Challenges and Opportunities in the COVID-19 Global Learning Landscape

Program Co-Chairs
Alex Grayson
Amisha Kambath
Membership Director
Amy Zhou
Policy Outreach Director
Swathi Kella

Education Policy Co-Chairs
Natalie Gale
Olivia Morris
Education Policy Associate Editor
Zhen Xu

Education Policy Authors
Delaney Hurley
Marc Leroux-Parra
Phillip Michalak
Virginia Tiernan

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I.   Executive Summary

Since the rapid spread of COVID-19 began in early 2020, the global pandemic has disrupted education systems and practices worldwide, forcing many education professionals to develop hybrid and remote learning strategies on an unprecedented scale. In light of the reality that many countries will be employing such strategies for a significant amount of time due to COVID-19, and because there are many circumstances in the future where our learning during this time may once again be of use, this paper examines innovations and obstacles in the sphere of hybrid and remote education since the beginning of the COVID-19 crisis through a series of case studies from nations with diverse resources and pre-existing education systems. These case studies were produced via a review of policy documents and of teaching strategies within the global Teach For All network, both as documented in previous Teach For All publications and as described in focus groups with current Teach For All educational professionals. In these case studies, particular attention is paid to different technologies that have been employed—including computers, smartphones, radios, and televisions—as well as different premeditated and improvised methods for measuring the success of different strategies in order to make recommendations around the following four themes: High-Technology Areas; Moderate-Technology Areas; Low-Technology Areas; and Assessment and Monitoring.

II.   Recommendations

All recommendations were made as of August 2020.

A.   *High-Technology*

i. High-tech countries benefit from national platforms—ranging from online databases of lessons to nationwide educational television programs—that give students and teachers access to an abundance of educational materials.[1]

ii. Teachers should make use of online systems that provide real-time interaction with students and allow for the tracking of student progress. These ensure that students are engaged with the materials and are on the right track, while giving teachers the opportunity to step in if that is not the case.[2]

iii. Teachers should receive publicly-funded training on how to transition over to e-learning and online platforms endorsed by the state.[3]

B.   *Moderate-Technology*

i. Across all hybrid and remote teaching strategies, educational networks should improve communication systems among teachers so that educators can work together and share strategies in an effort to produce teaching materials and increase efficiency.[4]

ii. Given the additional challenges of maintaining attendance and engagement remotely, teachers should prioritize lesson content that students consider most relevant to their lives.[5]

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[1] See the examples of Encyclopedia Britannica, Seguimos Educando, and SOLE in Argentina, pp. 6-7; Mzeed in Qatar, p. 8; and DASARAN and Hybrid Edu in Armenia, pp. 9-11.
[2] See the use of Zoom, Moodle, Whatsapp, Google Hangouts, and more in Armenia, p. 11.
[3] See SOLE in Argentina, p. 7, and Armenian teachers' desire for training on diverse online platforms, p. 11.
[4] See positive experiences of teachers in such networks in India, p. 12, and in Chile, p. 17.
[5] See thematic direction of lessons in India, p. 13, and of Brazil, p. 13.

iii. Asynchronous digital materials ought to be employed in environments where the number of devices (computers or smartphones) is fewer than the number of active students in families, in order to minimize the necessity of families choosing which child will be permitted the device during synchronous teaching.[6]

iv. Printed materials such as worksheets or packets should be distributed from a central location in the community, ideally one already frequented by families, such as a ration distribution center, water source, etc.[7]

v. On a regular basis, teachers should check in one-on-one with students and/or families by phone in order to encourage engagement, to demonstrate continued investment in student progress, and whenever applicable, to gauge the reach of teaching methods such as radio or WhatsApp.[8]

C.   *Low-Technology*

i. Financial resources should be drawn from diverse sources, including allies abroad and the philanthropic sector, and spending should be focused on building infrastructure to ease the distribution of learning resources such as radios or homework packets.[9]

D.   *Assessment and Monitoring*

i. Assessment and monitoring strategies should be developed before and concurrently as remote and hybrid avenues are implemented in order to ensure thorough understanding of the advantages and disadvantages of any strategy.[10]

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[6] See efforts of Teach for India, p. 12.
[7] See efforts of Teach for India, p. 12.
[8] See the use of this strategy in India, p. 12, and in Brazil, p. 13.
[9] See the challenges outlined by teachers from Nigeria and Ghana, pp. 21-23, as well as the success of extranational grants in Haiti, pp. 20-21.
[10] See the Note on Assessment and Monitoring.

ii. One metric of assessment for any remote or hybrid strategy should always be measuring the number of students reached, and this must be measured using tools appropriate to the strategy at hand.[11]

E. *Areas For Further Study*

i. Future research should seek to clarify the effectiveness of local versus state responses to the pandemic in schools, considering the following questions: Are the methods, effectiveness, and reach of remote and hybrid learning affected by the level at which education is controlled? Is the level at which educational practice is dictated creating a barrier to access for information? Are variable remote and hybrid learning strategies best disseminated via central government websites or within and among smaller teaching communities?

