. In addition, 90.3 percent of the principals and 89.4 percent of the teachers agreed or strongly agreed that the program was helping to reduce the dropout rate of at-risk students, and 92.2 percent of the principals and 93.7 percent of the teachers agreed or strongly agreed that Influencer 504 promoted leadership and empowered youths to become a positive influence on their peers.

91 percent of the principals and 92.5 percent of the teachers either agreed or strongly agreed that Calming Corners helped reduce toxic stress in younger children, while 84.7 percent of the principals and 87.8 percent of the teachers either agreed or strongly agreed that the activity contributed to a reduction in the number of younger children who abandoned school (Asegurando la Educación 2021).

CONCLUSION

There is no substitute for in-person attention, long training hours, interaction with more than one student at a time, and face-to-face engagement. Prior to the COVID-19 pandemic, the fact that Asegurando could concentrate dedicated team members inside the 135 schools to implement all or part of the package of 14 interventions that comprise the Safe Learning Spaces program ensured greater impact.

IMPROVING TEACHER AND STUDENT WELLBEING IN HONDURAS DURING COVID-19

When Asegurando “went virtual” with its 10-minute Influencer 504 video on YouTube, it could not reach the same level of interaction, engagement, and oversight that the in-person sports-based SEL session had before the pandemic. However, the project’s virtual SEL programs did reach millions of teachers, students, and parents during the pandemic and almost certainly helped to keep a great number of young people studying and curbed dropout rates. Preliminary data for 2020 show that the dropout rate was much lower than predicted, about 2.3 percent nationwide, compared to 5.39 percent a year earlier; in fact, this was the lowest rate in five years (Ministry of Education 2021). If the final official figures remain consistent with the preliminary data, then the repercussions of COVID-19—travel restrictions, closed borders, a lack of jobs, etc.—were likely contributing factors. However, never before in the history of Honduras had the education ministry and program implementers, like Asegurando, invested so heavily in awareness-raising, multimedia SEL courses, and other activities that facilitated retention.

In early 2021, when countries in the region lifted travel restrictions and the Honduran economy began reopening, a large number of young people either refused to enroll in school, stopped attending, or dropped out altogether to pursue other options than during the first year of the pandemic. However, enrollment rates in Asegurando’s 135 schools remained high, 101.06 percent, compared to 95.51 percent for the rest of the country (Ministry of Education 2021)⁴

Interventions related to teacher and student wellbeing were, of course, not the only ones that boosted retention. Asegurando, other USAID implementing partners, the MOE, and many stakeholders mobilized resources, made donations, and found solutions to keep young people studying.

Finally, the COVID pandemic created the need for an entirely new way of reaching educators and students. Virtual capacity-building, webinars, and social media campaigns that emerged during the pandemic have demolished barriers and opened minds to alternative ways to engage beneficiaries. Many of us in the development community will never return to the old conceptualization of program design and targets. While there are advantages to focusing resources on in-person activities, which will likely remain a large part of future program designs, we will balance that approach with distance-learning activities, social media, and multimedia events that reach much larger audiences.

4 The figures are based on most recent enrollment data. The 100 percent target is based on an analysis of the previous five years’ enrollment figures, 2015-2019.

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THE SANDBOX MODEL: A NOVEL APPROACH TO ITERATING WHILE IMPLEMENTING AN EMERGENCY EDUCATION PROGRAM IN LEBANON DURING THE COVID-19 PANDEMIC

MICHÈLE BOUJIKIAN, ALICE CARTER, AND KATY JORDAN

ABSTRACT

Jusoor's Refugee Education Program helps Syrian refugee children living in Lebanon integrate back into formal schooling. When schools closed due to the COVID-19 pandemic, the refugee program adapted to distance learning by developing Azima, a novel program that used WhatsApp to enable children to keep learning. Azima had to respond immediately to the emergency context while maintaining high education standards, and it also needed to find an effective way to test and refine its content quickly. To do this, the Azima program adopted an innovative experimental approach called a sandbox. A sandbox model operates in rapid iterative cycles and uses multiple methods to quickly test a program's assumptions about how it will meet its goals. In this field note, we use Azima as a case study to report on our experience of applying the sandbox model. We reflect on the benefits and limitations of this novel approach in supporting the use of education technology in a crisis situation.

INTRODUCTION

The outbreak of the COVID-19 pandemic in March 2020 had consequences that reached far beyond the health sector. Education was hit particularly hard, with school closures being one of the most widely implemented policy responses (Hale et al. 2021). According to the World Bank (2021), “COVID-19 has created the worst crisis to education and learning in a century,” disrupting school-based education

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for 1.6 billion children worldwide. Education technology (ed tech) solutions were often at the center of rapid responses to this crisis, as many governments turned to remote learning options. Devices replaced classrooms, starting a new education modality that children, teachers, and parents had to adjust to quickly.

Due to the scale and speed of the emergency, program evaluation was often deprioritized. The emergency context also exposed some existing challenges in ed tech, such as inappropriate evaluation techniques and a lack of accessible and understandable research (King et al. 2016; Cukurova, Luckin, and Clark-Wilson 2019). There clearly was a need for evaluation and impact studies that would generate evidence rapidly enough for practitioners to use when making decisions in situations where they were asked to act immediately (Tauson and Stannard 2018).

In this field note, we introduce the sandbox model, which embeds research and evidence-informed decisionmaking into program implementation. It uses rapid iterative cycles to evaluate an intervention and triangulate understanding of what is working and where barriers persist throughout the implementation. We present the sandbox model through a case study of Azima, a program of Jusoor, which used WhatsApp to support refugee education in Lebanon during the COVID-19 emergency.¹ In the next section, we discuss the rationale behind the need to use different evaluation and research approaches in ed tech and introduce the sandbox methodology. We then demonstrate how the components of the sandbox model were concretely applied in the context of Azima. Finally, we reflect on our experience of carrying out a sandbox approach and the usefulness of this approach for making rapid decisions, and for the education in emergencies field in particular.

THE NEED TO TAKE A DIFFERENT APPROACH

Education practitioners aim to find the most cost-effective interventions to improve learning outcomes. Historically, this has meant relying on costly and time-consuming evaluation approaches. One option is randomized controlled trials, which are regarded as the gold standard for generating causal evidence. However, decisionmakers—particularly those in low-resource, highly uncertain settings—are increasingly seeking other forms of research appropriate to these contexts (Crawford et al. 2021).

¹ Jusoor is an international nongovernmental organization whose mission is stated as “Investing in Syria’s Children & Youth for a Better Tomorrow.”

Furthermore, there often is a disconnect between the academic world that produces evidence and the practitioners who are expected to act on it. Evidence generated by evaluation studies that have been conducted by researchers can feel inaccessible to practitioners, which results in its limited use for decisionmaking (Hennessy et al. 2021). Evaluations also commonly occur at the end of a project and thus assess the impact of the activities concluded, rather than intending to inform future iterations of the intervention.

With this in mind, we argue for the need to consider methodologies that are better suited to supporting ed tech implementers. Best practice in the digital realm tends to encourage practitioners themselves to take the lead in generating evidence, to work in multidisciplinary teams, and to conduct formative assessments that will inform future iterations effectively and in a timely manner. These methods and approaches can be borrowed and adapted for the education sector.

THE SANDBOX METHODOLOGY

The term “sandbox” has been used for decades in software engineering to describe a space that enables developers to test new code before rolling it out. The concept also has been used in other sectors, including by the EdTech Hub, which has developed the sandbox methodology to focus on its application in ed tech initiatives (Rahman et al. 2021).²

The sandbox method creates a space in which interventions operating in uncertain conditions can be tested and iterated. By using a combination of research and design methods, the approach enables its implementers to put their findings into practice and then to re-evaluate them quickly and iteratively. To enable learning, adapting, and scaling to take place throughout implementation, the sandbox combines elements from backcasting (Robinson 1990), lean start-up (Chang 2019), user-centered design, agile methodology (Kaiser 2019), and behavioral innovation (Simpson 2019).

The key steps in the sandbox method are as follows:

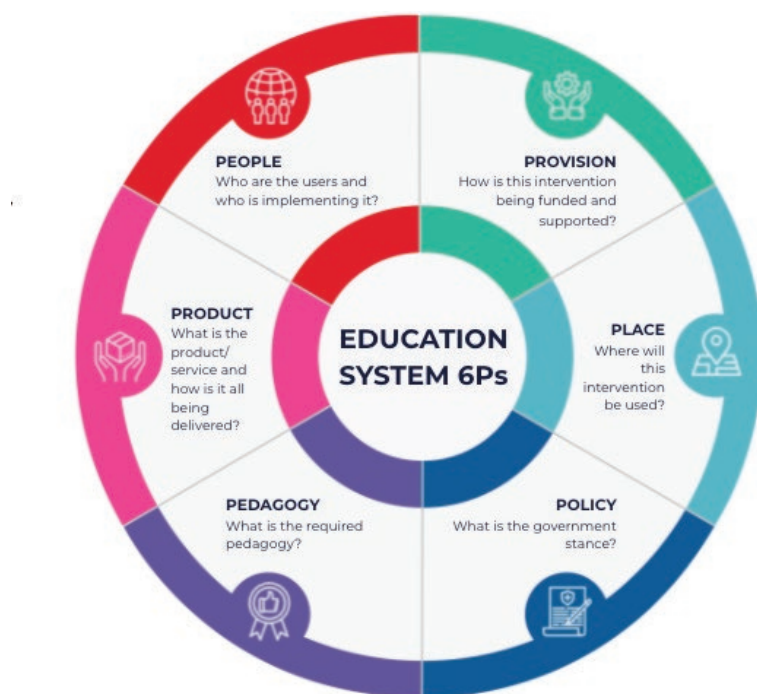
1. Articulate the desired impact of the intervention and surface critical assumptions

² The EdTech Hub is a global research partnership that works to generate evidence for decisionmaking in ed tech.

The primary focus of the sandbox model is to address a problem and have an impact, rather than to assess a product or solution. To do this, a team of stakeholders must first articulate a hypothesis for the intervention; this is a backcasting methodology that orients the team's effort around a desired future, from which it then works backwards toward the current state, rather than making marginal gains forward. The team determines the hypothesis or “big idea” and then considers what must be true for the idea to work. This can be done using a design hypothesis format—“If we...then...”—or by creating a theory of change for the intervention. The next step in the sandbox approach is to collect evidence to validate (or invalidate) the assumptions underpinning the hypothesis. An assumption is something that needs to be true in order for the intervention to work (Chang 2019).

Education technology exists within complex and often fragmented systems. To account for this, the EdTech Hub proposes a model that goes beyond testing the technical components of an intervention and considers the broader system of factors that need to work together to have an impact at scale. By using the 6Ps Framework—people, product, pedagogy, policy, place, and provision (Plaut et al. 2020)—practitioners are encouraged to identify assumptions across all aspects of the education system that might affect the intervention (see Figure 1).

Figure 1: The 6Ps: A Framework for Considering the Education System



2. Design lean experiments to test the assumptions

The assumptions are prioritized from most to least critical; the most critical assumptions are those that would undermine the entire project if proved invalid. Experiments are then designed to test the most critical assumptions. An experiment is the smallest batch of work that can be done to get informative feedback to iterate an intervention (Murray and Ma 2015). This approach is drawn from the lean method, an approach to new product development that prioritizes feedback loops and accelerates the pace of learning about what works (Chang 2019). Practitioners themselves design and conduct the experiments and draw from all relevant data-collection methods: qualitative or quantitative, primary or secondary, descriptive or experimental. Experiments vary in length. At the start of a sandbox, when uncertainty about the merits of an idea is still high, experiments typically are short and inexpensive; the financial and time investment increases in keeping with growing confidence in the validity of the assumptions and the efficacy of the intervention. Finally, experiments are designed to generate measurable and clear insights into people's real behavior rather than their opinions or claims.

