

**LEARNING LOSS IN LATIN AMERICA AND THE
CARIBBEAN: BUILDING BETTER EDUCATION
SYSTEMS IN THE WAKE OF THE PANDEMIC**

HEARING

BEFORE THE

SUBCOMMITTEE ON

WESTERN HEMISPHERE, CIVILIAN SECURITY,
MIGRATION AND INTERNATIONAL ECONOMIC
POLICY

OF THE

COMMITTEE ON FOREIGN AFFAIRS

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**LEARNING LOSS IN LATIN AMERICA AND THE
CARIBBEAN: BUILDING BETTER EDUCATION
SYSTEMS IN THE WAKE OF THE PANDEMIC**

Thursday, September 15, 2022

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON THE WESTERN HEMISPHERE, CIVILIAN
SECURITY, MIGRATION, AND INTERNATIONAL ECONOMIC
POLICY,
COMMITTEE ON FOREIGN AFFAIRS,
Washington, DC.

The subcommittee met, pursuant to notice, at 12:48 p.m., in room 2172, Rayburn House Office Building, Hon. Albio Sires (chairman of the subcommittee) presiding.

Mr. SIRES. Good afternoon, everyone.

Thank you to our witnesses for being here today.

This hearing, entitled “Learning Loss in Latin America and the Caribbean: Building Better Education Systems in the Wake of the Pandemic,” will come to order.

Without objection, the chair is authorized to declare a recess of the committee at any point, and all members will have 5 days to submit statements, extraneous material, and questions for the record, subject to the length limitation in the rules.

To insert something into the record, please have your staff email the previously mentioned address and contact the subcommittee staff.

As a reminder to members joining remotely, please keep your video function on at all times, even when you are not recognized by the chair.

Members are responsible for muting and unmuting themselves, and please remember to mute yourself after you are finished speaking. Consistent with H.R. 8 and the accompanying regulations, staff will only mute members and witnesses as appropriate, when they are not under recognition, to limit background noise.

I see that we have a quorum, and I now recognize myself for opening remarks.

Good afternoon, and thank you to our witnesses for coming and testifying before our committee today.

A defining feature of the COVID–19 pandemic was its ability to worsen social issues that predated it. Latin America and the Caribbean nations have struggled against a legacy of educational scarcity, stagnation, and inequality. While some countries have made significant strides toward universal access to education, literacy and dropout rates in the region were trending in the wrong direction before the first case of COVID–19 was detected there.

The pandemic brought about an unprecedented disruption of the region's academic institutions, interrupting the education of nearly 200 million students. Latin America and the Caribbean had longer school closures than any other region in the world, due in large part to limited resources and inadequate capacity to adapt.

Students who were lucky enough to access virtual education still lost out on critical face-to-face services, such as school meals and access to social support and mentorship. Those who reside in rural areas, live with disability, or face economic adversity are now at a heightened risk of falling out of the system entirely.

The long-term impact of this could be devastating. According to the World Bank, pandemic-related school closures in Latin America and the Caribbean could have nearly two out of every three students incapable of reading and writing at grade level, and nearly 80 percent are already falling behind on basic foundational skills.

In the absence of interventions to make up for lost instruction, this generation of students will not be prepared to participate in the modern economy. A recent study estimates that current students in the region could lose out on \$1.7 trillion in future earnings.

Without the prospect of economic mobility, more young people will turn to gang affiliation, informal employment, and migration to our southern borders. Further, they will be increasingly susceptible to online disinformation and political radicalization.

Long before I was elected to Congress, I taught teenagers at Memorial High School in West New York. Over half of my students were free-lunch-eligible; a third spoke English as a second language, including myself, by the way; and many of them had endured financial hardships from an early age.

As a teacher, I saw firsthand the impact that a student's environment has on their ability to learn. I can only imagine how difficult it is to navigate these challenges in isolation or to attempt to reach students through a screen.

The immediate, sweeping effect of the pandemic on education in Latin America and the Caribbean is a wake-up call for many who are focused on the region. However, the repercussions of this crisis can be mitigated with a recognition of the problems that were present before the pandemic as well as an acknowledgement of our past failures to provide equal access to quality education in the region.

It will take a coordinated international effort, with support of the United States, to move beyond confronting the damage done by the pandemic and take on the challenge of building better education systems in Latin America and the Caribbean.

We are lucky to have the opportunity to learn from experts who can illustrate the scale of the problem and provide us with recommendations for supporting student achievement across the Western Hemisphere.

I will now recognize Ranking Member Green for his opening remarks.

Congressman Green?

Mr. GREEN. Good afternoon, everyone. And thank you, Chairman Sires, and to all of our witnesses for being here today.

Two years following the initial outbreak of COVID, the facts about the coronavirus and its implications are well-known to each of us by now. Unfortunately, though, instead of following the science, as was the quasi-religious motto over the last year, it is a sad fact that, both in the United States and Latin America, schoolchildren are paying the price for radical policies. This is despite new guidance from the CDC that disputes the narratives many people took as gospel truth since March 2020.

Many were so determined on silencing any and all dissent that even data-driven arguments from physicians like myself urging schools to reopen were summarily silenced. What is even more absurd is, as the performance numbers of our children have fallen and with FOIA evidence that the CDC worked with the liberal teachers' unions to keep schools closed, the liberal media is trying to flip the narrative and say that it was Republicans that closed the schools. Americans are not buying that lie.

As I know everyone on the subcommittee and the full committee would agree, our most valuable resources are young children, the future generations. One of the most tragic ways in which this mismanagement of the COVID-19 pandemic has continued to hurt America and her allies is the mass closure of schools and institutions of higher learning.

In fact, according to the United Nations, after only 2 years of the pandemic, 7 of 33 Latin American nations are operating at full and in-person capacity. We shouldn't be surprised, then, that school completion rates in Latin America have plummeted, from 56 percent to 42 percent. This is a tragedy for the next generation and comes after billions of dollars of U.S. spending in development aid and vaccine assistance worldwide.

The story is the same here at home, though. American schools saw a disastrous 12-percent decline in middle-school reading comprehension. Likewise, math and science comprehension reached an all-time low. In my home State of Tennessee, there has been a shocking 50-percent decrease in proficiency rates for reading and a projected 65-percent decrease in math. A report from Vanderbilt University found that student chronic absenteeism significantly increased, with nearly one in four students classified as chronically absent.

Even this crisis, though, pales in comparison to the mental-health crisis facing our children. As reported by the U.S. Surgeon General, suicide attempts by teenage girls rose by a shocking 51 percent during the closed schools. A quarter of all young people in our Nation have recently experienced symptoms of depression, and a fifth have symptoms of anxiety.

Despite these shocking metrics, Democrat dogma has continued to impose lockdowns and performance efforts like masking that have zero effect on public health in that population.

The problems are endless, and our adversaries know this. The Chinese Communist Party is taking full advantage of the virus that it unleashed on the world to influence institutions of learning, particularly in Latin America and the Caribbean. Since 2006, CCP-sponsored Confucius Institutes have developed a substantial presence in 23 Latin American and Caribbean nations and continue this expansion at an alarming rate.

There is an extremely troubling trend that, as more Confucius Institutes emerge in the Western Hemisphere partner nations, the CCP gains an ever-larger footprint and influence on our partners' and allies' economic and foreign policies. Argentina, Brazil, Chile, Colombia, Mexico, and Peru each have a strong Confucius Institute presence and are becoming increasingly economically dependent on China. Clearly, the CCP doesn't let a tragedy go to waste.

I am glad that my majority colleagues have a concern for students in Latin America and the Caribbean. It is a concern that I share wholeheartedly.

As we have discussed in this committee countless times, a free and prosperous Latin America and Caribbean is clearly and transparently in the interests of the United States. As Chairman Sires and I have Stated together before as we were unveiling our Western Hemisphere nearshoring bill, preserving and building upon the prosperity of our neighbors to the south is a key first step in solving the migrant crisis at our southern border.

It is an extension of this very same effort to improve the education outcomes for Latin American and Caribbean students and an absolute imperative for this subcommittee. I look forward to hearing the testimony of our witnesses today on how we can rebuild these education systems and overcome the setbacks of the past few years.

I yield back the balance of my time.

Mr. SIREs. Thank you very much, Ranking Member Green.

I will now introduce our witnesses.

Mr. Leandro Folgar is the president of Ceibal, Uruguay's education, technology, and innovation agency. He leads the ed-tech national strategy and faced major challenges with the COVID-19 crisis.

He earned a B.A. In education from Universidad Catolica del Uruguay and a master's degree in technology, innovation, and education from Harvard University.

A former Fulbright student, entrepreneur, and business consultant, he began his career in education as a teacher and has more than 13 years of experience in different school positions. He is passionate about technology, the evolution of education, and its influence on the future of our global society.

Mr. Folgar, we welcome you to the hearing.

And I ask the witnesses to please limit your testimony to 5 minutes, and, without objection, your prepared written statements will be made part of the record.

Mr. Folgar, you are recognized for your testimony. Did I pronounce that correctly?

**STATEMENT OF LEANDRO FOLGAR, PRESIDENT OF PLAN
CEIBAL, ORIENTAL REPUBLIC OF URUGUAY**

Mr. FOLGAR. Yes. Thank you, Chair Sires, Ranking Member Green, and distinguished members of this committee, for the invitation to make a statement as a witness in this session.

Building better education systems in the wake of the pandemic has been a goal for Uruguay and Ceibal besides the topic of this hearing today. Ceibal's most recent claim is "learning from the future," because it is part of our DNA to innovate and ensure that

educational technology is equitably distributed in our country and education system. The organization's commitment, as Uruguay's educational innovation and technology agency, to provide an access to connectivity and technology, plus meaningful pedagogical approaches during the pandemic, has been total.

These facts generated that the regional community in the Southern Cone of the Americas and the Caribbean reached out to us to complement their education efforts during the pandemic. Furthermore, the international community and multilateral development organizations have recognized the good results in Uruguay, despite the unprecedented negative situation generated by the COVID-19 pandemic and school closures.

Ceibal's experience in Uruguay allows us to observe the capacity that public policies can have when it comes to reducing the digital gap, boosting the quality of learning, and promoting educational continuity.

During the COVID-19 pandemic, Ceibal's technological solutions allowed schools to implement distance/blended emergency teaching/learning models with flexible dynamics and adaptable to various contexts. In 2020, its virtual teaching platform reached 88 percent of the students and was positioned as the fifth site with the highest number of visitors in the country.

However, the participation of students in this period had differences. Some gaps became more profound, and new ones emerged. This reality was even worse in other countries of Latin America and the Caribbean.

Ceibal's team's experience with innovation and practice trying to solve complex problems with imperfect technologies for more than 13 years was one of the many reasons why Uruguay was able to offer learning continuity during school the closures, and it was also the main reason why the organization experienced one of the best cycles of internal innovation in its history.

Ceibal created new software for learning, adapted its infrastructure to help Uruguay become the only country in Latin America with a public education system both online and offline, and provided the real-time data that informed the early reopening of schools when it was safe. Ceibal made the Uruguayan educational system more resilient.

So how to build sustainable, resilient education systems in the region is a challenging, complex question that has taken on considerable significance since the outbreak of COVID-19. Having flexible educational systems that can be remodeled at a pace consistent with the changes we are experiencing and can withstand the different disturbances that may occur is a current challenge in which technology plays a key role.

Technology is not the solution for education, but there is no future in education without technology. Providing education systems aided by technology with quality infrastructure and solutions means providing more students with an education that is more accessible, sustainable, and less prone to interruptions. The pandemic has shown that those who purposefully use available technology for education do better than those who don't.

It is essential to contextualize solutions and understand how countries make technology available and what type of technology is

used locally. Promoting technological infrastructure to enhance learning will depend on each country's possibilities, reality, cultural relationship with the technologies, and available talent. It is an ongoing process that calls for a systematic investment strategy and improvement of technological capabilities.

Ceibal created the Ceibal Foundation, which seeks to strengthen digital education policies in the region as part of its mission, promoting research, innovation, and the dissemination of projects on technology and learning in collaboration with the national and international academic education community.