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[11] See the Note on Assessment and Monitoring, and namely the challenges outlined by fellows at Teach for India and Teach for Chile with unidirectional evaluation.

III. High Technological Access

A.   Argentina

Currently, Argentina's strategy is fairly defined. On March 27th, 2020, it was reported that its ministry of education partnered with Encyclopedia Britannica to increase access to remote learning resources with the goal of improving schools' and general learning environments' approaches to long term remote learning. With the volatility of the pandemic, it is difficult to predict how long access will be required and in what quantities. Additionally, this strategy seeks to facilitate the growth of the remote learning market. Britannica's service provides the whole nation access to a digital library full of learning materials for students and training guides for teachers. Furthermore, Education Minister Nicolás Trotta emphasized that the use of this digital library will enhance the use of other strategies, such as TV, radio, print, and digital. He equally emphasized that it's important to the nation's government that they overcome the inevitable socio-economic barriers impeding access to remote learning resources.[12]

Trotta has also advocated for Argentina's online learning platform, seguimoseducando.org.ar, where one can find a collection of academic and educational materials.[13] He also cites television programmes that can be supplemented by the materials on the platform. As much as he and the world would hope for in person teaching to resume, that dream might not be realized until much later in 2020 under a dual system.[14]

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[12] "Argentina's Education Ministry and Encyclopaedia Britannica Partner to Enable Remote Learning," PRWeb, accessed August 27, 2020,
https://www.prweb.com/releases/argentinas_education_ministry_and_encyclopaedia_britannica_partner_to_enable_ remote_learning/prweb17022182.htm.
[13] "Education Minister Tells Argentina's Students: 'It's Not a Vacation'," Buenos Aires Times, March 16, 2020, https://www.batimes.com.ar/news/argentina/trotta-announced-the-plan-seguimos-educando-for-the-quarantine-it-is-not-a-vacation.phtml.
[14] "Education Minister Says Schools in Argentina May Re-Open in August," Buenos Aires Times, May 12, 2020, https://www.batimes.com.ar/news/economy/trotta-believes-that-the-class-would-take-place-in-august.phtml.

Separate from the government, the School in the Cloud, or SOLE Argentina, is a platform

that "aims to promote the [...] methodology so that it becomes a well-known pedagogical theory

which is shared, implemented, and experienced by Argentine teachers on a regular basis."[15]

Together, with a network of partnerships, NGOs, and civil society agents, SOLE provides an

additional platform for students and teachers to be better equipped and informed in this time of

educational uncertainty. SOLE is currently operating through the Institute of Research and

Technology and Learning, a University of Buenos Aires agency.

B.   *Qatar*

Oliver Wyman states that Qatar's education strategy during COVID-19 has centered

around two main pillars: (1) policy and structural changes, and (2) social changes.[16] In terms of

policy and structural changes, Qatar closed all schools nationwide beginning on March 23.[17] Most

semester exams for students in grades 1-11 were cancelled and replaced with "evaluation processes"

that entailed continuous assessment rather than one-time examination.[18] Students at specialized

high schools still took public certification exams with strict social distancing guidelines.

Each testing center provided "masks, gloves, and sterilization tools" and conducted temperature

checks on all students.[19] The government placed limits on classroom capacity and

ensured that students were not within four meters of each other.[20] Finally, the government

[15] "SOLE Argentina," School in the Cloud, accessed August 27, 2020, https://www.theschoolinthecloud.org/partners/sole-argentina/.

[16] "Education Continuity During COVID-19," Oliver Wyman, April 15, 2020, https://www.oliverwyman.com/content/dam/oliver-wyman/v2/publications/2020/apr/education-continuity-during-co vid-19.pdf.

[17] "COVID-19 Fails to Disrupt Academic Year, Thanks to Qatar's Quick Shift to e-Learning," Qatar Tribune, June 8, 2020, https://www.qatar-tribune.com/Latest-News/ArtMID/423/ArticleID/29758/COVID-19-fails-to-disrupt-academic-yea r-thanks-to-Qatars-quick-shift-to-e-learning.