3. Reflect, learn, and iterate at regular intervals

The sandbox model centers on the importance of iteration and adaptation throughout the implementation process. The approach includes formal moments during the program that allow practitioners to focus on learning and make space to change plans. Experiments are packaged into “sprints,” a term used in agile methodologies to describe “a short, time-boxed period when a scrum team works to complete a set amount of work” (Rehkopf 2022).³ Between each sprint, the team reflects on what has been learned and uses the information to review and redesign the next sprint.

THE AZIMA SANDBOX IN PRACTICE

Jusoor has supported out-of-school Syrian refugee children living in Lebanon since 2013 through its Refugee Education Program, with the aim of getting them back into formal schooling.⁴ Lebanon is the country with the world's highest number of refugees per capita (UNHCR 2022). Since its onset in 2011-2012, the refugee crisis has been synonymous with an education crisis. United Nations data for the last pre-COVID academic year (2018-2019) put the number of school-

³ A scrum team designates practices that emphasize daily communication and a flexible reassessment of plans.

⁴ To date, Jusoor has enrolled a total of 4,631 Syrian refugee children in its schools.

age Syrian refugees at 666,491; of these, only 42 percent were attending school (Norwegian Refugee Council 2020, 4).

Despite attempts to provide access to education for Syrian refugees, the Lebanese public school system has struggled to absorb the substantial number of school-age children. Through the provision of nonformal education, nongovernmental organizations, including Jusoor, have played an important role in ensuring that refugee children do not become part of a lost generation.

Jusoor's Refugee Education Program is typically facilitated through three education centers. However, following the outbreak of the COVID-19 pandemic in March 2020, Jusoor switched to online learning by creating a new program that used WhatsApp. This new program was called Azima, which means "determination" in Arabic, referring to the children's determination to continue learning.

The Azima program was developed quickly and it relied on teachers to send video lessons and materials to their students via WhatsApp. Students were sent homework to complete and return for correction and feedback. Teachers recorded attendance through completed homework submissions. The goal was to preserve children's current learning opportunities and their future chance to receive quality education. Overall, the initial WhatsApp model appeared to work, but some students' attendance was poor, which suggests that they had difficulty engaging with the program.

Jusoor and the EdTech Hub formed a partnership to test and refine Azima using the sandbox method while responding to the urgency of the crisis. The partners began by articulating the following hypothesis: "If we provide lessons and assignments via WhatsApp to out-of-school refugee children at the primary level and engage their caregivers, then children will be able to continue learning and will have a greater chance of accessing formal education in the future."

The assumptions were formulated and the experiments were designed through a series of joint workshops between Jusoor and the EdTech Hub. The organizations' staff used the 6Ps Audit Tool (EdTech Hub 2022) to reflect on each element of the education system and to assess the level of certainty in the different parts of the intervention. They articulated assumptions by taking into account answers to questions related to the 6Ps, the intended goal of the program, and the team's observations and results from Azima. Each component of the 6Ps Framework was associated with critical assumptions, which workshop participants ranked from the most to the least critical. The most critical were prioritized for experiments that were designed to test each of them. Developing the experiments relied on

a combination of the field and research knowledge of Jusoor's staff and the innovation expertise of the EdTech Hub team.

The full set of six experiments and how they map onto critical assumptions within the 6Ps Framework is shown in Table 1.

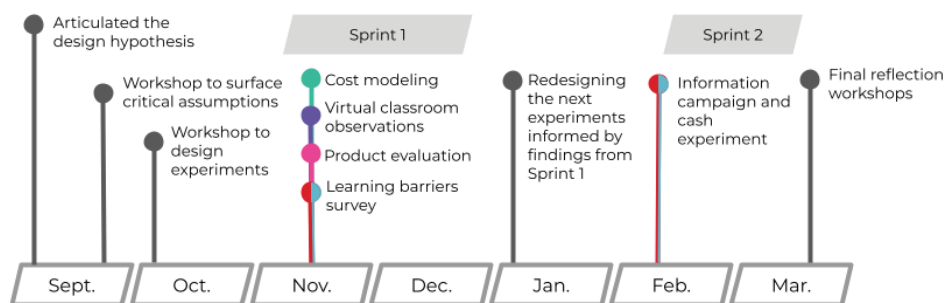
Table 1: Overview of the Critical Assumptions, Experiments, and Research Methods

6Ps Framework	Assumptions	Experiments and Research Methods
Pedagogy	Teachers are technically and pedagogically equipped to deliver remote learning, including curating and creating content themselves that will have maximum impact	Understanding teachers' practices in action through classroom observation and evaluation
Product	WhatsApp is the best platform for online learning for our beneficiaries in the context of school closures, or for out-of-school children	Testing the suitability of WhatsApp, explored through a tool criteria evaluation
People	Parents are interested in supporting the education of their children remotely if given the resources and support	Testing how to alleviate barriers to engagement for learners, which involved conducting a survey of nonengaged students and their caregivers and testing two interventions: a short information campaign and a one-off cash grant
Place		
Provision	WhatsApp, in combination with additional support, can be used cost-effectively to ensure learning outcomes across all groups	Modeling the costs of the program by applying cost-effectiveness modeling tools

Note: The sixth P, policy, was considered out of scope, given the timing of this sandbox.

The Azima sandbox extended from September 2020 to March 2021 and included two sprints (Figure 2).

Figure 2: Timeline Overview of Activities Undertaken during the Sandbox



Sprint 1 focused on exploring the assumptions across the 6Ps Framework to understand which had the highest level of uncertainty and where it would be most useful to invest additional resources in further investigation.

SPRINT 1 EXPERIMENTS

EXPERIMENT 1: PROVISION—COST MODELING

Method: We collected data on the program’s direct costs and expenditures, as well as projected costs for alternative models, in order to weigh the costs of different interventions (e.g., take-home learning supplies, cash, internet, devices, internet and devices, and information campaign interventions).⁵

Result: The highest costs were data plans and teachers’ salaries, both essential to the model’s effectiveness, thus only limited savings could be achieved without further exploration of the different needs and elements of the Azima program. Additional work would be needed to understand how to reduce costs in order to attract donors while maintaining student engagement and learning.

EXPERIMENT 2: PEDAGOGY—VIRTUAL CLASSROOM OBSERVATIONS

Method: The WhatsApp classroom group was monitored over the course of one week. Each of Jusoor’s 29 teachers was observed by two evaluators, one each from the sandbox team and the Jusoor staff. The evaluators used a customized classroom observation tool based on the World Bank’s (2019) *Teach Primary* tool. The scores and evaluators’ notes were compared to the results of the previous academic year (when distance learning started) to assess the progress achieved.

5 “Internet” refers to the provision of an internet-enabled data plan only. “Devices” refers to the provision of device hardware. “Internet and devices” means providing both the data plan and device hardware.

Result: An overall improvement was observed. 14 teachers were rated “Good,” 11 obtained a “Very good” score, and 4 teachers were rated “Excellent,” which suggests that the teachers were applying the training they received. This provided evidence that, with adequate training and consistent follow-up, it is possible to build teachers’ capacity to transition to remote learning.

EXPERIMENT 3: PRODUCT—TESTING THE SUITABILITY OF WHATSAPP

Method: WhatsApp was chosen as the distance learning platform because of its prevalence and familiarity among the refugee community in Lebanon. To assess its broader suitability for the program, a set of desirable criteria was developed based on existing research (Jordan and Mitchell 2020) and applied by three evaluators from the sandbox team. The criteria focused on function—what we wanted the ideal tool to do—and on contextual factors—what context-specific factors might affect the choice of a tool. A total of 23 criteria were listed and evaluated to determine whether or not Azima’s current education provision met them (Khalayleh 2021).

Result: Most of the criteria were rated as being met by Azima’s current provision; only two were unachievable. This indicated that WhatsApp could be used to implement distance learning and that most improvements could be explored without changing the tool. However, it also suggested that there was a role for complementary tools to fill some of the gaps, such as Google Drive for organizing content.

EXPERIMENT 4: PEOPLE AND PLACE—LEARNING BARRIERS SURVEY

Method: To understand the reasons behind some students’ nonengagement, a survey targeted students who were registered in the Azima program but not participating (nonparticipation was defined as a participation rate of 0 percent six weeks into the program) and their caregivers. The survey targeted all three locations where Jusoor operates, and we were able to survey all nonparticipating students (n=196).

Result: Access to devices was identified as the biggest barrier. While 88 percent of refugee families had access to a smartphone, this did not always translate into participation. The (generally) one device many families could afford was needed by the breadwinner to meet their priority of securing work or responding to work requirements.

The Sprint 1 experiments generated evidence that served to validate the program's assumptions about pedagogy, product, and provision. On the other hand, the survey informed the decision to further explore our assumptions about people and place, and to understand how to alleviate barriers to children's engagement most effectively. Two experiments were designed in a second sprint to test the assumption that parents are interested in supporting their children's education and to understand what resources and support would enable them to do so.

SPRINT 2 EXPERIMENTS

EXPERIMENT 5: PEOPLE AND PLACE—INFORMATION CAMPAIGN

Method: A tailored information campaign was designed to send tips to parents on practical things they could do to help their children learn at home. A series of weekly messages was sent via videos and voice notes over the course of four weeks.

Result: The information campaign targeted 916 families (all families of Jusoor's students), yet only 66 percent ($n=602$) interacted with its content. Of those, 65 percent found the information helpful and claimed to have adjusted their behavior as a result. However, no noticeable increase in children's engagement was observed. This may be because the campaign did not tackle the root cause of the problem, or that a longer timeframe was needed to see the full impact of children's behavioral changes.

EXPERIMENT 6: PEOPLE AND PLACE—CASH EXPERIMENT

Method: In one informal settlement, all 194 families were offered simple, no-strings-attached grants of US\$25 to spend however they wished.⁶ The following options were explicitly offered to the families prior to the distribution of funds: keep the cash, rent a phone and a data card, rent a phone only, buy a data card only. The impact on engagement was then monitored through a feedback form, attendance tracking, and in-depth interviews.

Result: As a result of distributing the cash, engagement with WhatsApp learning increased by 16 percent (to 64%, from an average of 48% before the experiment). Most families (58%) decided to use the cash on a device and/or data. Combining phone rental and data had the greatest impact, as observed through the highest increase in educational engagement. The attendance of students whose families

⁶ The grants were distributed to all families of Jusoor students in the settlement, irrespective of the children's attendance or performance results.

chose the phone and data option jumped to 78 percent following the experiment, from an average of 50 percent before the experiment.

The combined findings from experiments 4, 5, and 6 supported the assumption that parents prioritize their children's education when given the support to do so. These findings indicate that solutions such as unconditional cash assistance could be scaled to address the issue of disadvantaged children's participation in distance learning.

At the end of the sandbox, the team held a final workshop in which they reflected on options for scaling the program and on possible future paths, including an adaptation of Azima to target permanently out-of-school children in the next academic year, when lockdown restrictions were alleviated and Jusoor's students returned to physical classes.

CRITICAL REFLECTION

In this field note, we have presented a case study of an application of the sandbox model—a novel approach to rapidly develop and refine a new education program in an emergency context. This case study illustrates that the sandbox model represents a useful, low-cost, rapid way to conduct research that informs iterations throughout the implementation of a program.