The foundation coordinates the Alliance for the Digitalization of Education in Latin America, implementing the Rural and Inclusive Digital Education Project in Honduras and other countries of the Caribbean. Both initiatives are funded by international cooperation funds and collaborate with UNESCO in their effort to monitor the education goals for sustainable development related to the proper use of technology.

Ceibal is open to collaborating with the international community, and this is why this hearing becomes so relevant for us.

[The prepared statement of Mr. Folgar follows.]

September 2022

Building Better Education Systems in the Wake of the Pandemic



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Context

Uruguay

Uruguay (República Oriental del Uruguay) is located in the southern extreme of Latin America between Argentina and Brazil and on the Rio de la Plata and the Atlantic Ocean. Historically, livestock farming has been its main industry, but in recent years a number of novel industries have become more and more relevant; among them, the software industry. With a population of 3,500,000 people, it has the highest literacy rate in Latin America (UNPD, 2005). Politically, Uruguay has the strongest democratic system in the region -it ranks #15 in the democracy index 2020 report (The Economist Intelligence Unit, 2021), and is among the top five Latin American countries in terms of GDP (The World Bank, 2022).

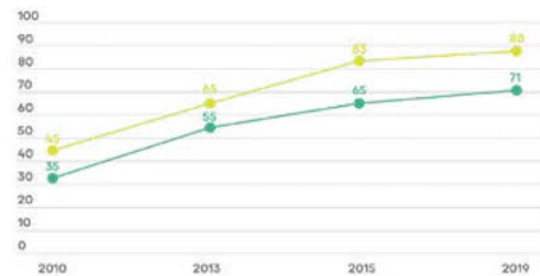
Connectivity

Nine out of ten people have internet access in 2019, and its use increases significantly: 79% of the population connect daily.



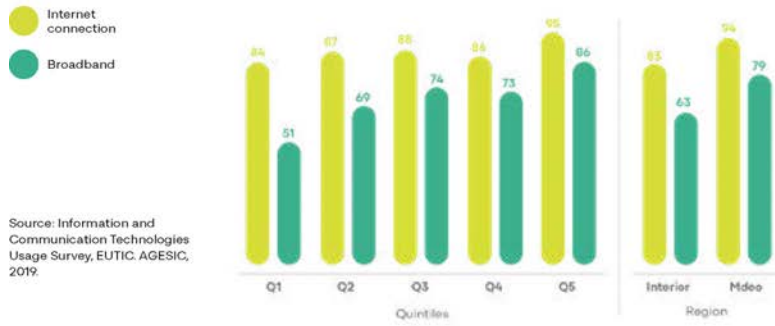
Source: EUTIC 2010-2019
Base: total households

Figure 1 | Households internet connection and fixed broadband



Internet access is widespread among households in the highest income quintile: 95% of these households have internet connection, and 86% have fixed broadband (Figure 2). Among lower income households, 84% have internet connection and 51% have fixed broadband.

Figure 2 | Internet connection according to income quintiles and region



Percentage of people across the country.

Figure 3 | Access to PC, 2007:

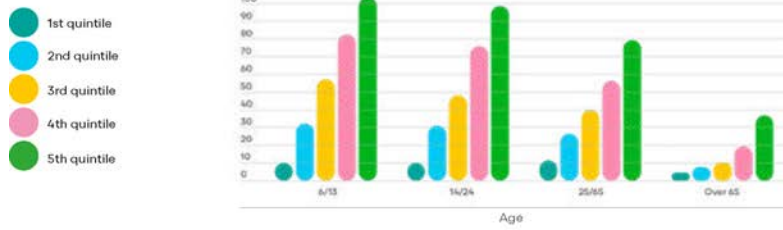
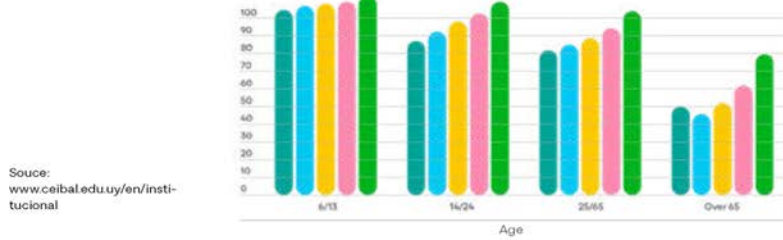


Figure 4 | Access to PC, 2016:



a. Uruguayan education system¹

With 3.5 million people, school-aged children (4-17 y.o.) represent approximately 20% of the population. The Uruguayan education system includes fourteen years of compulsory education, and boasts the highest literacy rate in Latin America at 98% (Edelman & Fernández, 2010).

The Uruguayan education system is unique in that there are three primary institutional actors: the Ministry of Education and Culture (MEC), the National Public Education Administration (ANEP), and the University of the Republic (UDELAR). Unlike OECD-member countries, it is the autonomous ANEP, not the MEC, which holds the most power over public education, responsible for the establishment of Uruguay's education policies, administration, and teacher training (Hinostroza et al., 2011).

ANEP consists of the Central Governing Council (CODICEN) and 3 Directors (primary, secondary and vocational education) and 1 Council for governing the teacher education programs that cover different areas of the education system. However, their roles are not clearly defined. For example, while CODICEN coordinates the councils and is hierarchically superior, the councils act almost entirely autonomously, showing no coordination between them or with CODICEN. (Santiago et al., 2016).

b. Ceibal

The need to solve this issue may have contributed to President Tabaré Vázquez's decision to introduce the Ceibal reform through Executive Presidential Decree 144/007. Born out of the political will to merge technology and education, Ceibal responded to the "need to advance toward an information and knowledge society" (Mateo-Berganza Diaz & Lee, 2020 in Delso Segovia, et. al. 2022).

The Equity program for Access to Digital Information (PEAID) was launched in December 2006, based on the MIT non-profit organization, One Laptop Per Child (OLPC), which provided digital devices to address critical education gaps. Ceibal was subsequently created in 2007 to provide a laptop to every student and teacher in public primary education (Plan Ceibal & ANEP, 2011 in Delso Segovia, et. al. 2022).

Ceibal's theory of action is to promote "the integration of technology into education in order to improve learning and promote processes of innovation, inclusion and personal growth" (Plan Ceibal, 2020 in Delso Segovia, et. al. 2022).

While creating Ceibal via an executive order was arguably wise at the time, enabling a fairly swift implementation of OLPC, prioritizing speed, meant sacrificing "closer coordination with educators and education authorities" which may have "helped to better integrate education technology into teaching and learning." (Delso Segovia, et. al., 2022)

¹ Extracted from Delso Segovia, et. al., 2022

Ceibal is Uruguay's digital technology center for education innovation at the service of public education policies. Ceibal promotes the integration of technology to improve learning and foster processes of innovation, inclusion and personal growth.

Ceibal believes that technology improves education since it creates innovative pedagogical experiences and educational activities that could not otherwise be carried out, such as distance learning, customization through platforms, distribution of digital books, or the development of blended educational strategies.

From its inception, Ceibal aimed to universalize public education students and teachers' access to computers and the internet. After meeting its goals for Primary Education students, its scope was extended to Lower Secondary Education (Secondary Education and UTU) and those private schools interested in joining the proposal. As of the Budget Act of 2020, computers were also delivered in Upper Secondary Education.

Within the framework of the Ministry of Education and Culture (MEC) principles and goals set out in the National Education Policy Plan 2020-2025, in conjunction with the National Public Education Administration (ANEP), and aligned with its Education Development Plan 2020-2024, Plan Ceibal aims to provide students with the skills required for an information society, through innovative technologies and methodologies applied in various areas of knowledge (STEM, Language, Foreign Languages, etc.). Through the Deep Learning paradigm, education is comprehensively promoted, coordinating knowledge, up-to-date information, life skills and competencies such as creativity, collaboration and perseverance.

Since its creation in 2007, Plan Ceibal has gone through four stages: The first three were identified by Michael Fullan in "Ceibal: los próximos pasos" (2013), and the fourth began in 2020:

1. 2007-2009.

Delivery of devices to students and teachers; schools were connected to the internet.

2. 2010-2012.

Deployment of platforms and teacher support.

Emphasis shifted to encouraging the use of computers. A new position was created, the Ceibal Support Teacher (MAC), and multiple platforms set up for teacher work management, online assessment and education.

1. Digital Library
2. Adaptive Mathematics Platform (PAM)
3. CREA Platform
4. Online Evaluation System

3. 2013-2019.

Technologies as accelerators for new pedagogies.

The objective is to transform teaching practices through the integration of computers into the learning process. As of 2014, the technological deployment and software programs were maintained, but the use of technology as an accelerator for customized learning processes was increased. Plan Ceibal implements a series of initiatives that put into practice the latest concepts and

proposals of contemporary educational knowledge (e.g., the Global Learning Network, the Computational Thinking program and the Digital Citizenship Education initiative). These initiatives' objectives, content and design make them examples of "new pedagogies".

4. 2020-2025.

Systemic approach, teacher orientation and blended teaching. In 2020, Plan Ceibal began to transition a fourth phase adjusting its proposals to the needs of the teaching personnel through the design of user experiences, increased communication with the education communities, and coordination opportunities with ANEP. In turn, blended education modes are developed and the technological infrastructure required is set up. The aim is to strengthen inter-agency processes within the education system, e.g., the creation of the Inter-Agency Data Board composed of Plan Ceibal, ANEP, MEC and INEED. The aim is to promote international exchanges on the integration of education technologies.

Pedagogical framework

In order to fulfill its mission Ceibal focuses on three areas of action that promote pedagogical innovation and integration of education technologies:

Pedagogical practices and learning environments.

Our motto is "learning by doing." We place each student at the center of the learning process, which is supported by technology. We foster collaborative workspaces where we promote the culture of making (maker culture) and project-based learning since we believe that this approach develops key competencies for the world we live in. The experiences proposed cater for the students' different interests, and make teachers the catalysts for learning.

The use of virtual platforms and digital resources enables learning environments outside the classroom, extending pedagogical time and transforming other spaces outside school into learning spaces. This technological deployment makes it possible to test innovative models such as videoconferencing teaching where the triad remote-teacher, classroom teacher, technology facilitates learning in areas as diverse as English, Computational Thinking, or Science and Art.

In this framework, pedagogy-oriented technology takes on the role of "digital trigger" enabling, customizing and accelerating learning in places where it would not be possible otherwise. This ubiquitous learning also enables greater family involvement; families are learning catalysts, being also a fundamental pillar of blended education and remote teaching global models that have expanded their scope in the past years. (Strategic Plan. Ceibal, 2021)

Ceibal delivered an XO computer with free digital access to Biblioteca Digital Ceibal to every primary-school student and teacher. Notably, there was a significant increase in access to technology in Uruguay between 2007 and 2017. Over ten years, PC access in all age groups and income quintiles increased. An outstanding increase was observed within the youngest group, aged 6 to 13, which saw over 90% improvement across all income quintiles (Plan Ceibal, 2020 in Delso Segovia, et. al. 2022).

By 2021, over 2.5 million devices have been delivered, thus securing access for students and teachers in secondary education (Ceibal, 2021). By providing 3,023 education centers with connectivity and equipping 1,500 with video conferencing platforms, Ceibal has also ensured that “every educational center in the country is now connected to the internet” (Mateo-Berganza Diaz & Lee, 2020 in Delso Segovia, et. al. 2022).

Guaranteeing universal access to computers and digital textbooks highlights Ceibal’s commitment to inclusion in its theory of action. This evidence also underscores Ceibal’s direct effect on students in narrowing the digital divide and “promoting equal access to information and communication tools for all our people” (President Vázquez, 2009). Ceibal’s intended impact to narrow the social divide between urban/rural students and those from different socioeconomic backgrounds through the universal provision of technological education is reflected in the aforementioned improved access (Trucano, 2009).

This complements one of the MEC primary objectives to “guarantee the use of ICT as an instrument for the democratization of knowledge” signaling early alignment between Ceibal and prominent local government entities (Ministerio de Educación y Cultura, 2021). The tight intertwinement between Plan Ceibal and Uruguay’s most influential education decision-makers is not coincidental, given its status as a privately run but publicly funded organization.

Additionally, representatives from the MEC and ANEP form half of the Ceibal board of directors. This results in undeniable political influence, while also allowing some degree of autonomy.