[18] Ibid.

[19] Ibid.

[20] Ibid.

released "awareness plans" for all participants to ensure healthy practices for the duration of the exams.[21]

After schools closed, Qatar fully transitioned to e-learning, which was partly made possible by its strong internet systems.[22] The Ministry of Education created a platform specifically for this purpose called *Mzeed*, which offers "digital and interactive resources...interactive books, textbooks in PDF format, video, audio and many other digital learning materials."[23] The stated goal of this model is to make online education interesting, while providing enough resources to eliminate "the constant need to connect to the internet."[24] They also launched a Youtube channel with over 1,700 video lessons, each lasting between 10-15 minutes, that students from varying levels can access anytime.[25] In addition, Qatari schools use Microsoft Teams to allow for direct interaction between students and teachers.[26]

In terms of social changes, actors within the education system have published various materials to support both students and parents during this transitional period. For example, the Qatari Ministry of Education has published guides for students and parents logging into online learning platforms for the first time.[27] Individual schools such as Sherborne Qatar have created guides on how parents can best supplement the learning of the children on topics like phonics.[28]

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[21] Ibid.

[22] Nidal Al Haj Sleiman, "Inequity and Inaccessibility: What COVID-19 Reveals about the Gulf Education Systems," Gulf International Forum, June 26, 2020,
https://gulfif.org/inequity-and-inaccessibility-what-covid-19-reveals-about-the-gulf-education-systems/.

[23] "The Covid-19 Challenge," Ministry of Education and Higher Education Qatar (State of Qatar, 2020),
https://www.edu.gov.qa/en/Pages/Corona.aspx.

[24] Ibid.

[25] "Qatar Students to Begin Distance-Learning System Sunday," Gulf Times (Gulf Times Commercial Press, March 21, 2020), https://www.gulf-times.com/story/658912/Qatar-students-to-begin-distance-learning-system-S.

[26] Ibid.

[27] "COVID-19 Fails to Disrupt Academic Year, Thanks to Qatar's Quick Shift to e-Learning," Qatar Tribune, June 8, 2020, https://www.qatar-tribune.com/Latest-News/ArtMID/423/ArticleID/29758/COVID-19-fails-to-disrupt-academic-yea r-thanks-to-Qatars-quick-shift-to-e-learning.

[28] "Distance Learning Takes off at Sherborne Qatar during Coronavirus Closure," Gulf Times (Gulf Times Commercial Press, March 23, 2020),
https://www.gulf-times.com/story/659060/Distance-learning-takes-off-at-Sherborne-Qatar-during-coronavirus-closu re.

Broadly speaking, the education sector has continually "emphasized the joint responsibility of students, teachers, parents, [and] school administrations" as stakeholders during this public health crisis, perhaps creating a more favorable social environment for the support of students in their non-traditional educational journeys.[29]

C.   *Armenia*

Armenia's education system responded to the COVID-19 crisis in mid-March by cancelling the majority of exams for its students.[30] Students graduating from high school, as well as 4th and 9th grade students transitioning into new school levels, did not have to take their exams out of safety concerns.[31]

What Armenia has gained most praise for, though, is their widespread use of online learning platforms. One in particular called DASARAN, which means "classroom" in Armenian, is used by approximately 1.2 million people nationwide.[32] Even before the COVID-19 crisis, the platform had gained much recognition since its founding in 2009. Studies find that DASARAN "increased Armenia's public-school academic performance by nearly 40 percent...decreased student absentee rates by 83 percent…[and] increased teachers' computer literacy levels to 81 percent across socio-economic sectors, including the rural regions."[33] Through DASARAN, teachers can post lessons, assign homework, and administer quizzes to their students.[34] Critically, the platform includes a feature in which teachers can view "analytical summar[ies] of their

[29] Ibid.
[30] JAMnews, "Armenia: School Leaving Exams Cancelled Due to Coronavirus, Students Will Only Take Uni Entrance Test," English Jamnews, April 28, 2020,
https://jam-news.net/armenia-school-exams-cancelled-coronavirus/.
[31] Ibid.
[32] Jackie Abramian, "Amidst COVID-19 Armenia's Public Schools Enjoy Uninterrupted Learning," Grit Daily News, March 23, 2020,
https://gritdaily.com/amidst-covid-19-armenias-public-schools-enjoy-uninterrupted-learning/.
[33] Ibid.
[34] Ibid.

students' learning" to determine who needs additional guidance, even from afar.[35] Students also

have the option to interact directly with their teachers to ask questions or receive extra help.[36]

The lessons uploaded to DASARAN are made available to students across Armenia.[37] The

platform also includes a feature called E-Stat, a "diagnostic tool for data-driven decision-

making."[38] E-Stat consolidates information from educators around the country on "school

management efficiency, school enrollment, and student performance uses various indicators" and

rapidly analyzes it to provide information to policymakers and school staff alike.[39] Such a tool

has the potential to improve state-level education policy during the highly unprecedented age of

COVID-19.