The sandbox approach puts the implementers themselves in the role of researcher, which might present some risks or weaknesses. Practitioners may not have time to collect data with the same rigor as those conducting a more formalized research project, and they may not have the necessary research skills. Having the practitioners evaluate their own projects may create the risk of bias and raise questions about the independence of the research. On the other hand, sandboxes can empower individuals to take a new perspective on their own practices and focus on generating evidence that will be of practical value in their particular context.

Sandboxes result in the production of evidence that is highly contextualized and focused on iterating the particular intervention. As a result, inferences from the data generated may not be generalizable and should be tested carefully before implementing in other contexts. The sandbox approach itself, however, is highly flexible and transferrable, as reflection and iteration are at its core. Building in time to surface critical assumptions and to re-evaluate as new insights emerge during sprints are principles that can be applied in a wide range of settings. By working in sprints, we regularly stopped and reflected together on what we were

learning and used those insights to inform the next steps and experiments. For example, the nature of our experiments changed quite radically between the first and second sprint, as we realized the importance of fully exploring what it would take to alleviate barriers to engagement.

The 6Ps Framework also provides a systematic way of thinking through the range of factors that can intersect in any given ed tech implementation and is a transferable tool for thinking through these issues in different contexts. Within this framework, the choice of particular experiments or data-collection techniques can be adapted to the specific context (Rahman et al. 2021). As such, the sandbox approach has the potential to be applied in a wide range of education contexts, particularly where existing evidence is lacking and urgent action is needed.

ACKNOWLEDGMENTS

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REMOTE FAMILY ENGAGEMENT THROUGH VIRTUAL TUTORING: AN EMERGENCY RESPONSE TO SUPPORT CHILDREN, FAMILIES, AND STUDENTS

CARMEN SHERRY BROWN

ABSTRACT

Family engagement is a reciprocal relationship between educators and families that supports whole child development. In response to the unique contexts and situations created by the COVID-19 pandemic, a faculty member in the School of Education at Hunter College, City University of New York (SOE), and families that had opted in to 100 percent remote instruction for their children conceptualized a remote virtual tutoring model that supplemented and supported asynchronous instruction, learning, and development. The model also gave fieldwork interns in the SOE early childhood program the opportunity to engage in authentic teaching and learning experiences; to plan and implement culturally and linguistically responsive activities; and to assess development, learning, and engagement. In this field note, I discuss the virtual tutoring model and its impact on the participating families, children, and fieldwork interns. I also describe lessons learned during the implementation and provide suggestions for replicating the model.

INTRODUCTION

Families and children were affected by the COVID-19 pandemic at unprecedented levels during the 2020-2021 (September-May) school year. Nearly 93 percent of people in households with school-age children reported that their children engaged in some form of distance learning (McElrath 2020) during the pandemic, which required families to adapt to many changes to support their children's education and development.

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Research has shown that families who are active participants in their children's education promote the children's social, emotional, and academic growth (Boonk et al. 2018). Families that opted for 100 percent remote teaching and learning for their young children became increasingly concerned about their children's education, social-emotional development, and approaches to learning. In their email exchanges, families acknowledged to the School of Education faculty member that they needed support to facilitate their young children's lessons and social-emotional development, and they sought to establish a joint effort with education professionals.

One parent expressed concern about the effects a remote learning environment would have on their kindergarten child's development:

My child is going into kindergarten with no experience interacting with children her age. She is only accustomed to being with adults and getting a lot of attention from older children and relatives. I am very concerned about the lack of interaction and social skills with the remote learning. This is very challenging...trying to work with the remote school and understanding the academics. I am just so worried she is not going to be where she needs to be academically or socially. (Parent communication, August 2020)

The fieldwork interns communicated similar fears about the impact of the remote learning environment on their education. Fieldwork is designed to give students practical, real-world experience so they can observe and develop skills that align research and theory with evidence-based practice. During the 2020-2021 school year, however, fieldwork interns in schools of education (SOE) did not have the opportunity to participate in actual teaching and learning experiences, due to limits on the number of people allowed in school buildings and/or interacting with students in the online teaching environment.

During the pandemic, fieldwork interns expressed concerns that they would not have the opportunity to work with children in a classroom environment:

I was worried that I would not get the chance to do fieldwork this semester. This is my last semester of fieldwork and I have not had the chance to work in an elementary classroom because of COVID. I want to be prepared for student teaching, but COVID is making things more difficult for in-person teaching. (Personal communication with fieldwork intern, September 2020)

PURPOSE OF THE VIRTUAL TUTORING MODEL

To support families as co-teachers in a remote learning environment and engage fieldwork interns in an authentic teaching and learning experience, an early childhood faculty member from the SOE at Hunter College, and the families of children in kindergarten, first, and second grade conceptualized a virtual tutoring model. The model was designed to provide children with equitable learning opportunities and supplemental online instruction that supported asynchronous, offline assignments and activities aligned with the in-person teaching and learning, and with the hybrid models that were a mix of in-person and online classes.

The virtual tutoring model was designed to replicate the effective cycle of teaching—planning, instruction, and assessment—that mirrors the in-person experiences the fieldwork interns observed and participated in pre-COVID. The fieldwork interns supported the planning of activities focused on children’s learning and development; facilitated the lessons in a remote environment; and documented the impact of their instruction on children’s learning. The objective of the virtual tutoring model was to connect course content to practical applications in remote settings and to enable families to be co-teachers in the facilitation of the lessons.

PARTICIPANTS

FAMILIES

Families of children (n=31) who were in kindergarten, first, or second grade during the 2020-2021 school year participated in the virtual tutoring sessions. Initially, 100 percent of the families opted for 100 percent remote learning for their children. In October, 20 percent of the families shifted to a hybrid model offered by the school district while continuing to participate in the virtual tutoring.

The families that participated in the virtual tutoring sessions lived in a large urban area in the northeastern United States. A family that represented its parent group initiated contact with a faculty member at a large public university and set up an introductory meeting with other families to discuss their concept of virtual tutoring. The families participating in the model continued to recruit more families to participate in the virtual tutoring.

FIELDWORK INTERNS

Fieldwork interns (n=50) studying early childhood education at an SOE participated in the virtual tutoring model. The model was designed to give the students a fieldwork experience at the required grade levels to fulfill state requirements for certification. Prior to their engagement in the virtual tutoring model, the interns had no supervised or mentored experience working with children and families.

CHILDREN

The children (n=33) who participated in the virtual tutoring sessions ranged in age from 4.9 to 6.6 years at the beginning of the 2020-2021 school year. The children were students from ten schools in a large urban district that included dual language and gifted and talented programs. All of the students were fluent in English, and 10 percent of the families identified their children as struggling learners. Information about the children's and families' demographics (socioeconomic status, ethnicity, etc.) were not obtained because the purpose of the tutoring sessions was to give the fieldwork interns the opportunity to plan activities, implement lessons, and assess children's development. The model was an emergency response to the COVID-19 pandemic and the subsequent shutdown of schools, not a research project that required collecting demographic information.

TEACHER OF THE VIRTUAL TUTORING MODEL

A full-time faculty member from the SOE early childhood program taught the virtual tutoring model. She also took on the role of cooperating teacher, and served as a mentor to the interns during the in-person fieldwork. She helped the families and interns plan developmentally appropriate activities that aligned with the scope and sequence of the children's grade-level expectations.

VIRTUAL TUTORING MODEL

PLANNING

The teacher of the virtual tutoring model created lesson plans and associated activities to meet the developmental needs of the children and their families. She developed the activities in collaboration with families, aligning them with developmental approximations and standards for children in kindergarten through grade 2.

The teacher also created a comprehensive lesson plan that was aligned with individual children's development and included the rationale for the lesson; the lesson, language, and vocabulary objectives; and the standards for and assessment of learning and language development. The lesson plan also identified differentiated instruction for struggling and advanced learners, and for learners whose home language was not English. All the lessons addressed how each activity was culturally responsive and supported an antiracist/antibias curriculum.

INSTRUCTION

The teacher used the virtual tutoring model to provide opportunities for families to gain experience in lesson implementation, in the use of developmentally appropriate strategies, and, by modeling the activities prior to working with the children, to gain understanding of the cognitive and affective aspects of teaching. The families were encouraged to use resources and materials available in the home to help facilitate the lessons and engage their children.

To support engagement during the small-group session, the children were introduced during the whole-group lesson to the lesson, language, and vocabulary objectives. The families were present to reinforce and supplement students' learning, as was appropriate to their children's level of engagement and development.

The children, families, and fieldwork interns collaborated during the small-group sessions. Depending on their availability, 4-6 families and their children participated in each whole-group session, while 4-6 interns observed the introductory activity. Two to three interns participated in the small-group activity, and one intern conducted a one-on-one lesson while the others documented the child's engagement and development, as well as the facilitation of the lesson.

ASSESSMENT

The formative assessments embedded in the virtual tutoring model lesson plans included a pre-assessment, as well as quantitative and qualitative assessments. For the pre-assessment, families and fieldwork interns observed the children's engagement during the whole-group session in order to document their children's development in accordance with the lesson objectives. The purpose of the pre-assessment was to collect information on what the children knew and were able to do prior to the small-group sessions, and to observe how the children engaged in the activity and note their individual learning styles.

The quantitative assessments were aligned with the activity's lesson, language, and vocabulary objectives. These assessments documented what the children were expected to have learned after their engagement in the lesson. Each lesson had realistic goals, and the individual families set high expectations for their children.

The qualitative assessment items were aligned with the children's social-emotional development and approaches to learning. The families were able to observe their children's eagerness and willingness to engage with the fieldwork interns in the virtual learning environment. They were able to determine how trust was established and how the children developed their self-concept and self-regulation skills.

REFLECTION

Each session had a concluding activity designed to help the children view the teaching and learning as a holistic process that involved the entire family. The fieldwork interns provided family engagement activities that aligned with the lesson objectives and extended the children's learning beyond the virtual environment.

DISCUSSION

IMPLEMENTATION

The lesson activities were designed to support learning as was appropriate to the children's development. The implementation of the activities followed an outline that included the anticipatory set of the prepared lesson and activity, step-by-step directions for student engagement, and a concluding activity.

FAMILIES

The families participated as co-teachers in the virtual tutoring sessions. They supported the facilitation of activities that engaged the children in an active, multimodal learning experience. This included asking and answering questions that supported their children's engagement in the activity, and using materials and resources that helped children make connections beyond the virtual tutoring environment.

CHILDREN

The children were able to make their own interdisciplinary connections during the tutoring sessions because their families were an integral part of the planning and implementation process. The children and families were guided in how to use materials and objects that were readily available in the home. The families and fieldwork interns were able to elicit and build on children's responses during the implementation because they were engaged in an interactive, multimodal learning environment, which deepened their understanding of the lesson and content-specific objectives.

ASSESSMENT

FAMILIES

During the lesson planning and implementation, families were given various opportunities to provide information on their children's development, and they were an essential part of the assessment process. For families able to provide more comprehensive information on their children's development, the individualized goals were based on the family members' observations and discussions with their children's remote teacher.

FIELDWORK INTERNS

To promote children's learning and development, the fieldwork interns created pre-assessment, qualitative, and quantitative assessments that aligned with the lesson objectives. During the planning process, they collaborated with the families on developing strategies to document their children's individual learning strengths and needs. The interns also created family engagement activities to extend the lessons beyond the virtual tutoring sessions.

CHILDREN

Observation and documentation of the children's participation in the virtual tutoring activities were an essential part of the assessment process. During the whole-group introductory lessons, the children were encouraged to discuss their prior knowledge of the content and skills and how it connected to their personal and cultural experiences. The interns documented the children's engagement and interactions on the pre-assessment checklist.