Ceibal also offers a robust learning management system, CREA, which proved particularly influential during the COVID-19 pandemic. In October 2021, 376,836 students and teachers entered CREA; of those, 347,585 were students (92%) and 29,251 teachers (8%).

The CREA platform hosts a vast collection of tools, over 1,500 educational resources, and a guidance section on “how to support pedagogical continuity from home, targeting parents and students’ families” (Florencia Ripani, 2020, in Delso Segovia, et. al. 2022).

There is clear alignment in encouraging innovation, as named in its theory of action, by providing more tools and resources, as well as a commitment to personal growth by including resources targeted at supporting student learning in partnership with their families. Ceibal has since expanded its activities far beyond OLPC, its remit now encompassing branches for teacher training, English language instruction, and coding and robotics initiatives.

The use of technology to achieve social and educational goals promotes a national digital culture, equipping students, teachers, and families with “new digital skills [...] beyond basic reading, writing, and arithmetic” (Molinari de Rennie & Canale, 2019, p.7). These goals – of equity, knowledge, and inclusion – are at the core of the Plan Ceibal reform, and in direct alignment with the United Nations Educational, Scientific and Cultural Organization’s (UNESCO) goal “to close the digital divide in education, and to consider digital literacy, for students as well as for teachers, one of the essential literacies of the 21st century” (The International Commission on the Futures of Education, 2021, in Delso Segovia, et. al. 2022). This alignment signifies unity in a global context.

Strategic areas

Ceibal provides every student and teacher at primary and basic secondary public education with a personal computer, internet access in schools, a comprehensive set of educational resources, as well as pedagogical services and programs. (Delso Segoviab, et. al. 2022)

Ceibal works in six strategic areas providing services to the Education System:



Basic Infrastructure. Connectivity and Devices

Ceibal provides broadband connectivity to 94.4% of public schools, and other types of internet connection to the remaining 5.6%, thus covering 100% of schools. This network provides broadband connection to 99,8% of school children in the Public School System.

Also, Ceibal provides high quality video conference equipment to 52% of schools, chosen with specific criteria for education settings, creating the widest videoconference network in Latin America.

In terms of devices, laptops and tablets are purchased in international open bids and following specific criteria designed for devices in education settings. In 2022 154,800 new devices were delivered to students and teachers following the distribution criteria mentioned previously in this article.

A strategy for repairing devices is crucial for the success of technology projects with young children. Ceibal decided to assume the cost of repairing devices by creating a repair center network all over the country. Each province has a repair center and by a collaboration agreement with the National Post Office, students send their devices by mail for repair and get it back free of charge. Through this network Ceibal provides support to 592,027 devices at the moment this report was prepared.

In addition to that basic infrastructure Ceibal also distributes other technologies for Education:

Digital Ramps:

Hardware and software solutions for learners with low vision, motor difficulties, etc., these are offered to eligible students all over the country.

Maker Technology:

Following the "learning by doing" premise, Ceibal offers a wide variety of gadgets and tools to implement pedagogical projects, among them, programming boards, robotics kits, drones, sensors, 3D printers and educational video games.



Ceibal provides an ecosystem of platforms to support learning in different areas:

- CREA:** Learning Management System (LMS) that connects teachers with their students and students with their peers.
- Conferences:** Videoconference Tool that allows users to make video calls in CREA, providing the chance of connecting synchronically, as a complement of the asynchronous work already happening on the platform.
- Little Bridge:** Gamified English learning platform that includes an online automatic assessment system.
- Biblioteca País:** An intuitive, easy to use digital library with over 9,000 titles to download or read online. Textbooks for elementary and middle school are available for Uruguayan families free of charge.
- Language Platform:** Language Learning Platform that enhances language learning from a communicative perspective.
- Matific:** Gamified platform that aims to improve Math teaching and learning processes. It has an adaptive component that enables students to have a customized experience depending on their strengths and areas in need of improvement. It provides teachers with tools to design and assign tasks and challenges to their students.
- ALEKS:** New online Math adaptive platform.



Ceibal designs innovative, student-centered programs to create learning environments where competencies unfold, enabling students to make their own decisions, to co-design their learning path and to solve problems through technology. A brief summary of each project is included below:

Computational Thinking

This project is based on an innovative design created by Ceibal en Inglés (a language teaching program described later) that combines remote video conference teaching, follow up activities in an LMS, and collaborative work between the classroom teacher and the remote teacher.

Students solve problems using the logic of programming and the cycle of computational thinking: identify a problem, decompose it into smaller parts, recognize patterns, abstract it and create algorithms to create an innovative solution. They learn logical thinking, how to represent information in different formats, and problem solving skills.

Ceilab

Maker spaces designed at schools to work on technology-based collaborative projects, following the premise of "learning by doing". Ceilabs include most of the technology described and provide opportunities

for teacher development, collaborative work, creativity, critical thinking, communication and other 21st century skills, designing solutions to problems using technology.

Robotics, Coding and programming Olympic Games

Elementary and High School groups from all over the country work during the school year on a topic designing their own robotics and coding projects. The completion of this process is celebrated in an annual gathering, a big project showcase where students share their ideas with the audience and best projects are awarded.

Jóvenes a Programar (Programming Youth)

Spin off project that has the goal of training young people to get into the IT sector industry. It is a public-private partnership with local and international organizations (CUTI, BID Lab, INEFOP and the main tech industries based in Uruguay.

Artists and Scientists in the Classroom

Videoconference supported projects where local artists and scientists connect with students nationwide to show their work and share their knowledge in interactive conferences. As a complement of these conferences, activities and extra materials for teachers are uploaded to CREA to create a learning experience beyond the videoconference lesson.

Diseñando el cambio (Design for Change)

Project that applies the design thinking process (based on four stages: feeling, imagining, doing and sharing) to solve local problems and the need for changes in education centers. It is aimed both at teachers and students. This program is part of the international network "Design for Change".



Digital Citizenship

This program focuses on developing the necessary digital skills to be a competent digital citizen, promoting a critical, responsible and creative use of technology. It is part of a national strategy of digital citizenship, designed with other strategic partners, such as AGESIC (National Digital Government Agency) and also a part of Ceibal strategy on Digital and Global Citizenship and Wellbeing.

Red Global de Aprendizaje (Global Learning Network)

This program focuses on Innovative pedagogical practices to competence development. It promotes the work around six basic competences: Communication, Creativity, Citizenship, Critical Thinking, Character and Collaboration, and it is the framework in which Ceibal lays all education programs. Red Global de Aprendizajes is part of the International Network "New Pedagogies for Deep Learning" led by Michale Fullan.

Ceibal en inglés (Ceibal in English)

This English teaching program complements the traditional one in Primary Education, solving the issue of the lack of language teachers in Uruguay.

It was the pioneer project on remote teaching for Primary Education in Uruguay, with an innovative design adopted by other projects such as Ceibal's Computational Thinking program.

It combines remote teaching through a high quality video conference call, follow up activities on the LMS (CREA) and collaborative work between the Remote English Teacher (RT) and the Classroom teacher (CT)



Teacher's Professional Development

Ceibal has worked in an alliance with the education system to provide teachers a wide variety of initiatives and professional development opportunities. It is a flexible and diverse offer and each teacher chooses the path to follow according to their professional needs and interests.

Ceibal's professional development strategy:

Focused on digital competences, life skills, and innovation
 Guided by the national curriculum framework and the international digital competence framework
 Offers different tracks that vary in duration and dedication requirements
 Offers integrated certifications and validations by the CFE (Teacher Training Council) and external partners
 Easy access and usability for teachers
 With different topic options/alternatives
 With different scopes (massive or tailored made according to needs)
 Indifferent formats (online, face to face or hybrid)
 Indifferent modalities (synchronous or asynchronous)
 Integrating different platforms.

An interesting opportunity for Teacher Development is the creation of content, particularly in a program called Open Educational Resources (in Spanish "Recursos Educativos Abiertos" or REA).

This initiative helps teachers to create and share their own Learning Objects designed to enrich teaching practices in the digital world. All content is created with Creative Commons licensing and shared in a repository specially built by Ceibal for this purpose.

Courses teach how to design these materials, help teachers to reflect on content generation, collaboration, and promote the creation of teacher's networks to exchange ideas and learn together.



Ceibal aims to become a data oriented organization and also to create a data wise culture in educational settings. In this direction, Ceibal generates strategic information towards a user centered management model. The Data Treatment Unit runs two major projects in this line of work to help teachers and administrators to use data for decision making and assessment of educational policies:

Education Centers Monitor

Digital tool available for principals and administrators with the goal of enriching decision making processes by providing data gathered in ANEP and CEIBAL databases in an intuitive and friendly manner.

Data Observatory

This digital tool provides data about the use of education platforms in the public school system. It contains current and historical data and, thanks to a set of filters, allows teachers and administrators to get data on the scope and use of platforms in different areas of the country and different courses, among other indicators.

Pandemic national education contingency plan

The Coronavirus landed in Uruguay in March 2020, just a few days before the new government settled in office. One of the first decisions involved shutting down schools. Complete school shut down would not last very long since by the end of April a gradual "back to school" plan started to take place. The plan started in rural areas (in schools with low numbers of students, approximately 11,000 students in the whole country), it was then extended to small cities and finally, it included the most populated schools in Montevideo (by the end of June, most schools had returned to classes, though not necessarily in a "normal" scenario). (Check Pag. 15). This resulted in most of the 2020 courses being taught online and eventually in a hybrid format.

2021 started with a peak in COVID cases that impacted on the education system. Attendance was not compulsory, so each school managed its hybrid learning system according to their own capabilities. Early in May a similar "back to school" plan was implemented and students returned to school by the end of the year. (Check Pag. 15). Vaccination plans (March 2021) that gave top priority to teachers and other members of the educational community were

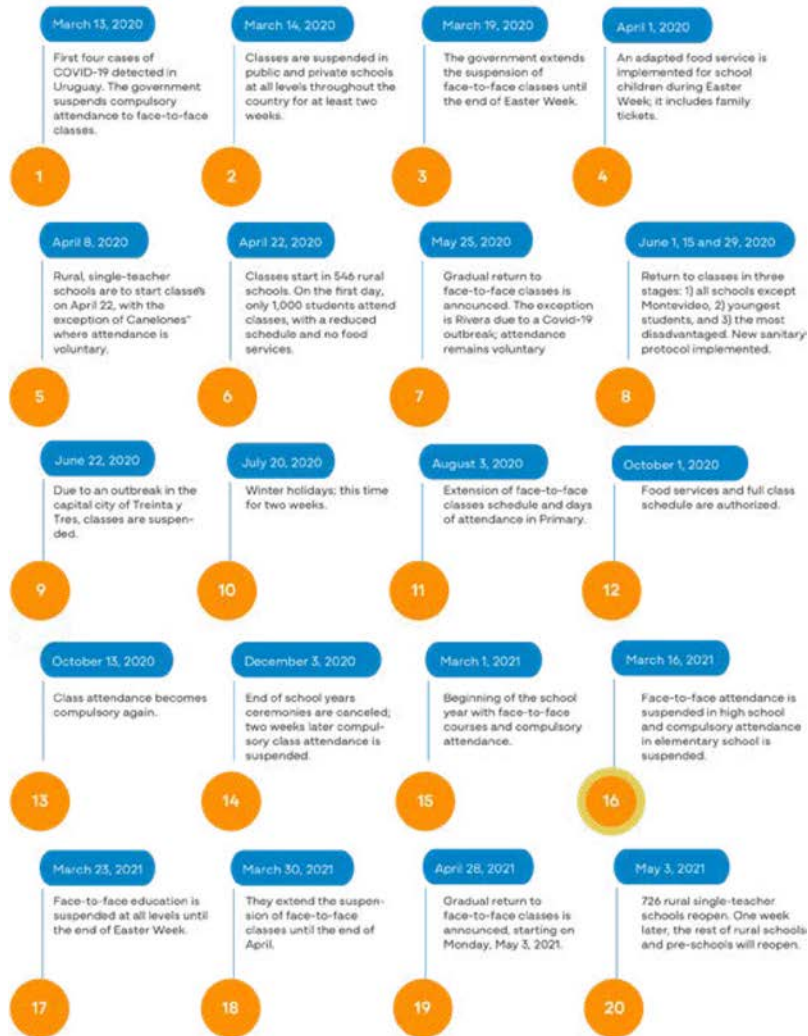
crucial to return to in person courses; 70% of said population was vaccinated (first dosis) by the end of April.