DASARAN is not the only example of innovative technology in Armenia's COVID-era

education system. Some lessons have been organized via the state's new educational television

channel called "Hybrid Edu."[40] Other online systems such as "Zoom, Moodle, Blackboard,

Google Hangouts...WhatsApp...and Coursera" have been utilized by teachers as well.[41] However,

not all teachers have been educated on how to utilize these tools.

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[35] Ibid.

[36] Ibid.

[37] "EdTech Platform DASARAN Launches Distance Learning Enabling Uninterrupted Education For Armenia's 1M+ Public School Students," WRCBtv.com | Chattanooga News, Weather & Sports, March 20, 2020, https://www.wrcbtv.com/story/41920393/edtech-platform-dasaran-launches-distance-learning-enabling-uninterrupte d-education-for-armenias-1m-public-school-students.

[38] Abramian, "Amidst COVID-19 Armenia's Public Schools Enjoy Uninterrupted Learning."

[39] Ibid.

[40] "How COVID-19 Is Sending Armenian Education Online," EAIE, May 6, 2020, https://www.eaie.org/blog/covid-19-online-education-armenia.html.

[41] Ibid.

IV. Moderate-Technology Access

A.   India

Representatives from Enlightenment India and Teach For India explained how WhatsApp has been the most effective form of communication for their students. Internet access has remained as one of the toughest challenges in the country. The two organizations are focusing on internet connectivity, accessibility to a safe space at home to practice the activities, parent engagement and the importance of life skills for the upcoming school year. Teachers from each organization are working hard to create custom worksheets for their students, which they make accessible through distribution at central community hubs such as food rationing centers, and look forward to creating personalized workshops for their students in the next couple of months.[42] In person activities, such as LEGO sets for younger children as well as board games and other types of learning tools, are being distributed. The organizations have been highly innovative during the summer in terms of creating additional support systems for the teachers. They are working to build various collaboration systems where fellows can work together in an effort to produce teaching materials and increase efficiency. This strategy has not been a common theme among other partner countries, and has great potential to decrease strain for teachers across the globe.[43]

Evaluations are similarly done via the phone by talking directly with the students. Enlightenment India has created a program to help train teachers on video editing and content creation for the upcoming school year, which would help with continuity in other partner organizations. The online learning environment has allowed greater reach across India in terms

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[42] Samanta, Soumyaparna, interview by Natalie Gale, Zoom Focus Group, 7 August 2020.
[43] Akkinepally, Navya, interview by Phillip Michalak, Zoom Focus Group, 8 August 2020.

of demographics; however, many students are unable to participate due to lack of accessibility to the internet or devices. One immensely beneficial strategy has been leaning more heavily on asynchronous lessons to prevent families from having to choose which child gets to use the family device if there are more synchronous lessons taking place at a given time than there are devices. There is currently no way to measure the full reach of how many students are participating in the online learning classes.[44]

Both Enlightenment India and Teach For India are making an effort to teach ethics and life lessons in their classes. They are creating lessons that have themes such as sanitization, hygiene, and gratitude. This innovation is a strategy that other partners organizations can implement as a way to keep students engaged in online learning environments.[45]

B.   *Brazil*

Teach For All indicated on their website that Brazil had a fairly personal strategy in place. Ensina Brasil's "Good Calling" manages to overcome the technological and social barriers of the new normality. More than 130 teachers participated in the "hackathon" that oversaw the genesis of "Ligação do Bem," which is rapidly expanding nationally. Given the considerable challenges of learning at home with absent experience and a lack of pedagogical guidance, teachers wanted to prevent their students from falling behind, especially given the strong socioeconomic divides in Brazil. After some due diligence, the teachers started delivering 20 minute-long calls with students, often discussing non-academic topics. Teachers chatted with students about staying healthy and active, maintaining routine, leadership, familial relationships, among other common aspects of

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[44] Ibid.
[45] Samanta, Soumyaparna, interview by Natalie Gale, Zoom Focus Group, 7 August 2020.