LESSONS LEARNED

CONTENT OF LESSONS

The virtual tutoring sessions provided supplemental learning for the children in literacy, reading, and mathematics. The families expressed their gratitude for the additional support and guidance the virtual tutoring sessions provided for their children. All of the families (n=31) indicated that the tutoring helped their child meet grade-level expectations:

Both in math and reading concepts, the tutoring sessions were either spot on to what was being learned in the remote classroom or were a couple of steps ahead. My son is bright and he took to all of it, especially when it was something new or more difficult than his remote school lessons. (Parent in focus group, May 2021)

While the parents expressed an alignment to the lessons, activities, and skills their children were engaged in during the synchronous class sessions, the scope and sequence of the tutoring lessons were generalized to grade-level expectations. During the planning sessions, most parents agreed with the lesson objectives and were aware of the alignment with what was occurring in the remote learning environment, and thus they did not ask for specific skill development or activities for their children. However, some parents identified areas in which their children needed additional support. The families appeared to trust the SOE faculty member to develop lessons and activities that would support their children's learning and development. During the planning sessions they seemed reluctant to incorporate any additional information in the lessons, such as activities that would supplement and enhance skill development.

The teacher of the virtual tutoring model had limited, if any, communication with the remote teacher. Except for one kindergarten teacher, the remote teachers did not respond to an email sent to them that described the virtual tutoring model. The teacher who did respond asked if additional students could join the virtual tutoring, and she included information about the model in a monthly newsletter for the kindergarten classroom, which resulted in two families joining the program. However, there was no further communication with this teacher or any other remote teacher during the 2020-2021 school year.

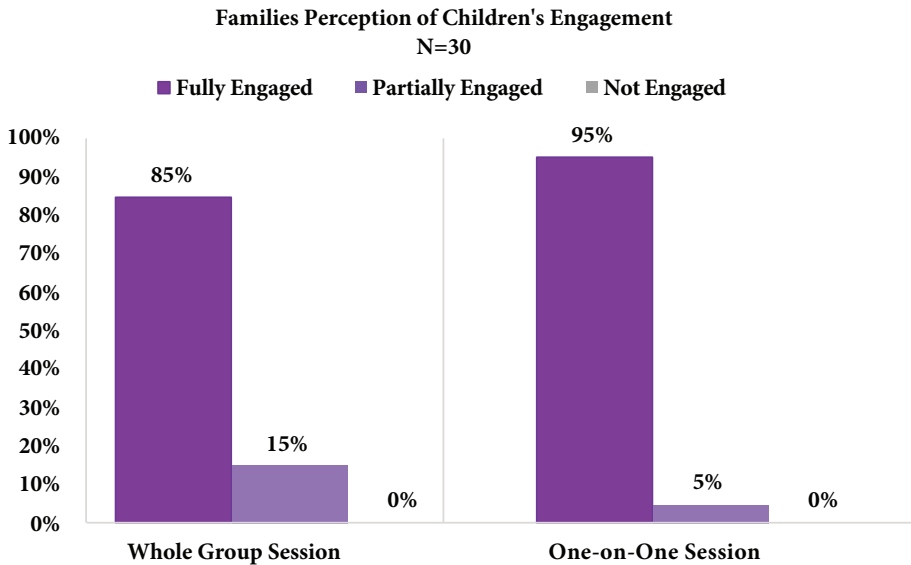
The lack of communication between the remote teachers and the teacher of the virtual tutoring model resulted in the latter relying on the information provided by the families. This limited the ability to conduct an in-depth, comprehensive assessment of the children's strengths or to discover areas where they needed additional support, which created challenges for the SOE faculty member.

Challenge: The virtual tutoring model included one teacher who created and facilitated the lessons for all three grade levels. The planning included the families and fieldwork interns, but the teacher was the only experienced educator. As part of the coursework, the teacher had to incorporate modeling and mentoring into the lesson, while also being responsible for providing appropriate engagement activities in a remote learning environment. This included the differentiation and individualization of lesson and activities.

Suggestion: The one teacher for the virtual tutoring model had many responsibilities related to planning and implementing activities during the tutoring sessions. Clearly, more resources are needed to replicate the model and prevent the teacher from burning out. Including special education and bilingual education teachers would provide additional experience and expertise.

Challenge: The participating families were from different schools that implemented a variety of curricula. This presented challenges because the scope and sequence and pacing guides varied greatly by school. As the remote teachers were learning to teach effectively in a remote environment, they appeared to have a variety of teaching and facilitation styles. Some parents expressed frustration with the remote teachers because they felt their children were more engaged during the virtual tutoring sessions. Figure 1 depicts the families' perception of their children's engagement during the virtual tutoring session.

Figure 1: Perception of Engagement during Virtual Tutoring Sessions



Suggestion: Communicate regularly with the school leadership to determine the curriculum and materials used to support the content and skill development for each grade level. Also ask to observe instruction in the classroom to make sure the language, vocabulary, and expectations for the topics and lesson content align. This would provide consistency during the lesson implementation and create higher expectations for the children's development, as they would be receiving supplemental instruction consistent with what they were learning in their schools.

FIELDWORK INTERNS

The fieldwork interns indicated that they were grateful to have the opportunity to engage with families and children in authentic and meaningful ways. They expressed sincere gratitude for being able to gain experience with the planning and facilitation of activities for the three grade levels that were required for teacher certification. The interns also appreciated the opportunity to observe an experienced teacher and receive feedback on their own teaching and facilitation of learning:

I like how we did not have to plan the activities and could add to the lesson. This was less stressful and helped me to understand the objectives much better. (Fieldwork intern in focus group, May 2021)

Planning and working with families was beneficial to my own learning. This was an experience that I did not expect and a wonderful opportunity. (Fieldwork intern in focus group, May 2021)

Videotaping the activities and completing the assessment charts helped me to understand how and what the students were learning. Being able to discuss this during reflection was eye opening and I learned from my classmates. (Fieldwork intern in focus group, May 2021)

While the fieldwork interns described how the virtual tutoring sessions supported their learning and development, they also discussed that they did not feel wholly prepared for the student teaching experience.

Challenge: The fieldwork interns did not facilitate the whole-group lessons that introduced the families and children to the lesson content. The interns were novice learners and the short period between planning and implementation did not give teacher of the virtual tutoring model enough time to prepare them to facilitate the lessons.

Suggestion: The virtual tutoring lesson could be implemented in two-week rotations with the same objectives. In week one, the teacher would facilitate the introductory lesson and model the activity. The fieldwork interns would observe and document the best practices from the lesson facilitation. They also would be able to formulate questions to ask of the cooperating teacher to help them understand the lesson facilitation. During the reflection conference, the fieldwork interns would be able to ask clarifying questions to help them prepare for their own facilitation of the lesson during week two. The observation of week one activities and the reflection discussion would give the fieldwork interns the time they need to prepare for the week two lesson. This would give them experience in planning and facilitating whole-group lessons.

In week two, the fieldwork intern would have the opportunity to remediate, reinforce, and build on the children's knowledge from week one and conduct the whole-group lesson. This would also give the interns more assessment data to use to document the children's developmental progress.

Challenge: The fieldwork interns worked with children in a one-on-one setting. While the families and children appreciated the individual teaching and learning, the fieldwork interns expressed concern about their lack of experience with small-group facilitation.

Suggestion: Families and children could be divided into homogenous groups according to the children's developmental levels. This would give the fieldwork interns the opportunity to work with more than one student during the small-group lesson. The data from the quantitative and qualitative assessments would be used to categorize the children into the groups. This also would support the children's social-emotional development because they would have the opportunity to interact with other children, collaborate during lessons and activities, and develop skills in problem-solving and taking turns.

CHALLENGES

The virtual tutoring model was designed to give early childhood education fieldwork interns the opportunity to have an authentic teaching and learning experience while interacting with children and families. While the interns viewed this as a successful, meaningful experience, they noted that not engaging with children in a physical classroom was a limitation of the pre-student-teaching experience. The virtual experience limited their opportunity to observe and document children's social-emotional development, approaches to learning, and collaboration with peers.

The children did not have the opportunity to use manipulatives and hands-on materials that are typically available in the physical classroom. The fieldwork interns were unable to observe and document children's physical development (e.g., eye-hand coordination and fine motor skills), and thus had to rely on families to self-identify any areas they were concerned about.

The limited amount of time spent on activities, skills, and concepts was a concern raised by both the fieldwork interns and the families. Each virtual tutoring session lasted 30-40 minutes; 10-15 minutes were allotted to the introductory whole-group lesson, 10-15 minutes for the small-group lesson, and 5 minutes for the reflection discussion. The interns indicated that the time spent in the virtual tutoring model was not equivalent to the amount of time they would have spent during an in-person fieldwork experience. Although the families appreciated their children's exposure to the skills and content offered during the virtual tutoring sessions, a few families said they felt the sessions were rushed.

The fieldwork interns were challenged by the pacing and flow of the activities during the lesson implementation, which resulted in their not completing the activities as designed. During the review of the videotaped small-group lessons and the post-observation reflection, they indicated that they needed more time to establish a rapport with the children and to become familiar with the language and expectations of the activities.

ONLINE ACTIVITIES THAT SUPPORTED STUDENT DEVELOPMENT

The online activities that supported student and family engagement, enhanced the fieldwork interns' planning, facilitation, and assessment skills, and were easily transferred into the home environment appeared to be the most successful in meeting lesson objectives and grade-level expectations. These included:

1. Activities that were
 - a. Interdisciplinary—combined more than one content and/or developmental area
 - b. Supported multiple modalities—incorporated the various methods students use to interact and engage in activities
 - c. Culturally responsive to the participating families—used the families' home, cultural, and community assets to support and enhance the activities
2. Recorded videos of online games that supported the pacing and flow of the activities and also differentiated and individualized instruction
3. PowerPoint presentations and Google slides that supported the scope and sequence of the lesson objectives and the developmental organization of the activities

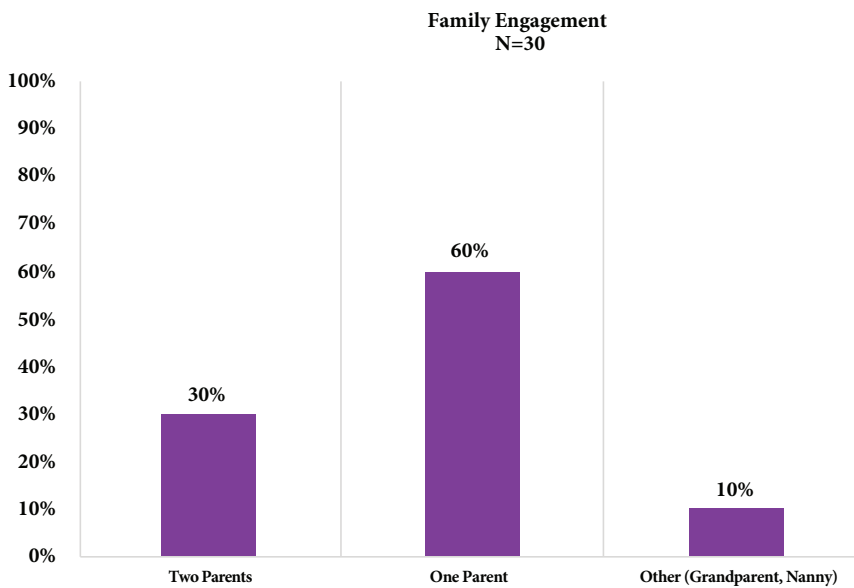
CONCLUSION

In order to be responsive to the unique contexts and situations created by the COVID-19 pandemic and to support whole-child development, family engagement must be a reciprocal relationship between educators and families. Including families as coteachers requires true partnerships and the building of mutual

trust and respect. To ensure that every student has the opportunity to participate in meaningful activities that support development and learning opportunities regardless of the teaching modality, true partnerships must exist. Family engagement helps extend teaching beyond the virtual and in-person learning environment, creates a more positive experience for children, and helps children build confidence and competence.