The COVID-19 pandemic meant that schools were closed in Latin American countries for much of 2020 (in most countries it took more than 41 weeks). Uruguay is the country in South America with the shortest period without in-person courses.

Plan Ceibal launched the contingency plan "Ceibal en casa" that made available several resources, among them, the mathematics learning platforms, the virtual learning systems, and the Biblioteca País. Besides, communication campaigns were carried out, support was provided to teachers, students and their families, and data costs to access educational contents was reduced.

By the end of 2020, Plan Ceibal and CREA platforms did not consume internet data for mobile devices with contracts with national (ANTEL) and private (Movistar and Claro) internet providers.

² In this context, measures were implemented to guarantee daily meals for those children who normally had lunch at school. In-person courses were canceled while a national health emergency was declared, borders with countries declared at risk were partially closed, public shows were suspended, and measures to restrict the movement of people were put in place (UNICEF, 2020).



Ceibal Strategy: Ceibal at home

Ceibal en casa (Ceibal at Home) was the contingency plan implemented by the Uruguayan government to mitigate the disruption to education caused by school closures across the country due to the COVID-19 pandemic. It consisted of offering digital platforms and services together with support and guidance for teachers, students, and their families to allow for distance learning for primary and secondary public schools which cover approximately 85% of the total students in Uruguay. Ceibal en casa offers a versatile Learning Management System (LMS) with communication features, digital learning platforms, and more than 173,000 educational resources, including adaptive solutions and gamification.

Ceibal en casa was launched immediately after school closures were announced because it could draw on the pre-existing systematic deployment of Ceibal's digital resources.

In order to implement Ceibal en casa, Ceibal worked in cooperation with the National Administration of Public Education to transform a program designed to complement and enhance face-to-face classes to a fully digital distance-learning solution. This transformation included technical and pedagogical aspects, ranging from new videoconferencing functionalities to ad hoc teacher training as well as guidance for parents (given that their role as mediators in the teaching and learning process became even more crucial than before).

Although complementary contents to reach students with no connectivity at home were put in place (for example, new educational TV programs), Ceibal en casa relied primarily on digital media. This was possible given the relatively high number of households with internet access in Uruguay.

On average, 88% of households have internet access, but this is true for 93% of households with children aged 14 or younger; over 76% of households have access to a computer, partly thanks to the devices provided by Plan Ceibal (INE & AGESIC, 2020).

According to data analytics and to a national survey conducted among teachers, Ceibal en casa's resources were widely used by most students and teachers during the school closures.³(Florencia Ripani. M. (2020), Uruguay: Ceibal en Casa (Ceibal at home), Education continuity stories series, OECD Publishing, Paris)

Mobilizing and developing resources Ceibal had a whole ecosystem of contents and platforms, offering more than 173,000 educational resources that were already available prior to the pandemic. This includes a learning management system (CREA), accessible to all public schools across Uruguay, gamification and adaptive math platforms for primary and secondary education, a digital library with more than 7,000 books, a collection of 1,500 open educational resources and school texts for students free of charge. It also featured a number of educational sites, online resources and software installed

in Ceibal computers and tablets, for example robotics and coding accessories among other materials.

The new features introduced by Ceibal en casa were mostly related to enhancing the digital interaction between students and teachers, and the involvement of families as key facilitators in the teaching and learning process.

When face-to-face classes were suspended, videoconferencing capabilities were added to the learning management system in order to leverage synchronous activities and allow group audiovisual interaction between teachers and students. Although Plan Ceibal had already introduced videoconferencing on a massive scale to teach English remotely in schools in 2013. (Ceibal was a precursor in teaching English as a foreign language remotely by videoconferencing to address the shortage of English language teachers in Uruguay. This method facilitated the interaction between students in Uruguayan schools and remote teachers both in Uruguay and overseas.) Ceibal en casa marked the first time that this distance learning method was fully integrated into the main Ceibal learning management system, becoming universally accessible to all primary and secondary public school teachers and students.

In addition, a special section of the program's site was specifically created to provide content and guidance on how to support pedagogical continuity from home, targeting parents and students' families. This material was also delivered through other platforms, such as social networks.

In order to guarantee educational continuity during the health emergency, Ceibal and the National Administration of Public Education (ANEP) worked together to transform a program based on face-to-face learning into an online learning program. Ceibal en casa was the contingency plan implemented by the Uruguayan government to mitigate the educational disruption due to the closure of schools during the COVID-19 pandemic.

Ceibal en casa was mainly based on digital mediation and was implemented immediately after the announcement of the school closures, thanks to the deployment of pre-existing digital resources.

The disruptive scenario of the pandemic generated enormous challenges but also opportunities to redefine a digital plan that achieved a systematized growth over time and with a high level of ownership and appreciation of the educational community, in a context marked by the expansion of the socio-technological ecosystem.

During 2020, Ceibal was a key player in the reconfiguration of the education system, becoming the main learning environment for children and young people in Uruguay, as well as a mediator between teachers, students and their families. The CREA educational platform reached 91% of students in 2020.

During 2020, Ceibal, as Uruguay's pedagogical innovation agency, in coordination with ANEP, has generated, supported and implemented combined pedagogical formats to contribute to educational continuity both in contexts of school closure and reduced attendance. Based on existing infrastructure and coordination efforts jointly set up with ANEP, new models of combined education and adaptations of projects already underway allowed

students to continue their learning processes even in the context of the COVID-19 pandemic. During class suspension, these platforms registered an increase in users of 53% in primary, 124% in secondary and 165% in technical-tertiary education, according to system data.

Specific training was provided to teachers to improve interaction with students through digital platforms; communication campaigns and distribution strategies for educational resources were presented in a visible, accessible and user-friendly way. Work was also done on the socioemotional impact caused by social isolation. We also worked with strategic partners, such as ANEP - National Administration of Public Education - and UNICEF, for the joint development of the guide "Psycho-emotional support for families during the coronavirus quarantine", which presented guidelines on how to navigate the quarantine while taking into account social wellbeing.

Main problems addressed

The main problems that Ceibal en casa had to address in relation to the COVID-19 pandemic were those related to the disruption of pedagogical activities due to school closures and the resulting challenging context of social isolation. In order to cope with this situation, the program has two dimensions: one related to the provision and adaptation of technical and pedagogical infrastructure and resources, and the other addressed the social and emotional impact of social isolation.

Adapting the technical and pedagogical infrastructure and resources.

Ceibal en casa required training teachers and providing support on how to interact with students exclusively through digital platforms, in both synchronous and asynchronous exchanges.

Communication campaigns and content delivery layouts were also necessary in order to make the educational resources visible, accessible, and easy to use. To this end, Ceibal en casa organized a strategic process of data collection and collation in order to study the changes in use and the reach of the digital educational resources. This information made it possible to adjust and introduce innovations to the program. Through learning analytics, Ceibal en casa monitored the use of the platforms, specific resources, and general trends, including high demand times and days. This information was complemented with telephone and e-mail surveys to teachers.

Addressing the social and emotional impact of social isolation.

This focused on providing support on how to cope with the social and emotional impact of isolation and on providing relevant information about well-being. The target audience - teachers, students and their families - were reached mainly through digital communication channels with specific messages according to their needs, including Ceibal's educational platforms, sites and social networks.

To sum up, what makes Ceibal en casa an interesting program is its combination of a robust pre-existing digital infrastructure, pedagogical resources, and data access and collation, and its remodeling through specific innovations to adapt to the emerging situation.

Main problems addressed: Infrastructure.

Ceibal en casa main implementation challenges were related to providing infrastructure and services. This was mainly due to the exponential increase in the use of Ceibal learning digital platforms across Uruguay during quarantine. In this respect, the main concern was to guarantee the provision of resources to all students, particularly those from disadvantaged backgrounds.

Most difficulties were solved with contingency plans, which, in some cases, involved cooperation of key partners. For example, Ceibal en casa made an agreement with the National Telecommunication Agency (ANTEL), the national internet provider and market leader, and Claro, a private internet provider, to facilitate access to educational resources and platforms without using internet data; this was key to guarantee equal access to educational resources.

Also, a special contingency procedure was designed and put in place to deliver computers to students while ensuring physical distancing. This was key in order to reach students in rural or vulnerable areas. Likewise, it was necessary to create a protocol to safeguard sanitary measures for essential in-person activities (5%) on Ceibal premises (e.g., computer repairs).

The rest of the activities (95%) were conducted remotely using internal and external virtual communication networks and systems, thanks to the virtual systems previously adopted by Ceibal.

Finally, it was crucial to increase the capacity of the technological infrastructure by 400% and to redesign its architecture to increase concurrency capabilities, allowing night maintenance shifts to avoid service downtime during peak hours. In order to deal with the increasing customer service demands, Ceibal en casa implemented an automated end-user tool, which included account set-up and password reset functionalities. (Florencia Ripani. M. (2020), Uruguay: Ceibal en Casa (Ceibal at home), Education continuity stories series, OECD Publishing, Paris)

During the pandemic, internet connectivity became necessary to access education. Ceibal reshaped its connectivity service, creating a strategy to provide free access to all students and teachers across the country. This strategy addresses the importance of connectivity as an indispensable condition for accessing education and expands the definition of the right to education. It also highlights the importance of teacher training in digital pedagogies to build more resilient educational systems and the crucial role of a governmental agency dedicated to education innovation to facilitate these processes.

Ceibal Integrado (Integrated Ceibal) developed for the first response plan for school closures. In 2020, Ceibal en casa had prioritized the contact between students, teachers, and families through the devices, internet connectivity, and cloud infrastructure. Ceibal Integrado started as a consequence of the monitoring connectivity metrics and attrition rates in education at different stages of the pandemic. The reality was that the benefits of the solutions available were not equitably distributed. Plan Ceibal, in agreement with the National Administration of Public Education and the Ministry of Education, decided to implement a strategy to mitigate the effect that school closures had on internet access for students and teachers.

Ceibal Integrado managed to overcome the connectivity challenge by facilitating free access to all students and teachers across the country. The decision, which had no precedent in Uruguay or the region, was key to guaranteeing inclusion and equity in accessing education.

This innovation involves vital stakeholders and specific technologies already available to the Uruguayan school system. CREA Contents and Resources for Education and Learning (Contenidos y Recursos para la Educación y el Aprendizaje) is an LMS with virtual classrooms and interaction tools that comprise the entire database of public schools students and teachers. In March 2020, education authorities declared CREA the official platform for education continuity. This declaration created a spike in connections, and the use-rate grew exponentially (Plan Ceibal, 2020). In 2021, Plan Ceibal integrated an open-source video conferencing tool into CREA for virtual lessons.

This whole initiative involved complex negotiations and a series of actions to implement this nationwide innovation successfully. The process required agreements with edtech providers, the setting up of servers in the country, management of cyber-security issues, tech integrations, and agreements with telephone companies to zero-rate data consumption for education. All these changes made the Uruguayan public education system available to students at school or home. Online access and video conferencing for education became completely free of charge for all students. Consequently, the usage of Plan Ceibal platforms and video conferencing tools in 2021 increased by 25 per cent compared to 2020, when Uruguay had records of coverage and access to Plan Ceibal's platform ecosystem. The removal of barriers to connectivity substantially impacted the type of use and the number of students and teachers accessing the combined models implemented during the first semester of 2021, making CREA one of the top five sites in Uruguay.

Pairing those infrastructure optimization strategies with focused adaptations of the educational programs and contents transforms the daily practices of students, teachers, and families, even when schools remain closed.

The timeline of the process illustrates how fast this innovation unfolded.

In April 2020, Ceibal started migrating all its pedagogical frameworks and educational programs online. Ceibal en Inglés, which delivers online lessons to more than 75,000 students with remote teachers from different parts of the world, had to adapt to the new reality. Teachers recorded four video lessons per week for each form until another approach was made available.

The computational thinking program, present in 1,764 groups in public primary schools and reaching over 35,500 students, made the necessary changes so that students could complete the missions assigned. Red Global de Aprendizajes, a network of schools and administrators implementing a competency-based model with active pedagogies in their communities, moved all their events and resources to a digital format supported by Plan Ceibal platform's ecosystem.