living. With a team of 10 teachers and 50 students in the pilot and tremendously positive results, the program grew. The reach of this non-governmental program is massive, since "92% of Brazilian households have at least one cell phone, and 4 out of 5 children 10 years or older have a phone of their own."[46]

Aside from "Ligação do Bem" and its growing success, the Lemann Foundation continues its twenty year long campaign for guaranteeing quality public education in Brazil to create the initiative #PeloFuturoAgora. This initiative was set into motion with a "consortium of 30 private, public, and non-profit organizations to offer a bundle of innovations specifically tailored to the nation's circumstances."[47] With close to 40 million children attending public schools in Brazil, the Lemann Foundation and its partners need to overcome a substantial barrier, not to mention the fact that the data plans that most Brazilian's have access to are not always unlimited. As such, the Lemann Foundation has coordinated efforts with WhatsApp to advance #PeloFuturoAgora, which offers free high-quality resources available on a variety of platforms. The Lemann Foundation and its partners are also working on a number of projects like ApprendiZap (a tool that integrates into WhatsApp and provides lesson plans) or YoutubeEdu, which publishes weekly content adhering to the national learning standards.[48]

Other initiatives include the World Bank's Brazil Education team's discussions with Todos Pela Educação (TPE) and the National Council of Education (CNE) to overcome some of the

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[46] "Fostering Connectivity by Phone: Ensina Brasil's 'Good Calling' Bridges the Distance Between Teachers and Students," Teach For All, June 3, 2020, https://teachforall.org/news/fostering-connectivity-phone-ensina-brasil%E2%80%99s-%E2%80%9Cgood-calling%E2%80%9D-bridges-distance-between-teachers.

[47] "Lemann Foundation Launches Remote Learning Initiatives to Benefit Millions during COVID-19 Pandemic," Medium, April 30, 2020, https://medium.com/@lemannfoundation/lemann-foundation-launches-remote-learning-initiatives-to-benefit-million s-during-covid-19-pandemic-f999d800848d.

[48] Ibid.

unprecedented challenges that Brazil faces.[49] Given that 42.2% of 10 year-olds in Brazil do not

understand an age-appropriate text, participation is critical. The World Bank estimates that this

number will increase to 44.8% during the pandemic.[50] The shocking numbers are not aided

by the fact that the Education Ministry was omissive in its COVID-19 response, notably due to

their failure to implement a unified remote learning project.[51] This response arrives despite the

expenditure of more than $305.29 million in new contracts since March 22, 2020 from the

ministry.

C.   Chile

Chile, like many other countries, learned to implement strategies to enhance remote learning

given the adversities and challenges of the COVID-19 pandemic. In a recent survey conducted by

the Chilean Association of Municipalities (AChM), 68% of parents stated that they would not

allow their children to return to school this upcoming school year, with 23.9% undecided, and 8%

would go through with it.The AChM also indicated that 12% of the Chilean population lacks

internet access, which poses considerable challenges for those seeking remote education sources.

The AChM is currently examining strategies to reinforce video education formats. This led to

AChM partnering with local government schools to start a consultation program, titled "Online

and Back to School Modality in Chilean Education," with the goal of educating parents and

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[49] "The Impact of COVID-19 on Education in Brazil," World Bank (The World Bank Group, April 8, 2020),
https://www.worldbank.org/en/events/2020/04/29/the-impact-of-covid-19-on-education-in-brazil.

[50] Ildo Lautharte, "Covid-19 Imposes Unprecedent Challenges to Education in Brazil - Brazil," ReliefWeb (OCHA Services, July 10, 2020),
https://reliefweb.int/report/brazil/covid-19-imposes-unprecedent-challenges-education-brazil.
[51] Rafael Lima, "Brazil's Education Ministry Called 'Omissive' in Its Covid-19 Response," The Brazilian Report (The Brazilian Report, June 17, 2020),
https://brazilian.report/coronavirus-brazil-live-blog/2020/06/17/report-education-ministry-was-omissive-in-its-covid-19-response/.

students about the potential outcomes for the fall. Given the lack of continuity during the transition to online learning, 62% of surveyed parents report that the new online model failed to properly help their children learn.[52]