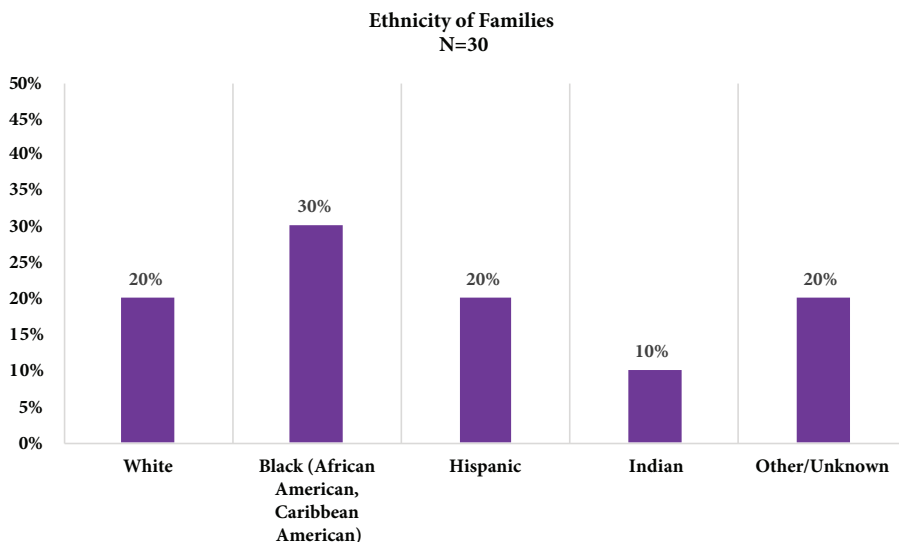
With the virtual tutoring model, family engagement was described as any adult who participated in the planning of the lesson, supported the students during the whole- and small-group remote sessions, and communicated with the cooperating teacher and faculty member throughout the school year. Figure 2 presents the breakdown of the adults that participated in the virtual tutoring model.

Figure 2: Family Engagement and Participation during the Virtual Tutoring Model



Although the demographics and ethnicity of the participating students and families were not formally collected for the virtual tutoring model, Figure 3 presents observational data on the diverse population that engaged in the remote tutoring sessions. This figure is included to acknowledge and emphasize that diverse cultural perspectives can inspire creativity and innovation that relates to culturally responsive pedagogy and an antiracist/antibias curriculum.

Figure 3: Ethnicity of Participating Families (observational data only)



Fieldwork is an integral part of the coursework in a teacher preparation program. Providing fieldwork interns with an authentic teaching and learning experience that incorporates family engagement will support them as they prepare for student teaching and a career in the teaching profession. Meaningful and productive fieldwork experiences will improve teacher candidates' learning and promote effective teaching that will maximize student learning.

The virtual tutoring model implements a family- and student-centered approach to remote instruction. Engaging families as coteachers in the teaching and learning process increases their children's interactions and engagement with the lessons and activities and promotes meaningful learning experiences that can help mitigate the effects the COVID-19 pandemic has had on young children's learning and development. It can also be used as a model for virtual teaching and in future emergency situations where educators, families, and children engage in a remote learning environment.

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PROJECT-BASED LEARNING AS AN INNOVATIVE COVID-19 RESPONSE

LEENA ZAHIR AND JANHVI MAHESHWARI-KANORIA

ABSTRACT

The impact the COVID-19 pandemic has had on learning has been acutely felt in underserved and low-income contexts, remote and rural settings, and education in emergencies settings, where most students lag behind age-appropriate milestones in learning and achievement (World Bank 2019). Digital remote learning methods were pervasive in the global education response to the pandemic, which left marginalized learners, most of whom were not digitally connected, at a disadvantage and exposed them to greater learning loss and higher dropout rates than their peers with digital access (Dorn et al. 2020). In this field note, we recommend project-based learning, a unique pedagogical approach that promotes relevant, holistic, student-centered learning and 21st-century academic skills. The innovation has had promising preliminary results among the digitally marginalized during COVID-19-related school closures. Some students participating in the proof-of-concept pilots experienced up to 28 percent growth in academic and nonacademic skills and reported satisfaction with the project-based learning resources of up to 98 percent, as well as a positive shift in their mindset toward learning. The initial success of the early-stage pilots in diverse geographic and education contexts indicates that the model has the potential to scale.

INTRODUCTION: GAPS IN GLOBAL EDUCATION RESPONSES TO COVID-19

COVID-19-related school closures in early 2020 disrupted the education of over 91 percent of the world's school-age children (Nugroho et al. 2020). More than 90 percent of countries responded to the pandemic by developing digital and broadcast programs that were accessible to almost 70 percent of students. However, this tech-heavy response had marginalizing implications, as it left more than 30 percent of the world's students without access to education; more than 70 percent

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of the students who could not be reached live in remote and rural areas where access to technology, even television and radio broadcasts, is often limited (UNICEF 2020). Moreover, while the broadcast media can deliver content to learners, they cannot support student engagement or provide feedback, which limits their ability to promote students' acquisition of knowledge and foundational skills. These limitations provided the rationale for Education Above All (EAA) to develop an innovative and flexible project-based learning (PBL) solution that enables underserved learners to continue learning without requiring access to the internet or other technology, or to other limited resources such as educational materials and extensive parental support.

REVIEW OF THE LITERATURE

PBL is a pedagogy that promotes student autonomy and the construction of knowledge through active, experiential learning and investigation (Billah, Khasanah, and Widoretno 2019; Mohammed 2021; Thomas 2000). Seven essential design elements characterize effective PBL: (1) a challenging driving problem or question; (2) sustained and iterative inquiry throughout the duration of the project; (3) authenticity and real-world relevance; (4) student voice and choice; (5) opportunities for student reflection; (6) opportunities for student-led critique and revision; and (7) the culmination of the project via a tangible or intangible public product (Larmer 2020). Meta-analyses of PBL research over the last 20 years have found that it was associated with more learning gains in several subjects than learning gains achieved through [conventional direct instruction (Chen and Yang 2019; Thomas 2000). PBL also was found to be effective in programs conducted with learners of low socioeconomic status (Anderson and Pesikan 2016; Mohammed 2021). Although most evidence on PBL's effectiveness comes from K-12 settings, a recent study found that PBL also improved leadership skills among third-grade Palestinian refugee students (Migdad, Joma, and Arvisais 2021). However, there is a dearth of literature on PBL in crisis-affected contexts. Our aim in this paper is to contribute to this evidence base and to argue that PBL is a viable teaching and learning method in such contexts.

PROGRAM FEATURES AND MODALITIES OF USE

INNOVATIVE DESIGN FEATURES

EAA developed the Internet-Free Education Resource Bank (IFERB) to address some of the challenges in creating crisis-sensitive learning opportunities. In this paper, IFERB refers to the bank's interdisciplinary PBL resources, which are a

collection of educational projects that promote academic, 21st-century, and life skills, including financial literacy, entrepreneurship, and social and emotional learning. These resources, which cover mathematics, science, social studies, and environmental studies, are available for preprimary, primary, and lower secondary learners. The IFERB resources require only the use of low-cost, commonly available materials, and no technology or internet is needed once a PBL project is accessed through the EAA website. They also can be used effectively in low-literacy contexts, as they require limited parental guidance and promote student agency.

While the IFERB resources offer most of the critical features of effective PBL, they can be considered innovative from a pedagogical perspective for several reasons. First, unlike typical teacher-facing PBL resources (Norfar n.d.), IFERB resources contain detailed but simplified instructions that are shared directly with children or their caregivers; the teacher facilitates the lessons. This was especially valuable during COVID-19-related school closures, when the resources were used for self-directed learning, with some caregiver support. Where learners gathered in person, the approach enabled volunteers, who sometimes had no teaching experience, to facilitate lessons successfully without being subject-matter experts. Concise instructions were essential to enabling the novice teachers, untrained facilitators, and low-literacy caregivers to facilitate lessons.

Second, unlike typical PBL resources, IFERB attempts to provide core instruction resources while simultaneously providing learners with an opportunity to apply their learning and take ownership of each IFERB project by creating shareable products. This approach means that the projects serve as mini-lessons on specific topics instead of summative, end-of-unit exercises. For example, learners in one project were asked to design an animal park (Education Above All 2020). They were not expected to have prior knowledge about animal habitats and adaptations because the activities and descriptions in the projects served as a mini-lesson on these topics. The various IFERB projects were designed with low-resource contexts in mind, and they aimed to present topics in a manner that was contextually feasible, even before the implementing organizations specifically contextualized the projects, which teachers and volunteers later implemented with learners.

Third, unlike typical PBL projects that require computer or internet access for learner-led research (Bell 2010), IFERB introduced PBL in low-resource contexts that had teacher shortages without requiring a sizable investment. Learners carried out their independent study through technology-free investigation, exploration of their environments, and interviews with their community members. Therefore, IFERB can be considered an innovation in pedagogy that combines PBL with a

mini-lesson format and provides simplified student-facing instruction, and that can be implemented with minimal resources.

DIVERSE MODELS OF OPERATION

IFERB was initially created to serve as a stopgap solution to ensure learning continuity during the pandemic, especially for learners unable to benefit from existing distance learning programs. Target beneficiaries included low-income students, out-of-school children and youth, and children in refugee settlements, remote rural communities, and underserved urban contexts. It was piloted by 21 organizations working with vulnerable learners in Kenya, Lebanon, India, Zambia, and Pakistan and reached more than 106,000 learners using two main models.

Remote: The teachers or facilitators used mobile phones to share instructions for the project tasks. They used phone calls and SMS to reach students in households with feature phones (non-smartphones with limited functionality), and applications like WhatsApp to reach those with smartphones and some internet access. Learners without access to mobile phones received printed materials with simple instructions or verbal instructions during facilitator home visits.

In person: Learners gathered in small groups in community learning spaces to receive IFERB project instructions from the facilitators. Where schools were partially open, the teachers also used IFERB as part of a lesson.

Supported by EAA, the implementing partners selected an average of 12 IFERB projects that were relevant for their learners and adapted them to fit their contexts. Some organizations also translated selected resources into local languages before implementation. Table 1 summarizes the details of each pilot. The IFERB resources complemented the main curriculum in most of the pilots, and the delivery methods alternated between remote and in-person implementation, depending on the COVID-19 restrictions.

Table 1: Overview of Pilot Organizations

Organization	Location	Number of Learners	Number of Educators	Context
Mantra4Change	India	100,000+ (through 15 organizations) Age: 5-15	950	Rural and tribal out-of-school and enrolled learners; remote and face-to-face implementation
EkTara	India	600 Age: 4-14	40	Semi-urban low-income enrolled learners; remote implementation
Barefoot	India	250 Age: 4-7	11	Low-income enrolled learners; remote implementation
British Council	Pakistan	1,000 Age: 8-11	100	Semi-urban and rural enrolled learners; remote implementation
Zambia Open Community Schools (ZOCS)	Zambia	2,150 Age: 8-14	-	Rural enrolled and out-of-school learners; face-to-face implementation using radio
Lebanese Alternative Learning (LAL)	Lebanon	1,000 Age: 4-8	142	Semi-urban and rural Lebanese enrolled students and Syrian refugee learners; remote implementation
Dignitas	Kenya	1,200 Age: 4-11	61	Low-income semi-urban learners; remote implementation

The IFERB training program for implementers covered an overview of PBL and IFERB, resource selection and contextualization, implementation, and learning assessments. The implementers were responsible for the selection and contextualization of the resources. A cascading approach was adopted for this training, whereby designated staff members were trained by EAA and they in turn trained their colleagues. A total of 1,293 educators were trained, including teachers and volunteers with little to no teaching experience.