By the end of 2020, Ceibal had started a planning process in collaboration with ANTEL, and Blindside Networks (BN), the provider of Plan Ceibal's video conferencing tool, to migrate the service to local servers (in 2020, it was located on US servers). This strategy, together with negotiations with private

internet service providers (Claro and Movistar) was crucial to reduce costs of internet traffic and mobile telephone internet plans.

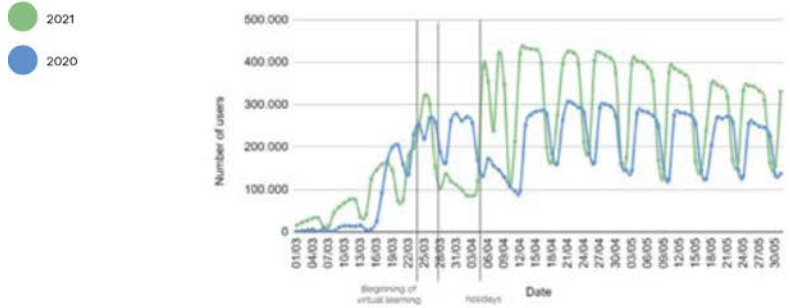
In January 2021, the telecom teams at Plan Ceibal and ANTEL started migrating the conferencing tool to ANTEL's Virtual Data Centre (VDC). This action allowed Plan Ceibal to identify the traffic generated in the platform and to understand the challenges of scaling up the solution to serve 800,000 users. The system's total capacity is now provided by the infrastructure available at VDC, securing the same use conditions at all times of the day, as well as responsiveness to the adjustments necessary for peak periods.

As a result, Ceibal delivered a series of interconnected proposals, providing pedagogical solutions to facilitate interaction between teachers and students through CREA. Before the COVID-19 pandemic, only 48 percent of students and 60 percent of teachers had explored this tool; and only 10 percent of students and teachers accessed the platform on a daily basis. During the pandemic, most teachers and students, for the first time, used CREA as their main medium for learning.

During the first phase of the Plan Ceibal response (Ceibal en Casa), the solution was accessible for most of the national education community – 88 percent of students and 95 percent of teachers – primarily to maintain contact and share learning materials with students, teachers and families. Further action was required to provide systemic access to vulnerable students and allow for more strategic use for community learning, which was addressed in the second phase (Ceibal Integrado).

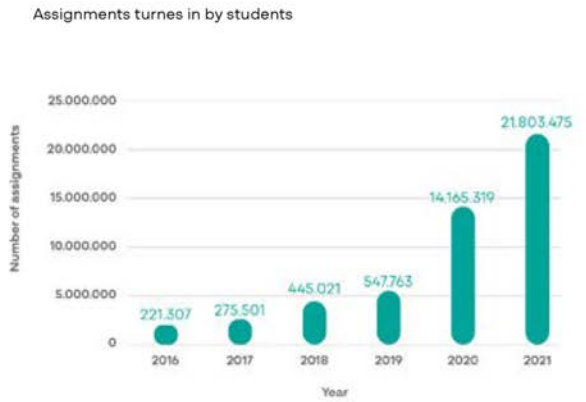
Access to computers and the provision of online comprehensive pedagogical services did not guarantee reasonable connection rates of the most vulnerable students. Neither was it guaranteed that teachers would use or feel comfortable using the digital learning tools. In the light of the disturbance caused by changing teaching conditions and learning settings, the second phase of Plan Ceibal's response provided ambitious personalized training to teachers and access to the programs' learning platform, with an embedded video-conference service, at no cost, significantly increasing accessibility (see Figure 1). There was also a 25 percent increase in the usage and the recurrence of contact compared to the previous year when Ceibal registered all-time records. The connections to Plan Ceibal's platform ecosystem increased, and the number of assignments completed by students rose by more than 50 percent (see Figure 2). These were the fundamental elements to provide better access to what could be described as a virtual public national education system. Plan Ceibal showed distinctive aspects of resilience: its ability to self-organize, to increase its capacity, to learn and to adapt.

Figure 1: Equity in PC access by age group, according to income quintiles.



During this time, not only did the connection between students and teachers improve but also the delivery of pedagogical programs. The network Red Global de Aprendizajes trained more than 3,100 teachers in online courses on new pedagogies. Ceibal en Inglés was delivered at no cost once all the English video lessons were embedded in the relocated LMS. The computational thinking program provided more than 1,700 lessons each week. None of these results would have been possible at this scale without the innovations introduced. Ceibal Integrado increased the reach of schools and helped students gain autonomy while helping them develop digital skills in such a challenging situation.

Figure 2. Number of assignments completed by students in May at CREA LMS: 2016, 2021



This initiative generates conditions that will enable education authorities and key stakeholders to think about sustainable hybrid education models and how to balance most of their components.

Ceibal Integrado could help leverage systems that could be scalable nationwide, create new blended formats of schooling, and exploit the potential of technology while extending learning outside school buildings.

The innovations represent a reorganization of elements, services and resources of the education system to face the challenges of a world of increasing complexity, uncertainty and disparity. Ceibal Integrado is: i) inclusive and student-centered, as it facilitates access to the national LMS to every student whenever and wherever (mobile data at no charge guarantees access from any place in the country to personal computers provided by Plan Ceibal or other devices); ii) multi-sectoral since it was possible, thanks to the collaboration of public-private actors, to reorganize infrastructure and commercial procedures and arrangements; and iii) quality-oriented, considering the enhancement of CREA as a result of the integration of a video-conference service. Additionally, and in alignment with public action ideas of UNESCO's Futures of Education initiative (UNESCO & International Commission on the Futures of Education, 2022), it expands the definition of the right to education, as it addresses the importance of connectivity and access to knowledge and information. At the same time, it highlights the need for sustained investment in innovation and technological infrastructure to provide quality education worldwide.

Technical infrastructure, professional development, pedagogical innovations and internet access may not address every issue facing education around the world. However, there is no equitable future for education without them.

This case study focuses on the analysis of infrastructure settings and suggests that technology is not a neutral component in the education ecosystem, but needs to be strategically deployed in order to guarantee an inclusive and equal approach to education.

Further research needs to be done to better understand how free models of connectivity can be sustained beyond emergency contexts and the implications of this for the quality of education. (Learning to Build Back Better Futures for Education, Raimers, Opetti, 2021 http://www.ibe.unesco.org/sites/default/files/resources/book_ibe_-_global_education_innovation_initiative.pdf)

Main problems addressed: Contents.

In coordination with the National Administration of Public Education (ANEP), Ceibal's contingency plan, Ceibal en casa, was able to sustain and expand the supply of educational resources. It also generated proposals adapted for teachers, students and their families, including content for socioemotional support, and new multiplatform communication strategies through social networks and television.

Also, a new learning environment based on multiplatform content was developed and distributed through multiple media, including the National

Television of Uruguay (TNU), to provide access to educational resources. This included an educational magazine (TA, Tiempo de Aprender), a series hosted by young influencers (C+) in which, through a fictional plot, educational content was presented, and a participatory space (Tu Corto) in which young people create and share their own productions. In addition, a cycle for teachers (ENLACEvivo) to rethink and guide pedagogical strategies through interviews with experts was launched.

Ceibal offered digital platforms and services, as well as support and guidance to teachers, students and families to ensure distance learning in public primary and secondary schools, as well as private schools that chose to use Ceibal's platforms (Ceibal internal presentation).

Ceibal en casa offered two learning experience options. Students could interact with teachers and peers through the program's learning management system – which included social networking and videoconferencing functionalities – following structured and organized activities. Alternatively, they could access auto-assisted teaching platforms, books, games, challenges and other on-demand learning resources organized by age groups.

In order to facilitate the learning journey and provide clear options and support, Ceibal en casa deployed resources addressing the main actors involved in the pedagogical continuity agenda: teachers, students and their families. Through dedicated subsections on the program's site and social networks, specific communication and pedagogical strategies were delivered to engage each of the relevant groups in the proposed virtual learning environments. For example, students were offered games and creative activities relevant to the curriculum; teachers could access not only teaching resources but also consultation services, discussion forums, tutorials, and virtual training and guidelines for remote teaching. Finally, families received daily tips on how to support their children with recommended content for different knowledge areas. (Florencia Ripani. M. (2020), Uruguay: Ceibal en Casa (Ceibal at home), Education continuity stories series, OECD Publishing, Paris)

Find below a summary of the main initiatives that combine social media, websites and platforms to provide extra support for three main audiences: Teachers, Students, Families.

General guidelines: main courses of action.

Supporting ANEP in creating a massive distance learning environment using Ceibal's ecosystem of Platforms.

LMS (CREA) as the main place of interaction among Sts and Ts. Math Platforms (PAM, Matific) Digital Library (Biblioteca País)

For teachers:

- Space in CREA that provides:
- Digital contents & resources.
- Teacher Development Section. Main focus:
- CREA use (Self assisted Course)
- Distance Learning and Online Teaching
- Recommendations about Ceibal ecosystem : Platforms and websites

(coding, Microbit, Robotics)

- Two forums: Exchange and Troubleshooting.
- Virtual Workshops (ZOOM) for novice and Teachers in the use of our Platforms
- Virtual Workshops and Conferences on other education related topics (streaming with guests, EnlaceVivo and Computational Thinking)

For students:

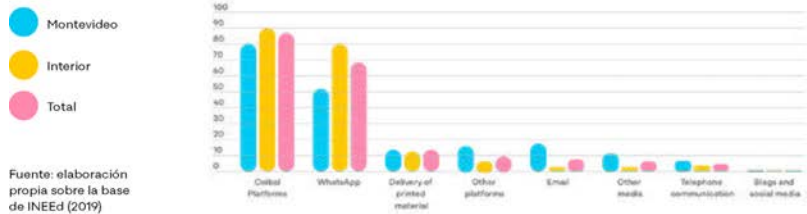
- A set of initiatives to promote autonomous learning.
 - Audience: 10 to 15 year old Students.
- It includes:
- A space in CREA (Group) with activities such as:
 - Math Games & Activities
 - DFC Creative Challenges #Mandátuya.
 - There are currently over 9000 Sts enrolled
 - Ceibal Initiatives
 - Weekly Webinars on Scratch & Scratch Junior
 - Live Youtube lessons on MakeCode & Microbit (7 to 14 years old)
 - Self assisted Courses on Coding (3d Modeling and Printing, Tinkercad, Open Roberta, etc.).
 - CEI "Sing Along (TikTok or other apps)
 - Social media posts recommending Ceibal's ecosystem.
 - For Primary Education:
 - Adapted Courses to Online Learning
 - The RT uploads 4 weekly videos (10min in total) and sets up activities in the platform connected to the videos.
 - The RT and CT coordinate a time to work with students that can access remote communication tools.
 - For Secondary Education (Middle School)
 - Tutorials for Differentiated Learning uploaded in CREA for all teachers.
 - A pilot for conversation classes is running to design the best way to do it.

For families

- A Communication strategy directed to families.
- Daily posts (social media, web campaigns and news on our institutional website) & live streaming.
- It provides:
 - Recommendations of Ceibal resources.
 - Hands on activities (mediated or not by technology)
 - Tips on socio emotional aspects of social isolation.
 - Webinars & Conferences with experts regarding issues of social isolation and homeschooling.
 - Families support Guide created with UNICEF: ("Time to be at home: A help for families and educators in times of Coronavirus")

Source: Ceibal internal presentation, Mariana Montaldo.

Main resources to propose teaching proposals according to region and total. 6th grade. Year 2020



Fuente: elaboración propia sobre la base de INEEd (2019)

Source: Cierre de escuelas en pandemia, World Bank, Carbajal et al, 2022.

Main problems addressed: Reports

Ceibal en casa was monitored through data analytics and a survey completed by a nationally representative sample of teachers from primary and secondary education². Based on data analytics, the reach of Ceibal en casa among primary and secondary students was 85% and 90%, respectively, increasing up to 95% among teachers, including teaching and training platforms³.

Access to Ceibal’s educational online resources increased by 452% in March 2020 compared to the same period in 2019.