The idea of a failed transition is somewhat challenged by the Chilean ministry of education, who claim to have been devising procedures and alternatives since January 2020. Raul Figueroa, the chief minister, noted that platforms like "Aprendo en Linéa," "Biblioteca Digital Escolar," and Aptus (which is also available to neighboring nations) have successfully granted students from 1st grade to 12th grade access to more than 10,000 books, class videos, and a variety of other scholastic resources. Aprendo en Línea, currently used by approximately 1.6 million students, observes its services reaching the screens of students in rural communities, only partially shortening the Chilean digital divide. In an interview, Figueroa also highlighted Chile's partnership with Google, utilizing services such as Google Classroom and G Suite Education to their advantage. Figueroa stressed that collective engagement, innovation, and research for novel strategies to face future challenges is paramount to Chile's educational success during the pandemic and potential future crises of similar magnitude.[53]

However, unequal access to Information and Communication Technologies (ICT) has proved to be more of a challenge than predicted. In a recent OECD study, measures of preparedness for ICT-based learning prior to the transition were observed among Teachers, Students, and Schools. The Teaching and International Learning Service observed that 13% of principals reported an intense shortage or inadequacy of digital learning resources, 22% stated the same with respect to

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[52] Andrew Mendez, "COVID-19: Over 68% of Parents Won't Allow Their Children Return to School, Shows Chilean Survey," The Santiago Times (The Santiago Times, June 27, 2020), https://santiagotimes.cl/2020/06/27/covid-19-68pc-parents-wont-allow-their-children-return-to-school-in-chile/.

[53] "How Is Chile Facing the COVID19 Education Emergency? UNESCO Talks with Raul Figueroa, Minister of Education of Chile," UNESCO (UNESCO, April 3, 2020), https://en.unesco.org/fieldoffice/santiago/articles/minister-education-Chile-covid-19.

internet access, and only 39% of students believed that they had access to adequate online learning resources. Despite generally positive results for preparedness among students who had used ICT for learning, those without prior experience will encounter difficulties making the transition, especially without teachers to guide them in person. This, among other pre-existing causes, poses immense challenges for Chilean students in less advantageous areas.[54]

Recently, Enseña Chile (Teach for Chile) has implemented a radio-based learning strategy.[55] "La Radio Enseña" (LRE) is a 30-minute radio program that "delivers quality and entertaining educational content for students in secondary education" across various core disciplines (Math, Science, Spanish etc.).[56] Interestingly, LRE can also be used for the 4.9 million adults who have not finished secondary school, or those who were not able to pursue an education in a non-socially distant context. Enseña Chile formed a group of 90 teachers and professionals to coordinate these lessons across 95 radio stations and 1200 radios, who greatly helped to disperse the information. There are, however, some drawbacks to this strategy. LRE, based on a model originally conceived by Teach For Nigeria, fails to overcome the possible lack of motivation, "absorption" capacity, and value of in-person learning, along with implementation challenges. The pre-recorded lessons prevent any student-teacher interaction from occurring, and students who need to ask clarifying questions will no longer be able to with this format. To overcome this, the use of social media has been put in place for students to ask questions. Another limitation is the lack of radio ratings in Chile, which makes it difficult to know just how many students are making good use of this service. Enseña Chile has provided key

[54] Etienne Albiser et al., "Chile: Were Students and Teachers Ready?," *OECD* (Paris: OECD, 2020), http://www.oecd.org/education/Chile-coronavirus-education-country-note.pdf.
[55] Tomas Recart, Francisca Chadwick, and Fernando Reimers, "Chile: La Radio Enseña," OECD (OECD, June 11, 2020), https://oecdedutoday.com/wp-content/uploads/2020/06/Chile-La-radio-ensena.pdf.
[56] Ibid.

guidelines for effective communication via radio which makes for a good starting point for other forms of digitally broadcasted education.[57]

In an interview, Maren Ureta of Enseña Chile stated that the beginning of the remote learning transition proved to be very challenging nationwide. She emphasized that despite the teachers' efforts to post information online, the biggest obstacle to surmount was equal distribution and access to the resources. Even with the radio programs, it is hard to ascertain how many students receive the programming, and how many are truly listening. This then requires parental supervision and team efforts on the families' parts. Teachers are collectively reconfiguring the way parents and students view education, undergo evaluations, and work together in grave times of need. For Ureta, the purpose of teaching has lost its meaning over time[58]. Still, with discussions of extreme inequalities[59] and unique attempts to overcome the digital divide,[60] there is potential for Chile to reinforce its remote learning framework in an attempt to rectify some of the educational inequity.

D.   *Peru*

Teach For All (TFA) wrote an article about Peru's successes with radio based remote learning. Other than the radio strategy, TFA mentions that Peru has managed to use televisions to reach students.[61] With the help of fifteen Enseña Peru alumni, the Peruvian Ministry of Education is creating the Aprendo en Casa program which offers learning tools and resources. The video lessons

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[57] Ibid.