The EAA staff created the IFERB resources with input from the implementing partners to ensure their relevance. The implementers played an active role in contextualizing the selected projects and suggesting themes for new projects. Some early implementers also created monitoring and evaluation tools used in later pilots, including surveys and assessments. The implementing organizations

did not collaborate bilaterally, but frequent monitoring by EAA facilitated iterative cross-pilot learning and modification. Third-party specialists were hired to review and improve the beta-stage resources and accompanying tools.

MEASURING EFFECTIVENESS

MONITORING, EVALUATION, AND LEARNING

A monitoring, evaluation, and learning (MEL) framework was developed to measure IFERB's effectiveness in (1) providing a learning solution; (2) providing access to learning opportunities; (3) promoting different types of learning outcomes; (4) promoting social and emotional skill development; and (5) providing relevant learning opportunities in diverse crisis-affected contexts.¹

A mixed methods approach was used for data collection. Surveys were administered weekly to literate students or caregivers to collect feedback on their experience, their satisfaction with the learning, and the ease of doing the projects. Focus group discussions were conducted with teachers or volunteer facilitators toward the end of the pilot. The academic assessment was a question bank of three types of questions: knowledge, skills, and discovery.² The 21st-century skills assessment contained a prompt and accompanying rubric for assessing students in three skills: communication, critical thinking, and creativity.

LIMITATIONS

Although standardized tests have been used to measure the effectiveness of PBL (Kokotsaki, Menzies, and Wiggins 2016), it was not possible to use them to measure learning growth through use of IFERB because EAA did not have control over the projects the organizations selected. Assessment questions were instead created for each project to enable users to curate their own assessments. This ensured a degree of flexibility that is central to IFERB but did not allow for a standardized method of assessing growth across pilots.

¹ Learning outcomes included general knowledge, numeracy skills, literacy skills, 21st-century skills, etc.

² Knowledge questions tested learners' understanding of information/general knowledge related to the project, skill questions their ability to apply some of the ideas covered in the project, and discovery questions their understanding of the main concepts or ideas of the project. The question bank can be accessed at <https://drive.google.com/file/d/1TZ5A1ZLzdjGx0eJOA9rSir0U31ssotlC/view?usp=sharing>.

Learning assessments were administered as both baseline and endline tools. While the assessment methods were not designed to be rigorous enough to attribute learning to IFERB, the attributability of the findings was strengthened through triangulation with the survey and focus group discussion data.

The implementers also faced several challenges due to COVID-19 restrictions, and in planning and implementing the pilots and MEL tools. First, the MEL tools were administered inconsistently, which resulted in missing data points for some organizations. Second, learning and growth measures could have been underestimated since the resources selected in some cases were not appropriate for students' learning levels, due to the inaccurate assessment of their baseline levels and abilities. Third, some pilots conducted assessments remotely, which proved challenging, given the scarcity of mobile phones and the low literacy rates among some caregivers. While IFERB did not rely on technology for implementation, mobile phones were needed for reliable remote data collection. When printed projects were shared directly with the students, for example, the organizations could not verify that they completed the activities themselves, rather than a sibling or parent, without contacting them.

Limitations related to program implementation included the significantly greater effort required to translate and contextualize resources than that required for conventional curriculum lessons, as well as the lack of school textbooks and learning materials available to learners. Using the projects independently of other curriculum resources made parents skeptical about their usefulness.

RESULTS

PROVIDING ACCESS TO LEARNING

Three measures were used to evaluate access: (1) the participation rate of all targeted students; (2) the completion rate of all participating students; and (3) the percentage of unreached students among all participating students. Although the reopening of schools in one context (Dignitas, Kenya) resulted in a lower participation rate (65%), IFERB projects had an average completion rate of 86.7 percent. Another access measure is the self-reported accessibility of the required supplies: more than 84 percent of the students and caregivers reported that they could easily find the materials needed for their project activities.

PROVIDING AN EFFECTIVE LEARNING SOLUTION AND PROMOTING
DIVERSE TYPES OF LEARNING

The primary measure of IFERB’s success as a learning solution is its ability to contribute to growth in academic learning and 21st-century skills. The 21st-century skills assessment was a more standard measure than the academic assessment. Teachers used a standard rubric to evaluate students’ communication, critical thinking, and creativity skills, based on their responses to various prompts.

Table 2 summarizes the results of the academic assessments. While these results indicate that the average learning outcome growth in the knowledge, skills, and discovery domains was 19.2 percent, younger learners appear to have been more affected. For example, the age-disaggregated data for Mantra4Change (2021) reveal that 5-year-old students’ growth was 25 percentage points, which compares to average growth of 16.55 percentage points from baseline to endline. This finding could result from the partners’ limited exposure to PBL methods and misinformation about students’ initial learning levels, which could have led the beta stage pilots to choose more accessible resources or to oversimplify them, making them inadequately challenging for learners.

Table 2: Learning Assessment Results

Organization	Average Baseline Score (out of 100)	Average Endline Score (out of 100)	Average Percentage Growth
Mantra4Change	59	75	28
Dignitas (Level 1)	67	79	18
Dignitas (Level 2)	80	89	11
British Council	77	93	22
LAL	67	79	17
Average			19.2

The results of the 21st-century skills assessment summarized in Table 3 indicate that learning outcomes grew for each skill, with more students placed in advanced levels at endline than at baseline. Several other measures provide evidence of improved learning. More than 92 percent of the students and caregivers surveyed reported being satisfied with the learning students acquired. Additionally, more than 82 percent of the implementers agreed that IFERB resulted in more learning than previous methods used, 92 percent agreed that students learned and grew

academically, and 80 percent agreed that students developed 21st-century skills through the projects.

Table 3: 21st-Century Skills Assessment Results

Organization	Communication		Critical Thinking		Creativity	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
Dignitas (Level 1)	36	61	34	61	41	56.5
Dignitas (Level 2)	75	85	65	80	65	84
LAL	28.5	42	46	82	76	91
Mantra4Change ³	3.4	3.8	3.5	3.8	3.5	3.9

PROMOTING POSITIVE ATTITUDES AND MINDSETS

The participating organizations also reported a shift in students' values and attitudes toward learning, as noted by the British Council (2021, 20):

The...pilot has provided our students with a creative environment, which encourages them to think outside the box. Projects such as “Adventures in the plant kingdom” have motivated our students to start plantation drives and raise awareness regarding the importance of trees within their communities...

We observed a significant improvement in the level of motivation of students in completing their regular school tasks. Not just that, parents have definitely stepped up after the pilot and increased their interest in the education and progress of their children. Most of them have become active and even offered to help in providing the children with an improved learning environment both at home and school. I have seen this interest from parents for the first time and it is truly remarkable.

Teachers from this pilot also shared anecdotes about the program's impact on students' and caregivers' mindsets. One mother who facilitated her daughter's lessons through IFERB discovered her daughter's talent and passion for learning.

³ Whereas the percentage of students placed in levels 3 and 4 for each skill is presented for most of the organizations, the data presented for Mantra4Change communicate the average level in which students were placed at baseline and endline.

Her participation prompted her to take a stand against child marriage, which is prevalent in her region, and to allow her daughter to continue her education.

Other reported shifts in mindset include improved attitudes toward gender roles. Teachers in the Zambia pilot also credited the program with improving student retention. They explained that students who had dropped out started returning to school after hearing about the participating students' work. They also said that the projects improved students' interest in learning, particularly those who were in school but had previously disengaged.

EFFECTIVENESS AS A CRISIS RESPONSE

According to feedback from the implementing organizations, 96 percent reported satisfaction with the overall pilot experience, and 80 percent reported satisfaction with the supporting tools provided, including MEL and training materials. Additionally, 80 percent said that IFERB met students' learning and context-specific needs, 92 percent expressed their desire to continue using IFERB, and 96 percent expressed interest in scaling the program with other organizations in their countries. To ensure sustainability, EAA provides training on developing PBL resources to enable partners and educators to continue using PBL, even after exhausting the available IFERB projects.

KEY LESSONS

EMPOWERING EDUCATORS AND IMPLEMENTERS TO ADOPT PBL

Although all stakeholders were trained to adapt and implement the projects, most felt underprepared to align the content with the curriculum, train educators, reach students, and engage parents. Regular communication with EAA helped the implementers address these challenges promptly. Building the implementers' confidence and capacity to contextualize and align the resources with the formal curriculum helped ensure that projects were not disconnected from students' contexts, curricula, or learning goals, and that they were not burdensome for educators.

Many implementers assigned mentors to guide the educators; one assigned six coaches to support sixty-one participating teachers, and another had eight supervisors overseeing the progress of forty teachers. Creating communities of practice among the educators facilitated the sharing of ideas, highlights,

and challenges faced, and encouraged educators to learn from each other. The facilitators at one organization regularly held learning circles to help educators reflect on the school week and plan for the next. Others organized a weekly discussion spearheaded by a different teacher each week, which enabled them to distribute leadership throughout the pilot. This improved teachers' ownership of the program and accelerated uptake among the cohort.

BUILDING EFFECTIVE PARTNERSHIPS WITH CAREGIVERS AND LOCAL COMMUNITIES

Engaging parents effectively was a key challenge. It was particularly impactful because remote implementation required access to mobile phones, which were typically owned by the parents or caregivers. Most of the projects also required input from family members, such as presenting projects, surveying parents, etc.

Many parents initially hesitated to participate because they did not recognize the value of PBL and requested that textbooks and worksheets be used instead. The implementers used several measures to improve engagement, including orienting caregivers to the significance of PBL and the powerful impact of hands-on learning and the inquiry-based approach. As they observed students' growth and engagement over the course of the pilots, most caregivers came to support this approach. In three pilots, this change in attitude helped lower the student dropout rate. While the activities present opportunities for caregiver participation, it is essential that their literacy levels and availability are considered. Caregivers can be supported by using appropriate communication methods, such as audio instructions in low-literacy contexts, and by limiting the number of tasks requiring their input, especially in remote contexts where the device owner is unavailable during the day.

SUPPORTING STUDENTS

Another challenge implementers faced was the ability to accurately determine students' skills at baseline. In the revised training for the second cycle of IFERB pilots, organizations were asked to rely on students' records or to conduct a pre-baseline assessment with a sample of students.

Inexperienced educators found it challenging to scaffold student learning, balance didactic and autonomous learning, and help students build skills in reflection and revision. Creating communities of practice and holding professional development sessions on relevant topics can help educators feel more supported, reinforce

skills gained through the initial training, and introduce new skills needed for ongoing implementation.

Since the conclusion of the initial pilots discussed in this paper, EAA has supported five new IFERB pilots that respond to educational needs and improve the quality of education in contexts of protracted crises, such as in Yemen and Sudan, and in low-resource contexts such as in Morocco and Kenya. IFERB was also adapted and used in the acute crisis responses for Afghan and Ukrainian learners. As part of its sustainability strategy and to support future implementers, EAA will create a platform to share lessons from previous pilots and implementation guides.

CONCLUSION

Responses to mitigate the effects of COVID-19-related school closures have highlighted the magnitude of the global digital divide; most digital solutions to providing ongoing education were inaccessible, ineffective, or unengaging for marginalized learners. IFERB is an innovation designed to solve the issue of access to high-quality learning for these learners and to promote student engagement and growth in various academic and nonacademic skills. It is considered innovative in that it offers PBL in a student-centered, experiential learning format that reduces the need for prior knowledge of the topic and requires minimal resources to implement. It was piloted in five countries, with promising preliminary results, including an average growth rate in academic skills of 19.2 percent and several shifts reported in the mindset and attitudes of students, caregivers, and teachers.