2. The survey was conducted among 1,245 teachers; 636 answered the survey by phone, whereas the remaining were reached by e-mail and responded to the same questions on the SurveyMonkey platform. The results were processed by the Monitoring and Evaluation Department of Plan Ceibal.

3. The information and all data analytics presented in this section are based on Ceibal en casa internal reports produced from when schools closed, on March 16, to the end of May 2020, including single sign-on data taken from Google Analytics on Ceibal’s site: ingreso.ceibal.edu.uy.

According to the survey's results, Ceibal resources were the most used to support teaching activities in public education (93%). Data collected suggests that 98% of teachers from public schools sent assignments to students, 90% received activities submitted by students and 87% used it to provide feedback. The activities that teachers reported doing the most frequently were sending homework, uploading documents and videos to support assignments, coordinating with colleagues, and creating groups of students and shared documents.

They also reported videoconferencing with other teachers as a regular activity (59% and 60% in primary and secondary education, respectively), although this activity was less frequent with their students (32% in primary education and 27% in secondary education).

The survey suggests that 92% of teachers were satisfied or very satisfied with the training activities provided by Ceibal, although 70% expressed the need for further training for a more effective use of resources. These data may reflect teachers' awareness of the potential of digital environments to enhance their teaching practices, which could be achieved through a higher level of digital literacy and specific professional development.

Ceibal is planning to use the information collected and lessons learnt through the implementation of Ceibal en casa to design a "Response Protocol for Massive Migration to Distance and Blended Learning" and propose a transition from an emergency phase solution to a normal time expansion and systematic integration of digital learning into face-to-face education.

The reach was calculated based on students who accessed any of the offered platforms at least once. (Florencia Ripani. M. (2020), Uruguay: Ceibal en Casa (Ceibal at home), Education continuity stories series, OECD Publishing, Paris)

Conclusions: Adaptability to new contexts

This solution could be adapted in countries which already have a digital resource infrastructure at a national scale – since it is built on Plan Ceibal, Uruguay's national digital education program.

Since Ceibal has a flexible and comprehensive combination of resources, experiences could be adapted to different countries, although they would require certain levels of investment and access to digital infrastructure and resources.

Ceibal has a long tradition of collaboration in the region. It has already started sharing the knowledge gained during the pandemic with low- and middle-income countries in Latin America through collaboration with Fundación Ceibal, which coordinates the Alliance for the Digitalization of Education in Latin America (ADELA).

The initiative allows for a larger scale use of the platforms in the future. The number of users of Ceibal's platforms grew exponentially during the school closures, reaching most public school students and teachers. (According to internal reports, the reach of Ceibal's platforms in primary public education increased from 42% in May 2019 to 85% in the same month in 2020, mainly due to the suspension of face-to-face classes. Similarly, reach among teachers increased from 58% to 95% in the same periods.)

This increase represents a unique opportunity for Ceibal to capitalize on the wider awareness among teachers, students and families about the importance of an available ecosystem for teaching and learning practices facilitated by digital technologies. It also represents a great opportunity to explore further effective models and pedagogical approaches suitable for massive use of platforms and digital environments in normal times.

Key points to keep in mind for a successful adaptation

1. Consider students and teacher's access to technology and connectivity to analyze the suitability of a program mainly based on digital media.
2. Analyze the context and the layout of your existing program and make strategic adaptations, including technical and pedagogical infrastructure to cope with the increase in traffic and demand of educational content.
3. Build partnerships with internet and mobile phone providers to apply reduced rates or free access to educational resources.
4. Focus your strategy on enhancing the digital interaction between students and teachers, and the involvement and support of families.
5. Present all existing educational resources in a single output platform (this could be a site, and a mobile app).
6. Provide a robust LMS with communication features in order to keep a fluid exchange among teachers and students (videoconferencing and other additional functionalities might be needed).
7. Include adaptive and gamification platforms in order to facilitate teaching and make learning more accessible and enjoyable.
8. Collect as much data as possible to monitor progress and improve the layout of the plan as it is being implemented (it is crucial to determine questions, indicators and metrics to get the most from data access).
9. Design the program as an ecosystem and implement it with sustainable and scalable solutions with the ability to increase in scope and quality, and adjust to unpredictable future scenarios. (Florencia Ripani, M. (2020), Uruguay: Ceibal en Casa (Ceibal at home), Education continuity stories series, OECD Publishing, Paris)

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Leandro Folgar

Leandro Folgar is the president of Ceibal, Uruguay's educational technology and innovation agency. He leads the Edtech national strategy and faced major challenges during the COVID-19 crisis. He earned a BA in Education from the Universidad Católica del Uruguay, UCU, and a Master's Degree in Technology, Innovation and Education from Harvard University. His business credentials are from Harvard Business School.

He currently complements his activity as a member of several Boards of Directors with postgraduate university teaching in the Business School at the Universidad Católica del Uruguay.

A former Fulbright student, entrepreneur and business consultant, he began his career in education as a teacher, and has more than 13 years of experience in different school positions. He is passionate about technology, the evolution of education and its influence on the future of our global society.

Mr. SIREs. Thank you very much. Very impressive, what you were able to accomplish during these difficult times.

Mr. FOLGAR. Thank you.

Mr. SIREs. There is a lot to be said for a stable country.

I will now introduce Dr. Fernando Reimers.

Is that correct? OK.

Dr. Reimers is the Ford Foundation Professor of Practice of International Education and director of the Global Education Innovation Initiative at Harvard University. An expert in the field of global education, his research and teaching focus on understanding how to educate children and youth so they can thrive in the 21st century.

He was a member of UNESCO's Commission on the Future of Education. He is a member of the Advisory Committee of the U.N. Education Summit. He has also developed curriculum aligned with the United Nations Sustainable Development Goals used in many schools throughout the world. During the COVID pandemic, he led numerous comparative studies examining the education consequences of the pandemic.

He has served on the Harvard faculty since 1998. Previous to that, he worked at Universidad Central de Venezuela, the Harvard Institute of International Development, and the World Bank.

Dr. Reimers, we welcome you to the hearing.

I ask the witness to please limit your testimony to 5 minutes. And, without objection, your prepared statement will be made part of the record.

Dr. Reimers, you are recognized for your testimony.

STATEMENT OF FERNANDO REIMERS, ED.D., FORD FOUNDATION PROFESSOR OF THE PRACTICE IN INTERNATIONAL EDUCATION, HARVARD GRADUATE SCHOOL OF EDUCATION

Mr. REIMERS. Chairman Sires, Ranking Member Green, and members of the House Foreign Affairs Committee, I appreciate the invitation to testify before you at this hearing on the educational impact of COVID-19 on education in Latin America.

I will summarize from my written testimony and structure it in five sections, about a minute each: the effects of the pandemic on education, preexisting educational efforts prior to the pandemic, the impact of COVID-19, the education silver linings of the pandemic, and the bumpy road ahead and opportunities for reform.

In Latin America, the education effects of the pandemic were particularly harsh, given the long duration of school closures and the deficiency of the alternative means that were used to teach remotely, especially to reach all children, the children of the poor, and also because the economic and health effects of the pandemic increased the vulnerability of disadvantaged students and their families.

As a result, the pandemic undermined much of the educational progress achieved at great cost in Latin America over the prior decade in improving access to school to the most marginalized and in supporting their learning, and it undermines the future economic prospects of large segments of the population, aggravating preexisting social and political challenges.

Students in Latin America experienced the brunt of six mutually reinforcing challenges: the longest school closures, the lowest levels of resources and institutional capacity to mitigate learning loss, lower levels of access to vaccines, the greatest increases in poverty, lowest effectiveness of alternative modalities to education, and the greatest preexisting levels of social and educational inequality.

The recently released Human Development Report shows declining measures of life expectancy, education, and income per capita since 2020, wiping out gains made between 2016 and 2019, and shows that those declines were the greatest in Latin America.

It is important to recognize, however, that, prior to the pandemic, education had come to be seen as a path to increase the opportunity of the children of the poor, to reduce inequality in what are the most unequal societies in the world. Education gave hope to those less privileged that the lives of their children could be better than their own.

Over the last quarter-century, a number of countries in Latin America had increased the priority given education, and, as a result, preceding the pandemic, Latin America was investing more on education as a share of government spending and as a share of GDP than any other world region. And education spending had increased over time.

Not only had Latin America increased the level of education spending, but it had also increased spending on poorer students through a variety of innovative targeting mechanisms. As part of the societal commitment to education, many governments in the region undertook reforms aimed at elevating education standards, increasing the years of mandatory instruction and increasing the levels of the curriculum, improving teacher preparation, increasing school autonomy, and improving educational management and accountability.

Efforts to achieve those goals included not only those of governments at the Federal, State, and municipal level but also efforts of many different actors of civil society. For example, ambitious efforts to overhaul the curriculum in recent years include reforms in Chile, Brazil, and Mexico.

As a result of these efforts, mandatory instruction in Latin America now covers 9 to 10 years of schooling, including primary education, which is compulsory in all countries in the region, and lower secondary education, which is compulsory in all countries except Nicaragua. Upper secondary education is compulsory in 12 of the 19 countries in Latin America. And these changes increased the levels of educational attainment of the population.

Latin America has achieved almost universal attendance to elementary and lower secondary school, while the number of children out of school declined from 15 million in 2000 to 12 million in 2018. The greatest levels of exclusion are in upper secondary school.

Now comes COVID. And when COVID was recognized as a pandemic, governments in Latin America ordered the suspension of in-person instruction as part of the efforts to contain the spread of the virus.

I will skip this part of my testimony because I think Chairman Sires has synthesized it very well. We completely agree on the facts.

And so let's talk about the silver linings of the pandemic.

It shouldn't be surprising that the pandemic produced an educational calamity, arguably the worse crisis in the history of public education. After all, shocks of varied sorts, such as natural disasters or conflict, typically interrupt the functioning of schools and the lives of students, negatively impacting their learning.

What should really surprise us is that during a global crisis of such magnitude there would be so much interest and effort to sustain educational opportunity. In particular, international development organizations and civil society demonstrated extraordinary leadership, maintaining attention on the importance of sustained education during a crisis—a reminder of the important role of international cooperation to advance progress and peace, especially in challenging times.

The United States Agency for International Development, for example, piloted some existing education programs and created new programming to support education in priority countries in Latin America, focusing on the educational opportunities of the most vulnerable students. Such responses have relied on multisectoral partnerships bringing together government, universities, and civil society.

Similarly, the World Bank, the Inter-American Development Bank, UNESCO, and UNICEF have demonstrated exemplary leadership advancing the importance of maintaining the priority for education and providing policy guidance to governments and providing financing and technical assistance. All of these generated an innovation dividend, which we must study and which we must leverage to address the road ahead.

So, during the period of between April 2020 and June 2021, my colleagues and I in the Global Education Initiative have been studying those innovations through three studies which are described in greater detail in my statement. And so I will skip ahead to talk about some of these innovations.

In spite of the variation in the region, most of these innovations recognize the importance of addressing the education of students beyond foundational literacies. We learned in the pandemic that nobody learns very much when they are in fear and that we must address the emotional needs of students so they are prepared to learn.

For example, Fundacion Sumate in Chile, a network of second-chance schools for school dropouts managed by Hogar de Cristo, prioritized and developed very effective programs using WhatsApp to support the emotional well-being of students.

In Colombia, the Alianza Educativa, a network that works with 12 high-poverty schools in partnership with universities, developed printed materials to support distance education during school closures. Enseña for Colombia, part of a network operating in 70 countries, akin to Teach for America, also showed the power of a network of schools.

Mr. SIREs. We are going to go——

Mr. REIMERS. May I just move to the conclusions and just say one paragraph in the concluding statement?

So let me just talk about the bumpy road ahead.

The pandemic created an education crisis in Latin America which robbed many students of the opportunities to learn what they were expected to learn and caused them to lose skills they had already gained. It also pushed some students out of school. Those losses affected primarily the most vulnerable students.

This is going to complicate other societal challenges which predated the pandemic, such as the challenge of increasing productivity, reducing poverty and inequality, increasing civic cohesion and trust in institutions and democratic governance, and addressing issues such as climate change and intra-and interState violence.

Thank you.