[58] Ureta, Maren, interview by Marc LeRoux-Parra and Virginia Tiernan, Zoom Focus Group, 7 August 2020.

[59] Dave Sherwood, "Chilean Student Hits the Roof for Online Classes during Pandemic," Reuters (Reuters, May 29, 2020), https://www.reuters.com/article/us-healht-coronavirus-chile-education/chilean-student-hits-the-roof-for-online-class es-during-pandemic-idUSKBN2352Y9.

[60] Fernando Donoso, "No Internet, No Problem: Teachers in Chile Take Class to Students," The Jakarta Post (Niskala Media Tenggara, June 25, 2020), https://www.thejakartapost.com/news/2020/06/25/no-internet-no-problem-teachers-in-chile-take-class-to-students.ht ml.

[61] "Using Television to Reach Students While Schools Are Closed," Teach For All (Teach For All, April 30, 2020), https://teachforall.org/news/using-television-reach-students-while-schools-are-closed.

included in this program will be broadcast on television. Furthermore, online science workshops geared towards reaching girls in Peru will attempt to overcome some of gender imbalances in science, albeit remotely.[62] The Mini Academy of Science and Technology, or MaCTec is helping to enable girls from a variety of socio-economic backgrounds to learn more about science and technology. MaCTec primarily uses Zoom to access the primary-aged students, despite the immense digital divide in Peru. Reportedly, only 6% of homes in remote areas of Peru have an internet connection, which differs strongly from the 40% in urban areas.[63] This is not the first instance of socio-economic disparities regarding education in Peru, and initiatives like MaCTec, which have the ability to scale up significantly given the emphasis on remote learning, will still struggle to reach all the desired students.

[62]"How Online Science Workshops Are Reaching Girls and beyond in Peru amid COVID-19," UNESCO (UNESCO, June 15, 2020),
https://en.unesco.org/news/how-online-science-workshops-are-reaching-girls-and-beyond-peru-amid-covid-19.
[63] Ibid.

V. Low-Technological Access

A. Haiti

Although there is nothing published by TFA about Anseye pou Ayiti (Teach For Haiti) or any of the government's strategies regarding remote learning, radio based learning has been used to educate children amidst the pandemic.[64] This strategy is particularly advantageous for students who lack access to cell phones and computers. The radio-based distance learning program is funded by the United States Agency for International Development (USAID), and seeks to provide distance learning regardless of location or internet access. USAID cites that during the 2019-2020 school year, "Haitian students will have attended school for only 30% to 50% of their scheduled school days due to political unrest and COVID-19."[65] This program is projected to reach more than 36,400 students. USAID is collaborating with the Haitian Ministry of Education (MENFP), the University of Notre Dame USA, the Alliance for Catholic Education's Haiti branch, and the Global Center for the Development of the Whole Child. This program is building off of previous literacy programs by the MENFP. The radio program is divided into three sub-programs, being a literacy program, a reading-hour program, and a pre-K social-emotional learning and parenting program.[66]

Another example of extranational cooperation in Haiti is the UNICEF Grant for 2020-2021. The grant allocates $7 million to Haiti's education ministry, in coordination with the Banque Interaméricain du Développement (the Interamerican Bank of Development), to support 750,000 children aged 5-14 from disadvantaged rural and urban areas to continue learning through

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[64] "Today's Students Are Tomorrow's Leaders: Radio Distance Learning Program for Haitian Children," U.S. Embassy in Haiti (UNESCO 2019, July 9, 2020),
https://ht.usembassy.gov/todays-students-are-tomorrows-leaders-radio-distance-learning-program-for-haitian-childre n/.
[65] Ibid.
[66] Ibid.

different distance modalities; training for 15,000 teachers to support remote learning; school kits for children and teachers; psychological support for students, parents and teachers; and a variety of other forms of supportive infrastructure.[67]

B. Nigeria

The COVID-19 pandemic in Nigeria has presented a series of challenges for both students and teachers. The country instituted a lockdown during mid-March, shutting all accessible schools down and only allowing students to continue education through remote learning strategies. Radio has been one main source of transmitting learning tools for students across the country, but a conversation with Teach For Nigeria representative Temitope Ifegbesan revealed how it has become increasingly difficult to reach students for a variety of reasons.[68]