Feedback from the implementing partners confirms that IFERB not only provided students with access to learning in the absence of alternatives but also enhanced their learning experiences and built educators' and implementers' capacity to implement PBL. The success of the pilots in five unique contexts indicates the replicability of this approach and its potential for scale, especially given that more than 90 percent of the implementers want to sustain and scale it in their own contexts.

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BOOK REVIEW

PANDEMIC EDUCATION AND VIRAL POLITICS

BY MICHAEL A. PETERS AND TINA BESLEY

ROUTLEDGE, 2021. 126 PAGES

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Pandemic Education and Viral Politics is a collection of essays edited by Michael Peters and Tina Besley. Most of the essays were first published as editorials in the spring of 2020 in *Educational Philosophy and Theory*, a journal for which Peters serves as executive editor. This slim volume gave this reader the opportunity to revisit a peculiar moment of pandemic panic and possibility, as seen through the eyes of a senior scholar and his colleagues. The editors have brought together disparate lines of philosophical inquiry to provide an initial understanding of a still-emerging period of global upheaval. Many threads of the two years and more of global debate about the COVID-19 pandemic are already visible in this relic of that early moment: the rapid spread of mis- and disinformation is juxtaposed against science, such as the varied perceptions of the need for social distancing, and the wisdom of the Chinese response is compared to the American, including the Chinese government's totalitarian imposition of restrictions versus the more limited American response. Missing from the authors' anticipation of key lines of public pandemic debate is any foreshadowing of the two years of discussion about viral spread in school, learning loss, and online education, which is not surprising, considering the early stage of the pandemic in which these essays were written.

The introduction, written by Peters and Besley, and first few chapters—"Viral Modernity? Epidemics, Infodemics, and the 'Bioinformational' Paradigm" (chap. 2, written by Peters with Jandrić and McLaren), "A Viral Theory of Post-Truth" (chap. 3, by Peters with McLaren and Jandrić), and "On the Epistemology of Conspiracy" (chap. 4, Peters alone)—are driven by the juxtaposition of a viral pandemic with an age of viral memes. The authors compare the spread of biological viruses with the viral spread of information, and highlight how the early stages of the pandemic sparked rapid scientific discovery and accelerated peer review of COVID-related research. They recognize that, as scientists published preprints and presses offered free access to COVID-19-related research, the moment offered the promise of a more open and accessible scientific community. In chapter 2, Jandrić called for philosophers and other "experts in knowledge development" to address the peril of "questionable verifiability" in the "data deluge" (22). In chapter 4, which addresses conspiracy theories, Peters muses about how to maintain a

coherent epistemology in the face of the baseless conspiracies that spread through the viral media environment and conspiratorial politics. Other contributors contrast the potentially valuable viral spread of scientific information through scholarly networks to the “infodemic” of misinformation spread by politically motivated actors. McLaren’s reflection on the bioinformatics of viral spread raises an important question: What strategies used to contain biological viral spread might be used to contain the spread of dangerous viral information (50)?

In “Love and Social Distancing in the Time of COVID-19: The Philosophy and Literature of Pandemics” (chap. 5), “*The Plague*: Human Resilience and the Collective Response to Catastrophe” (chap. 6), “The Disorder of Things: Quarantine Unemployment, the Decline of Neoliberalism, and the COVID-19 Lockdown Crash” (chap. 8), and “Reality Is an Activity of the Most August Imagination’. When the World Stops, It’s Not a Complete Disaster—We Can Hear the Birds Sing!” (chap. 9), Peters explores the possibility of what a post-COVID world could look like. He writes, “The threat of contagion creates two opposite emotions” (64). He goes on to say that, for some, the threat gives rise to a form of extreme individualism that rejects guidelines on social distancing and other modes of prevention; in others it sparks a paralyzing and stigmatizing fear of both the illness and the ill. However, he also observes that these base impulses can be transformed into an ethos of solidarity and a shared focus on keeping all of us safe. The reactions of economic institutions and the leading prophets of neoliberalism that seem, in Peters’ analysis, to be softening neoliberal impulses and advocating something like cross-class solidarity encourage the analysis of a possible post-COVID social and economic shift.

Peters examines a potential social shift by contrasting the impulses of the Chinese government’s strong hand with the widespread resistance to the limited restrictions put on American “freedom.” In “Philosophy and Pandemic in the Postdigital Era: Foucault, Agamben, Žižek” (chap. 7), “The Chinese Dream Encounters COVID-19” (chap. 10), and “Biopolitics, Conspiracy and the Immuno-State: An Evolving Global Politico-Genetic Complex” (chap. 11, written with Besley), Peters and Besley bring philosophers and the differing political contexts of China and Western nations into conversation in an effort to understand the way state power uses what Giorgio Agamben (2020) calls the “state of exception” to create and entrench technologies of control. A pandemic is a perfect excuse to pursue what Philipp Sarasin (2020) calls a “biopolitical dream”—that is, the extension of government power over citizens to reduce them to a “pure biomass,” thanks to the canny exploitation of public health advice (72ff, 98-99). Peters highlights the way Xi Jinping’s cultivation of a “Chinese Dream,” driven by reliable economic growth, is essential to both Xi’s political power and global economic stability;

the pandemic's interruption of commerce endangered both. In Peters' estimation in the spring of 2020, the Chinese exercise of power as a "strong socialist state" seemed to be getting the country "back to work" more reliably than the American approach, an evaluation that hasn't been disproven (95-96, 102).

Peters and the book's other contributors provide generous excerpts from the work of the scholars whose work they built on, which provides an effective boost for a reader looking to assemble a set of references with which to develop a philosophy of the current pandemic moment. As a "rapid-response" collection of thoughts expressed during the first COVID spring, the essays in this volume provide a useful touchstone and a guide to some of the more interesting and provocative thinking of the moment. I appreciated Peters' sober engagement with Slavoj Žižek's (2020) and Agamben's (2020) works from that spring, which caused heated discussion, and was glad to see that Arundhati Roy's (2020) "The Pandemic Is a Portal" served Peters as much as it served me in that difficult season. I appreciated the company these essays provided as I tried to make sense of an uncertain world; however, I wished for a more substantive central argument. I struggled to identify a line of thought that tied the essays together, and would have appreciated more explicit introductory and concluding chapters that helped the reader understand the purpose behind assembling these essays and that united the disparate lines of inquiry and analysis across the chapters.

Readers of this journal may find the chapters on the viral spread of mis-/disinformation the most useful and interesting of the book. These early chapters reflect on how the mis-/disinformation spread like their biological analogues and on how their sources were motivated. Readers also may look to other recent books that offer sociological, anthropological, and neurological views on how people come to distrust medical and public health information. For example, in *Stuck*, anthropologist Heidi Larson (2020) examined pockets of resistance to vaccination campaigns and concluded that one reason viral misinformation spread was because people and communities felt that their local and communal expertise and input were ignored and condescended to. An implicit lesson educators might gain from the book is that building students' capacity and ability to evaluate evidence and make their own decisions can meaningfully reduce their vulnerability to the viral spread of mis- and disinformation. The concreteness of Larson's cases and social science approach might have served as a useful check on the theoretical work in *Pandemic Education and Viral Politics*. In *The Sleeping Beauties*, neurologist Suzanne O'Sullivan (2021) covered some overlapping territory, outlining how physical illness and ailments can be the product of helplessness and curtailed autonomy. Reading the two books together, informed by Peters and colleagues'

philosophical approach, might suggest prescribing a vaccine of meaningful social and individual autonomy as a way to both make individuals unwelcome hosts to viral mis- and disinformation and prevent its spread.

After Peters and Besley sent this book to press in mid-2020, reporters increasingly recognized the disparate impact the pandemic was having on different social groups and the way biopolitics was being used to deepen existing racial and socioeconomic inequity. The disparate impact of the pandemic and any resultant expanded state powers appear in these pages only in passing. The book's themes of viral modernity, biopolitics, and how different systems of state power interact with a viral pandemic remain urgent and continue to reverberate in systems of racialized power throughout the world. For instance, while reading *Pandemic Education and Viral Politics*, I found myself thinking often of the lines of thought explored by journalism professor Steven Thrasher in *The Viral Underclass* (2022).

Agamben's worry about the totalitarian possibilities of expanded state power might be productively contrasted with Thrasher's analysis of the violence of organized state abandonment.

Peters and Besley's book provides a useful exploration of early lines of thought and inquiry that have been productive in the years since they wrote; I look forward to seeing how scholars build on the lines of thought set out in this book.

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BOOK REVIEW

EDUCATION, EQUALITY AND JUSTICE IN THE NEW NORMAL:

GLOBAL RESPONSES TO THE PANDEMIC

EDITED BY INNY ACCIOLY AND DONALDO MACEDO

BLOOMSBURY PUBLISHING, 2021. XXIV + 216 PAGES

\$22.95 (PAPER), \$68.00 (HARDCOVER), \$20.65 (E-BOOK)

ISBN 978-1-350-22577-0

Inny Accioly and Donaldo Macedo, the coeditors of *Education, Equality and Justice in the New Normal: Global Responses to the Pandemic*, have powerfully voiced the uncertainties, struggles, and challenges the world has faced throughout the COVID-19 pandemic, and illuminate a ray of hope for the future. This volume helps us to understand how the pandemic exposed the fragility of our education institutions, especially those serving vulnerable populations. Accioly and Macedo emphasize the inadequacies of our global education institutions and how the pandemic revealed the glaring inequities in society, which they argue are largely caused by capitalism and neoliberalism.

This volume showcases prominent thinkers in the field of education, from academic scholars in the Global North, such as Noam Chomsky, to indigenous leaders like Chief Luiz Katu, who is head of the Potiguara, an indigenous people who live in Brazil's Northeast Region. It was refreshing to see that several of the authors wrote their chapters in their preferred or first language, which were then translated into English.

The coeditors and the contributors to this volume issue a radical call to action to confront fragmented and inequitable approaches to education, arguing that neoliberal and pro-capitalist ideas are obstacles to creating a holistic education system. In chapter 1, Accioly and Macedo state that neoliberalism will be the "new normal" as long as the world's ruling elites continue to be motivated by neoliberal ideas of unrestrained power and financial greed that put the welfare of the economy and the welfare of the public in direct opposition. In chapter 4, Leher comments that individualism, supported by technology giants such as Google, has also emerged as part of this new normal in Brazil, especially as education transitioned increasingly to a virtual rather than face-to-face environment during the pandemic. This environment is expanding in Brazil's higher education institutions.

Another central theme in this volume is the predominant preoccupation with education as a commodity and the continued argument that this benefits a knowledge economy. Leher contributes to this discussion, noting the importance placed on operational skills or a skills-based education. He writes that there are several disadvantages and limitations to this framework. For example, the current practices of many education systems are closely linked to modern capitalism and its tenets, as they were developed in the years after the Industrial Revolution. As argued in other chapters, neoliberal agendas have continually failed to acknowledge the indigenous education systems that have persisted for millennia, irrespective of colonization and capitalism. Many indigenous education systems are sustainable and community based, but they continue to be eliminated or replaced with systems that promote uniformity.