[The prepared statement of Mr. Reimers follows:]

Fernando M. Reimers

Ford Foundation Professor of the Practice of International Education

Graduate School of Education, Harvard University

Testimony to the Subcommittee on the Western Hemisphere, Civilian Security, Migration, and International Economic Policy

Thursday, September 15th, 2022

Hearing: "Learning Loss in Latin America and the Caribbean: Building Better Education Systems in the Wake of the Pandemic"

Education in Latin America during COVID-19. Decline and silver linings during the greatest crisis in the history of public education and the challenges ahead

Chairman Sires, Ranking Member Green, and members of the House Foreign Affairs Committee, I appreciate the invitation to testify before you at this hearing on the educational impact of the Covid-19 Pandemic in Latin America and the Caribbean. I will structure my testimony in five sections:

- The effects of the pandemic on education in Latin America and the Caribbean
- Preexisting efforts to improve education
- The Impact of Covid-19 on Education
- Beyond learning loss. The education silver-linings of the pandemic.
- The bumpy road ahead and opportunities for effective support

1. The effects of the pandemic on education in Latin America

When the World Health Organization declared COVID-19 a pandemic, on March 11, 2020, educators and education authorities the world over realized they, and especially their students, would be facing challenging times ahead. These challenges were greater in countries with weaker educational and health infrastructure, and for those children whose families had less resources to mitigate the economic impact of the pandemic. In Latin America, the educational effects of the pandemic were particularly harsh given the long duration of school closures and the deficiency in the alternative means that were used to teach remotely in reaching all children, especially the children of the poor, and because the economic and health effects of the pandemic increased the vulnerability of disadvantaged students and their families. As a result, the pandemic undermined much of the educational progress achieved at great cost in Latin America over the last decade in improving access to school to the most marginalized, and in supporting their learning, and undermines the future economic prospects of large segments of the population, aggravating preexisting social and political challenges.

Students in Latin America experienced the brunt of six mutually reinforcing challenges: the longest school closures, the lowest levels of resources and institutional capacity to mitigate learning loss, lower levels of access to vaccines, the greatest increases in poverty, lower effectiveness of alternative modalities to education, and the greatest levels of social and educational inequality.

The direct public health impact of Covid-19, its toll on human lives, and the indirect impact in economic activity exacerbated inequalities in what was already the most unequal region in the world. Social inequality and vulnerability, and weak health infrastructure, resulted in a disproportionate impact of the pandemic in the region, which was the epicenter for the larger part of 2020, as it was home to six of the top twenty-five death-producing countries in the world. As a result, the economy went into a recession, with GDP contracting 6.9 percent in 2020, the largest contraction in any world region (World Bank 2021).

The recently released Human Development Report which documents declining measures of life expectancy, education and income per capita since 2020, wiping out gains made between 2016 and 2019, shows that those declines were the greatest in Latin America (United Nations 2022).

2. A backdrop of efforts to improve education¹

Before the pandemic, education had come to be seen, in Latin America, as a path to increase the opportunities of the children of the poor and to reduce inequality in the most unequal societies in the world. Education gave hope to those less privileged that the lives of their children could be better than those of their parents. In that sense, educational progress was a pillar of democracy, and a foundation of increased future economic prosperity. Over the last quarter century, a number of countries in Latin America had increased the priority given education. As a result, preceding the pandemic, Latin America invested more on education, as a share of government expenditure and as a share of GDP, than any other region of the world, and education spending had increased over time (UNESCO 2020: fig. 21.1). Not only had Latin America increased the level of education spending, but it had also increased spending on poorer students through a variety of innovative targeting mechanisms. These include the Fund for the Maintenance and Development of Basic Education and Valorization of Education Professionals, in Brazil, a formula-based allocation established in 2007 and designed to close gaps in per pupil spending across municipalities, which decreased such inequality by 12 percent in five years (UNESCO 2021). Another formula-based allocation targeting financing innovation is Chile's Preferential Education Subsidy, which provides higher transfers per pupil to schools serving the poorest students and includes a specific amount per child plus an additional amount that is proportional to the percentage of children in poverty in the school; these resources are used by schools to fund school improvement strategies (UNESCO 2021). Last, cash transfers to families of low-income children have been used as income support, with contingencies that incentivize school attendance (Reimers, DeShano, and Trevino 2006).

As part of this societal commitment to education, many governments in the region undertook reforms aimed at elevating education standards (increasing the years of mandatory instruction and increasing the level of the curriculum), improving teacher preparation, increasing school autonomy, and improving educational management and accountability. Efforts to achieve those goals included not only those of governments at the federal, state, and municipal levels, but also the efforts of many different actors of civil society as well. Ambitious efforts to overhaul the curriculum in recent years include reforms in Chile, Brazil and Mexico, for example (Reimers 2020).

As a result of these efforts, mandatory instruction now covers nine to ten years of schooling, including primary education, which is compulsory in all countries in the region, and lower secondary education, which is compulsory in all countries except Nicaragua. Upper secondary education is now also compulsory in twelve of the nineteen countries in Latin America. These changes increased the levels of educational attainment of the population. Latin America has achieved almost universal

¹ This section draws heavily on Reimers, F. 2022.

attendance to elementary and lower secondary school, while the number of children out of school declined from 15 million in 2000 to 12 million in 2018 (UNESCO 2021). The greatest levels of exclusion are in upper secondary school. Among the children out of school in 2018, 16 percent were of elementary school age, 22 percent of lower secondary school age, and 62 percent of upper secondary education age. Attendance to upper secondary school increased from 70 percent in 2000 to 83 percent in 2018. During this period, the percentage of children completing primary school increased from 79 to 95 percent; completing lower secondary school from 59 to 81 percent; and completing upper secondary school from 42 to 63 percent. These numbers place Latin America above the global averages of 85 percent, 73 percent, and 49 percent, respectively (UNESCO and Inter-American Development Bank 2020).

As a result of such progress in attendance to school, most children in the region attend school at the elementary level in most countries in the region except Guatemala, Haiti, Honduras, and Nicaragua. At the lower secondary level, most students attend in most countries except Ecuador, El Salvador, Guatemala, and Honduras. At the upper secondary level, the lowest levels of access are in El Salvador, Guatemala, and Honduras.

A number of countries in the region, such as Brazil and Mexico, have adopted ambitious and broad ranging curricula; most countries have adopted systems to periodically assess student knowledge and skills, and to make such information available to the public; and school autonomy has increased. To protect the independence of assessments of student knowledge, several countries, such as Brazil, Colombia, and Mexico, created quasi-autonomous institutes for the evaluation of education, although the Mexican institute of evaluation was abolished in 2019.

These efforts to improve education produced almost universal access to school for those between the ages of six to fourteen, and access to four in five of those between the ages of four and five and between the ages of fifteen and seventeen. There have also been significant increases in primary and secondary school completion. Of those who begin primary school, 78 percent complete it; 60 percent complete lower secondary, 42 percent complete upper secondary (Arias and Martinez 2017). A combined index of education and health outcomes created by the World Bank (2021) shows that over the past decade most countries in Latin America improved on these measures.

Despite this considerable progress in school attendance and completion of the past two decades, a recent UNESCO report on inclusion concludes that “disadvantaged social groups continue to be excluded from education. Barriers against access to education of good quality are still too high for people with disabilities, migrants and refugees, indigenous peoples and Afro-descendants, and particularly affect girls belonging to these groups” (2021: vi).

Today, one in three four- to five-year-olds does not go to school, and only four in five thirteen- to seventeen-year-olds are enrolled in the education system, with 14 percent of them still in primary school as a result of having repeated several grades, which is fairly likely in the early grades. Educational opportunity is stratified along socioeconomic and ethnic lines. More than half of the children who live in rural areas or are from low-income backgrounds do not complete nine years of school. There are important variations in completion rates at the secondary level; they are lower in countries such as Guatemala and Nicaragua than in Argentina, Chile, Colombia, and Mexico. While these differences reflect in part differences in the social circumstances children from different backgrounds experience outside of schools, which are considerable in this, the region with the highest income inequality in the world, these differences in educational outcomes for students from various social origins relate also to differences in the conditions present in the schools they attend.

There is considerable social segregation of students, with low-income students streamed to schools that have less resources.

Expansion in attendance, completion, and average schooling attained has not translated into high levels of learning for all. Many countries in the region evaluate student knowledge and skills with curriculum-based assessments, and a few participate in international comparative assessments such as those conducted by the International Association for the Evaluation of Educational Achievement (the IEA studies), or the Organization for Economic Cooperation and Development (the PISA studies). Overall, the results of such assessments indicate that students achieve at low levels, relative to the intended goals of the curriculum and relative to their peers in other countries, and show that student knowledge and skills are higher for the more socioeconomically advantaged children. One in two Latin American fifteen-year-olds do not achieve minimum proficiency levels in reading.

3. The Impact of Covid-19 on Education

In March of 2020, when Covid-19 was recognized as a pandemic, governments in Latin America ordered the suspension of in-person instruction as part of the efforts to contain the spread of the virus. With the exception of Nicaragua, all countries in the region suspended in-person instruction. The suspension of in-person educational activities in Latin America has been longer than the suspension in any other world region, averaging 159 missed days of classes during 2020 alone (World Bank 2021). Governments and private educational institutions created a variety of alternative modalities to deliver instruction remotely. Given the limited access to internet connectivity and online devices (only 77 percent of fifteen-year-olds in Latin America have internet at home, and only 45 percent of the students in the poorest quintile do [World Bank 2021]), many of these alternative modalities involved the use of radio, television, technologies such as WhatsApp and distribution of textbooks and printed packages. The limited available evidence of the efficacy of those contingency plans to date suggests that access to these alternative modalities has mirrored the large socioeconomic divides that characterize Latin America. As access to opportunities to learn was mediated even more directly than it ordinarily is by supports at home—a place to study, access to connectivity and resources, the freedom to devote time to study, support from educated parents—the already large gaps in opportunity to learn that children experience when schools are in session were augmented. As a result of deficient opportunities to continue learning, many students failed to learn or disengaged from learning, and others altogether stopped attending planned activities (Reimers 2021 and Reimers et al. 2021).

The World Bank estimates that the percentage of children unable to read at the basic level will increase 20 percent, adding an additional 7.6 million children to the “learning poor” (World Bank 2021). Learning losses for the region, which will disproportionately impact the poorer students, are estimated at 1.3 to 1.7 years of schooling on average, amounting to an economic cost over the lifetimes of the current generation of learners of \$1.7 trillion (World Bank 2021).

The pandemic produced, in Latin America as in the rest of the world, the worst educational calamity in the history of public education. With schools closed, the ways in which students knew to learn and teachers knew to teach were interrupted, and the alternative arrangements which were made to teach during that period were, in many cases, improvisational and of varying effectiveness. School closures translated into students not learning what was expected they would be learning, resulting in lost opportunity to learn, and for some students also in regression, sliding back in some of the competencies they had already gained prior to the closures, resulting in learning loss. The deficient arrangements to sustain student engagement led some students to drop out. Learning loss,

lost learning opportunity to learn and dropout rates were greater for the most marginalized children not just because the arrangements made to educate them were less adequate, but because their families were less able to compensate for such shortcomings, providing additional supports in the form of parental engagement with school-work or additional tutoring. In addition, the pandemic impacted the poor through other channels –creating income and food insecurity, for instance—and this compounded the unequal effects of school closing, further increasing inequality.

It was not just the deficient approaches to educate during the pandemic, and the compounding effects of other impacts of the pandemic on income and health, that limited the educational opportunities of poor children, it was also the differences in the responses of the various educational streams into which students of various social strata are sorted out, with poor children often segregated into schools of low quality, that magnified the losses for the children of the poor (Reimers 2021).

A comparative study of the educational effects of the pandemic we conducted through the Global Education Innovation Initiative I lead at Harvard University concludes that the education losses were the result of impacts of the pandemic on poverty and household conditions, as well as the result of insufficient capacity of remote instruction to adequately sustain opportunity to learn. The study shows different educational consequences of the pandemic by country and social class (Reimers 2021). The mechanisms through which the pandemic influenced educational opportunity, augmenting inequality, included both the responses of the education system as well as the direct health and economic impact of the pandemic on students, teachers, families and communities. The main direct pathway limiting education comprised the interruption of in-person instruction, the duration of such interruption, and the adoption of a variety of modes of education during the period of suspension of in person schooling of varied efficacy, for the most part limited. A secondary direct pathway included the constrains on education spending caused by the reduced fiscal space resulting from the unforeseen need to finance the health and economic response to address the health crisis. Other pathways influencing students, their families and teachers directly included the impact on health as well as the impact of the pandemic on income.