First, Teach For Nigeria has trained their teachers to effectively produce packets with worksheets to be distributed to their students. However, there is not a standard mailing system where the teachers can send packets directly to the students. In order to deliver the packets, parents have been commuting and been in contact with Teach For Nigeria representatives. One specific challenge in this arena is the limit of technology available to the parents in order to communicate, in addition to the conflicting working schedules of when parents are at home versus at work and when Teach For Nigeria fellows attempt to call each individual parent. A recommendation to solve this problem includes setting a schedule for parents with their availability so that the fellows can plan a time for when parents and

[67]"Haiti," Global Partnership For Education (Global Partnership For Education, 2019), https://www.globalpartnership.org/where-we-work/haiti.
[68]Igfesaban, Temitope, interviewed by Virginia Tiernan, Zoom Focus Group, 12 August 2020.

teachers can connect at a time in advance.[69]

In addition to finding a time for parents to speak with Teach For Nigeria fellows, one of the greatest challenges that the organization and the country faces is lack of technological access, whether that be lack of internet access, not having a phone or computer, or not being trained on how to use existing technology. There seem to be minimal solutions without significant additional financial backing with these circumstances. However, Zoom training sessions would improve participation and activity for those who do have access to phones and computers. Additionally, teachers have been utilizing printers to print out lesson plans and packets for their students. The 200 Teach For Nigeria teachers are looking for more financial support behind the accessibility of printers to continue preparing hard copies of lessons and tests for their students.[70]

At the moment, there are no solutions other than additional financial resources to solve lack of accessibility to adequate technology for students and parents. For the upcoming school year, one of the top priorities of Teach For Nigeria includes being able to distribute as many radios as possible to families across the country. According to a Teach For All article published mid-May of 2020, Nigeria had closed schools and 48 Teach for Nigeria fellows began developing and recording specialized lessons to distribute to students.[71]

One thing that has improved as a result of online learning tools is that the emotional well being of students is easier to analyze than ever before. Emotional analyses are done via the telephone have improved since being in person as it has been much easier to measure how students are faring emotionally.[72]

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[69] Ibid.

[70] Ibid.

[71] "Radio Lessons Help Keep Teachers and Students Connected During Lockdown," Teach For All (Teach For All, May 12, 2020), https://teachforall.org/news/radio-lessons-help-keep-teachers-and-students-connected-during-lockdown.

[72] Igfesaban, Temitope, interviewed by Virginia Tiernan, Zoom Focus Group, 12 August 2020.

C. Ghana

Similar to Nigeria, Ghana has been experiencing the most challenges with access to Internet and technology. In Sub-Saharan African countries, schools act as a primary source of care. Without in person interactions, many students are unable to have access to as many meals or learning tools. In March, Ghanaian President Nana Akufo-Addo decided to shut down all primary, junior, and senior schools. Power outages are an added obstacle to accessibility of remote learning strategies. As a result, Ghana's best plan to accommodate students is to focus on producing learning materials which can be printed. In order to effectively produce such materials, teachers must work collectively with each other to avoid repeated lessons. There is currently not a solution to lack of Internet access or online strategies, other than turning directly to the federal or state government to seek funding sources for increased resources.[73]

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[73] Wunpini Fatimata Mohammed, "COVID-19 and Challenges to Teacher Education in Rural Ghana," Teach For All (Teach For All, 2020),
https://teachforall.org/news/radio-lessons-help-keep-teachers-and-students-connected-during-lockd

VI. A Note on Assessment and Monitoring

Over the course of focus groups conducted with six teachers from within the Teach For All network, located in Ghana, India, Chile, and Colombia, it became clear that more planned, standardized, and intentional methods of assessment are necessary in order to thoroughly evaluate the efficacy of different remote and hybrid learning strategies. Teachers from each partner country independently identified as the primary criteria for assessment the number of students reached, the perceived quality of engagement and continued investment in educational progress on the part of students and families, and the address of any particularly relevant learning goals for the student body in question. In some cases, there are mechanical difficulties in assessing these criteria—for example, Soumyaparna Samanta, a Teach For India fellow, and Maren Ureta, a fellow in Chile, expressed the challenge of quantifying precise number of students reached with unidirectional strategies such as dispersed packets and radio lessons. In others, the assessment required a level of direct communication with families that often posed health risks or was impossible due to technological or time limitations on the part of teachers or families. We strongly recommend that wherever feasible, assessment and monitoring strategies ought to be developed before and concurrently as remote and hybrid avenues are implemented in order to ensure thorough understanding of the advantages and disadvantages of any strategy and create a basis for comparison between strategies. We also recommend that further research focus on developing tools to specifically measure the number of students reached across different hybrid and remote learning strategies, particularly unidirectional strategies.[74]

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