This volume aligns well with ongoing work and debates in the field of education in emergencies (EiE). Educators worldwide continue to deal with the pandemic's effects on education systems in areas of crisis and conflict, including higher dropout rates, gender-based violence, and the ongoing challenges of climate change that have affected access to food and water and made populations more susceptible to natural disasters. For example, several of the contributors, including Chomsky, Tsiakalos, and Lourerio, discuss how regions in Latin America and South Asia may become unlivable due to climate change combined with unstable political contexts.¹ In chapter 10, Lourerio outlines the need for critical environmental education that includes dialogue with traditional communities, such as those in Brazil. He writes that all people have a right to education and a safe environment as a "common good," and that understanding the impact of colonization, capitalism, and modernization sheds light on the need to preserve the environment and the associated indigenous knowledge.

The volume also showcases political and economic decisions made by leaders in Italy, the United States, India, and Brazil at the start of the COVID-19 pandemic. In Italy, as Vittoria and Muraca discuss in chapter 7, the government's initial lockdown prioritized the health of the people over the economy. However, after a period of time, this proved to be challenging, due to persevering neoliberal agendas which prioritized the economy. In contrast, the volume showcases how the United States, India, and Brazil undermined access to health care, put essential workers at risk, and used the media to deflect criticisms of decisions about the pandemic. For example, Chomsky and Filippakou, in chapters 2 and 3, respectively, provide important insights into how the US government's response

¹ We see this clearly in recent news reports of heavier than normal monsoon rains and glacial melting in the Himalayas which has caused disastrous flooding in Pakistan.

to COVID-19 under President Trump was designed primarily to protect the economy, and how the neoliberal agenda remained at the forefront of policy decisions. Other contributors draw a parallel to the actions of leaders in other parts of the world, particularly in Brazil and India. Tsiakalos, Malichudis, and Papangeli (chap. 5) and Macrine (chap. 6) complement this discussion and outline how systemic racism allowed COVID-19 to disproportionately affect the most vulnerable and minoritized populations, particularly in Europe and the United States. Reading these chapters, I was reminded of Arundhati Roy, an Indian author and political activist, who asks how the current pandemic, which has exposed severe inequalities in our world, can help us “imagine another world” in which we can address xenophobia, racism, and other structural inequalities globally.

The book also resonates with the work of educators, scholars, and development practitioners in the EiE field, especially with limited resources and the inequitable distribution of resources. In chapter 8, Borg and Mayo illustrate how the pandemic impacted the Republic of Malta. Unlike other European countries, Malta’s economic and financial struggles made it challenging to deliver virtual education to all students. We saw this occur in many other regions, countries, and communities, where the pandemic increased barriers to accessing education.

According to Accioly and Macedo, the pandemic further revealed that generating profits remains a predominant goal of countries, and that maintaining economic productivity and protecting the health and wellbeing of our populations are conflicting goals. As we reflect on the global education response to COVID-19, we in the EiE field are compelled to acknowledge that racism and colonialism are still present in our work.

My own research focuses on indigenous knowledge in education, thus it was encouraging that Accioly and Macedo referred to indigenous philosophies as a counterbalance to capitalism. In the volume’s final chapter, “Resisting and Re-Existing on Earth: Politics for Hope and ‘*Buen Vivir*,’” Katu, Sánchez, and Camargo argue that, although we all were affected by the pandemic, the severity of its impact was “visibly racist and unequal” (p. 148). The consequences of this inequality during the pandemic confirm the pressing need to acknowledge and embrace the multiethnicity of societies in our own worlds and across the wider world. I appreciated that, in chapter 9, Fernandez, Salinas Barrios, and Lira discussed the importance of teachers as change agents in education and how teachers in Chile used the pandemic to amplify their voices, particularly on the use of social media in education.

I agree with Accioly and Macedo's argument that the new normal must become collective, as there are many opportunities to learn from the plurality of knowledge in our world. Mainstream scholars might consider this problematic, but they must acknowledge that there is no one universal truth or universal reality and that the plurality of knowledge can enhance the global dialogue in many fields, including the sciences. This volume provides an important starting point for such conversations, but there is more to discuss and work on. For example, work that builds on this volume should highlight the opinions and experiences of communities in sub-Saharan Africa, where important discussions on inequality took place during the pandemic, including access to health care and virtual education, and where communities are still dealing with the impact of global decisions made during the pandemic.

I would recommend this book to graduate programs preparing students to work in the post-COVID-19 world, and to practitioners in the EiE field who are navigating emergency contexts and dealing with the challenges of ongoing neoliberal and capitalistic interests, as it will encourage them to reflect on and seek alternatives.

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BOOK REVIEW

***LEARNING, MARGINALIZATION, AND IMPROVING THE QUALITY
OF EDUCATION IN LOW-INCOME COUNTRIES***

**EDITED BY DANIEL A. WAGNER, NATHAN M. CASTILLO,
AND SUZANNE GRANT LEWIS**

OPEN BOOK PUBLISHERS, 2022. 488 PAGES

**NO-COST OPEN ACCESS (PDF AND XML),¹ \$42.95 (PAPER), \$57.95
(HARDCOVER)**

ISBN 978-1-80064-202-7

Since the inception of the UN Millennium Development Goals in 2000, the world has made significant progress in improving access to education and school enrollment rates at all levels. In *Learning, Marginalization, and Improving the Quality of Education in Low-income Countries*, Daniel Wagner, Nathan Castillo, and Suzanne Grant Lewis pay special attention to those who are still lagging. They capture the specific realities of children and youth who remain out of school, or are in school but not learning; namely, those who are learning at the bottom of the pyramid due to poverty or their marginal status in low-income countries (LICs). This publication is a compilation of papers on those learning at the bottom of the pyramid, which were presented at a virtual conference hosted by the University of Pennsylvania and IIEP-UNESCO in December 2020. It should be of great interest to scholars and practitioners in the field of education in emergencies, as many learners in emergency contexts overlap with those learning at the bottom of the pyramid.

There are two sections in this edited volume. The first discusses the various thematic issues related to learning at the bottom of the pyramid. In chapters 1 and 2, Pisani and Dowd and Kelcey, Guven, and Burde, respectively, shed light on these learners by identifying who they are and what their challenges have been relative to learning. They outline personal factors such as gender, disability, and language, as well as migration status; discuss how these factors negatively affect learning outcomes; and describe how they have been dealt with at the country level.

Akyeampong (chap. 3) and Castillo, Adam, and Haßler (chap. 4) focus on teachers and the use of education technology (ed tech) in learning in low-income contexts. They argue the importance of teaching at the right level and discuss

¹ Available from <https://www.openbookpublishers.com/books/10.11647/obp.0256>.

how countries have difficulty training teachers to do so. They then address how ed tech could support teachers and fill in this gap. The remaining chapters in this section approach the topic at the macro level. Crouch and Slade (chap. 5) and Van Damme, Prokic-Breuer, and Vermeulen (chap. 6) present different ways of assessing and measuring learning at the bottom of the pyramid, and Al-Samarrai and Benveniste (chap. 7) call for an equitable approach to education financing.

Section 2 of the volume mainly depicts several case scenarios and delineates how differently learning at the bottom of the pyramid manifests in various country contexts. Four countries are featured as examples: Mexico (chap. 8), India (chaps. 9-11), Côte d'Ivoire (chaps. 12-13), and Kenya (chaps. 14-17). These chapters include analyses of the learners at the bottom of the pyramid, their learning-related challenges, and the policies countries have designed and implemented to improve learning outcomes.

One of the main takeaways the coeditors intend to deliver through this volume is the targeted learning approach, also referred to as “contextualized targeting” or “differentiated strategy” (p. 15), that learners at the bottom of the pyramid need in order to improve their learning outcomes. For such an approach to be sustained over time and ultimately “raise the floor” (p. 4) for poorly performing learners, the coeditors emphasize the importance of a holistic or “system-wide approach” (p. 49). The coeditors note that, when designing a program, educators must go beyond simply factoring in gender, disability, or any other marginalizing individual characteristics. They call for more equitable education systems and societies in which learners with disadvantaged backgrounds can thrive. A few contributors to this book argue that many projects are carried out piecemeal and fail to address the deeply entrenched inequalities, thus having little impact.

Taking a targeted approach at the classroom level is known as teaching at the right level, which entails instruction being “tailored to meet abilities or learning levels rather than students’ ages and grades” (p. 84). There is plenty of empirical evidence on the effectiveness of this approach, particularly for low-performing students and in LICs. However, Akyeampong (chap. 3) observes that implementation challenges remain, including professional training for teachers, which is critical to successful learning. Many teacher education programs in LICs do not support the targeted approach and only prepare teachers with “a set of homogenized strategies” or “decontextualized teaching” (p. 99), which does not account for diverse student needs. However, these inadequate approaches are inevitable, considering that many teachers in LICs “have not mastered the school subjects they teach” and, therefore, “their basic pedagogical knowledge can... be weak” (p. 101).

Ed tech appears in various points throughout the volume as a promising solution to education problems. In Côte d'Ivoire (chap. 13), for example, a program “teaching at the right level” used simple messaging apps, such as WhatsApp and Facebook Messenger. This enabled the teachers to stay connected with their pedagogical advisors, ask questions if needed, and receive supporting teaching and learning materials. Adaptive technology is featured in the book as having potential for personalized learning. It is shown to have greater impact than other interventions, such as reducing class size or increasing teacher pay in sub-Saharan Africa (p. 353). However, the importance of aligning the use of ed tech with the desired educational changes the program intends to achieve cannot be emphasized enough. In a similar vein, Castillo, Adam, and Haßler (chap. 4) stress that technology must be guided by the primary objective—improving learning outcomes: “Programs are most effective when they take a problem-first approach rather than a techno-solutionist approach, i.e., when they focus on addressing barriers to improved learning outcomes rather than merely digitizing the learning environment” (p. 115).

The biggest value added this edited volume contributes to the field of education in emergencies is the wide variety of thematic angles the contributors bring to the core topic of learning at the bottom of the pyramid. The book is unique in that the discussion takes place at both the conceptual level (theory) and on the ground (implementation), and the overall scope is not limited to naming who these disadvantaged students are. It also explores different ways of measuring learning inequalities, documenting the initiatives in LICs, and distilling the lessons learned for other countries. This volume will, without a doubt, serve as a cornerstone for reaching those who are still left behind—the last mile of the Sustainable Development Goals. I hope the valuable inputs offered by the contributors, who come from many different walks of life, will help to define concrete next steps in improving learning at the bottom of the pyramid.

That said, the volume would be more useful for the field of education in emergencies if some or all of the contributors had focused explicitly on the experiences of teachers and students in contexts of crisis and conflict. Moreover, the book would have been strengthened by having a concluding chapter in which the rich findings are analyzed as a whole. This also would have provided space for the editors to explicitly call on the international education community to act on the five high-level items to effectively reach learners at the bottom of the pyramid, suggested by Hinton and Kazmi: (1) Face the reality of the learning crisis; (2) Collect data to understand the problem; (3) Take action based on evidence of what is most

BOOK REVIEW

likely to work; (4) Support governments to implement effectively at scale; and (5) Research the drivers of scale.

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JOURNAL ON EDUCATION IN EMERGENCIES

The *Journal on Education in Emergencies (JEiE)*, a scholarly, peer-reviewed journal, aims to fill gaps in education in emergencies (EiE) research and policy. Building on the tradition of collaboration between practitioners and academics in the EiE field, *JEiE*'s purpose is to improve learning in and across service-delivery, policymaking, and academic institutions by providing a space where scholars and practitioners can publish rigorous quantitative, qualitative, and mixed methods research articles, and robust and compelling field notes that both inform policy and practice and stir debate. *JEiE* provides access to the ideas and evidence needed to inform sound EiE programming, policymaking, funding decisions, academic program curricula, and future research.

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DANA BURDE, EDITOR-IN-CHIEF

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