These effects differed greatly among children in different socioeconomic circumstances, among different types of schools, and among different countries. For individual students, the educational effects of the pandemic were mediated by other conditions, mainly the education and resources of their parents. Some of these conditions were in turn aggravated by the pandemic— as poverty and social inequality increased, and as children in large families who shared limited space and connectivity resources at home had less space, time, and peace of mind to study as they were confined to their homes, where they had to study.

The differences of success in managing the spread of the virus across countries resulting from differences in the quality of political and public health leadership, differences in health infrastructure, risks, and financial and institutional resources resulted in considerable variation across countries in the duration of the period when in-person instruction was replaced with remote options. Furthermore, differences in technological infrastructure, access to connectivity, and previous experience and knowledge of Digi-pedagogies resulted in differences across countries, and among students within the same countries, in the amount of engaged learning time experienced by different students. There was considerable learning loss and greater loss for students from disadvantaged backgrounds, accentuated in countries with greater percentage of disadvantaged students as Brazil, Chile, or Mexico.

The comparative study showed also that education systems were in varying stages of readiness to sustain educational opportunity in the face of the disruptions caused by the pandemic. Those differences included access to connectivity at home and skills to learn and teach online, as well as level of resources, capacities, and institutional structures to meet gaps during the emergency. Levels of connectivity and resources were lower in Brazil, Chile, and Mexico.

Institutional fragmentation and school segregation contributed to augmenting inequality, as was the case in Chile, where the already-large inequalities in educational opportunity, produced by a highly stratified education system, were augmented with remote instruction, because of differential capacities of schools to provide adequate supports to the varying needs of children.

This comparative study and other studies of the effects of the pandemic show that the story of the educational effects of the pandemic is not a single story, but a story largely mediated by nationality—as national policy choices and institutional capacity and resources shaped the duration of school closures and the effectiveness of policy responses—and by social class—as the social circumstances of students shaped the educational institutions they had access to and the support they received from parents and from their schools. The educational impact of the pandemic proved then to be a quintessential ‘Matthew effect’, a term coined by sociologist Robert Merton (1968) drawing on the parable of the talents, to describe how unequal initial conditions often compound inequalities:

“For unto every one that hath shall be given, and he shall have abundance: but from him, that hath not shall be taken away even that which he hath.”

— *Matthew 25:24–30*

The pandemic’s impact on education was thus mediated by the multiple forms of marginalization that affect the children of the poor, multiple structures and processes which: home income and cultural poverty, weaker health and community infrastructure, weaker schools and less qualified teachers, and weaker institutional capacity in poorer countries.

Current research on the educational effects of the pandemic has emphasized learning loss, and the anticipated long-term consequences of a less educated generation. Less studied so far have been the distributional effects of the pandemic, which has augmented educational inequalities within and among nations. In this way the pandemic diminished the capacity of schools to be an avenue of hope for the poor that their children may have more opportunities than they did in life, and less able to disrupt the intergenerational transmission of poverty. The pandemic made education more unequal.

4. Beyond learning loss. The education silver-linings of the pandemic.

It should not be surprising that the pandemic produced an educational calamity, arguably the worst crisis in the history of public education. After all, shocks of varied sorts such as natural disasters or conflicts typically interrupt the functioning of schools and the lives of students, negatively impacting their learning. What should really surprise us is that during a global crisis of such magnitude there would be so much interest and effort to sustain educational opportunity. In particular, international development organizations and civil society demonstrated extraordinary leadership maintaining attention on the importance to sustain education during the crisis.

The United States Agency for International Development, for instance, pivoted some existing education programs and created new programming to support education in priority countries in Latin America focusing on the educational opportunities of the most affected vulnerable students. Such responses have relied on multi-sectoral partnerships bringing together governments, universities and civil society organizations (USAID 2022). Similarly, the World Bank, the Interamerican Development Bank, UNESCO and UNICEF have demonstrated exemplary leadership advocating for maintaining the priority of education, providing policy guidance to governments, and providing financing and technical assistance.

It is evident, in hindsight, that such preoccupation with education during the pandemic, from governments and international development partners, has been insufficient to prevent the learning loss and loss in learning opportunity, arguably reflecting not just the inadequacy of policy decisions, but the challenges of implementation which under normal circumstances often trump policy intentions, more so at a time when the education delivery chain was disrupted by the pandemic. In Latin America, lack of access to internet connectivity and devices, lack of capacity of teachers and students to teach and learn remotely, account for the deficient success of the remote strategies that were adopted.

It is necessary to keep in mind, in assessing the educational impact of the pandemic, that such impact happened to education systems which were, in many ways, failing students. Such preexisting deficiencies included not only the low levels of efficacy of schools in helping students develop the basic literacies of reading and math, but their low levels of relevancy in defining too narrowly the outcomes of schools and in failing to educate the whole child, addressing cognitive as well as socio-emotional dimensions of development. The World Bank had characterized the education situation just a couple of years prior to the pandemic as a 'learning crisis', and multiple international studies documented that many children spent years in school without gaining the benefits of literacy, or numeracy.

Paradoxically, in disrupting the functioning of schools and education systems, in upending the rules that ordinarily govern such institutions, the pandemic created the occasion for new and different ways of teaching and learning, as well as novel forms of organization and collaboration which resulted in pedagogical and curricular innovations. While these efforts were insufficient to prevent the educational effects which have been documented, these 'positive outliers' these programmatic and policy interventions to educate during the challenging context created by the pandemic, are of interest because of what they can teach us about the capacity of educational institutions to innovate during extremely challenging contexts. The pandemic represented a significant disruption, of unprecedented scale, which tested the organizational resiliency of education and upended many of the bureaucratic norms that govern education systems. Such disruption of education systems created a rare event in which the normal boundaries, constraints and roles that regulate the behavior of individuals in education organizations were suspended, in this way freeing the practices and interactions among educational actors and institutions allowing new forms of collaboration leading to novel ways to teach and learn. Even as the pandemic created other, new, constraints and challenges—resulting for example from the social distancing norms instituted by public health authorities to contain the velocity of the spread of the virus, or from inadequate resources or infrastructure to rapidly shift to digital platforms—it was precisely the existence of those new challenges and constraints, together with the temporary freedoms, which created the occasion for educational innovation.

During the period between April 2020 and June of 2021, my colleagues in the Global Education Innovation initiative and I, in partnership with colleagues in several international education institutions, conducted three studies of such innovation dividend.

The first was an effort to document emerging efforts of education continuity during the early phase of school closures, beginning in April of 2020. This was the result of a collaboration between the Global Education Innovation Initiative, the OECD, the World Bank and the organization Hundred. Between April and July of 2020 we wrote 45 case studies of innovations to sustain educational continuity.

The case studies included initiatives such as using radio, printed materials, educational television, and a variety of digital platforms, with and without internet, to sustain educational opportunity. They also included initiatives to develop the capacities of teachers to teach remotely, and to support parents as they supported the education of children at home. Some of them focused on novel ways to assess student knowledge remotely.

The 45 innovations studied focused on a range of educational outcomes, from maintaining students' engagement with learning –in activities of review of previously covered material–, to covering new content in academic subjects, to supporting the well-being and socio-emotional development of students. This heterogeneity in early-stage innovations reflect the absence of consistent standards for education continuity strategies, and the predictable variability in attempted approaches and intended results.

In spite of this variability, most of these cases address, at least to some extent, competencies beyond cognition, recognizing perhaps the salience of socio-emotional well-being during the crisis, and the foundational nature of attending to such well-being before any other form of learning could be productive. For example, Fundación Sumate in Chile, a network of second chance schools for school dropouts managed by the Hogar de Cristo, prioritized the emotional wellbeing of students, as the foundation to meet their needs during the pandemic, and to maintain engagement with learning.

In Colombia, the Alianza Educativa rapidly developed printed materials to support distance education during the school closures. Their initial focus was on the emotional well being of the students, to then add an academic component to the materials.

For instance, Ensenar for Colombia, created a rapid prototype of radio education, drawing on existing education materials from various organizations with which Ensenar por Colombia had preexisting partnerships, based on those resources the team of Ensenar for Colombia created 10 minute episodes. The same organization was able to produce at fast pace one new episode per day by engaging students, usually an under-utilized resources, along with teachers, in the development of new programs. Ensenar por Colombia learned from the experience of other organizations in the Teach for All network, which had used radio education to deliver content, adding the use of a WhatsApp feedback loop in which teachers discussed the radio lessons with their students, in effect building a flipped classroom with low cost technologies as the platform.

Among the conditions which enabled the innovations examined in these cases were preexisting networks across schools, and in some cases across schools in different countries. For instance, the network Teach for All, a federation of national organizations aligned in goals with preexisting experience and structures to support the exchange of information, learning across the various national organizations in the federation, and collaboration, catalyzed innovation by rapidly sharing emerging innovative practices designed to teach during the pandemic. A newsletter which

reaches all teachers in that network was the vehicle through which teachers in Chile learned that their peers in Nigeria had used podcasts to deliver content remotely, inspiring them to do the same. The rapid creation of a radio education curriculum by the *Ensenar* for Chile organization, spread throughout the network inspiring similar programs in Colombia and Peru. *Teach for Colombia*, for example, used existing social networks of educators to help spread the program within the network and beyond.

The cases illustrate also the power of collaboration, as the innovations involved, in many cases, the collaboration among teachers, and other stakeholders: members of the community, civil society organizations, and the private sector. To some extent the case studies illustrate the possibility of true collective leadership, in which various stakeholders come together to collaborate for the purpose of improving the performance of the education system. The challenges of achieving effective leadership are well known, one of the reasons the 'system' aspect of the education system is broken, and it is somewhat counterintuitive that in a context in which each of the stakeholders who came together in service of the greater good was in turn more challenged by the pandemic, that this would create the occasion for out of the ordinary collaboration.

The State of Sao Paulo in Brazil, for instance, developed in a matter of weeks a multi media center, which delivered education content via TV, radio, an app and printed materials, to sustain educational continuity during the period of school closures as a result of establishing partnerships with private providers and organizations of civil society. Of particular interest is the fact that this invitation to share leadership and responsibility extended by the State Ministry of Education to some of the most influential business leaders in the State, was followed by donations of services from telecommunication and education companies, which allowed the creation of the center, amounting to 0.6% of the annual education budget of the State. A number of different organizations collaborated in providing access to various elements of the education platform to students, for example, police officers visited the homes of the most marginalized students to deliver printed materials, and donated cloud computing time to host the technology platform.

For example, in the State of Maranhao, Brazil, a public-private partnership enabled the development of content to support remote education of children from 0 to 6 during the period when centers were closed. This partnership focused on supporting caregivers, rather than students directly as did most of the other components of the remote education strategy of the State. The focus of the programming was to use structured opportunities that enabled caregivers to transform everyday interactions with their children into opportunities for learning and development.

In Chile, the void of an effective educational response from the national government in the early phase of the pandemic, caused other levels of government, business and civil society organizations to step up to fill that void, as illustrated by the partnership between *Ensenar* Chile, a network of mayors of cities and of local radio stations, in developing a distributing radio education.

Also in Chile, the work of the *Fundacion Sumate* maintaining socio-emotional support to vulnerable youth during the pandemic, built on support they had received from UNESCO in developing a curriculum to support the development of socio-emotional skills.

Between June and December of 2021 we conducted a second study of 31 educational innovations generated during the pandemic, this time examining to what extent those innovations aligned with the recommendations of UNESCO's most recent report on the Futures of Education. Our intent was to examine whether the context of disruption created by the pandemic had allowed an innovation dividend aligned with aspirations to 'build back better' (Reimers and Opertti 2022).

The recent report produced by UNESCO's International Commission on the Futures of Education emphasizes the importance of aligning education systems with the challenges of democratic backsliding, threats to human rights, climate change, growing poverty and inequality, by transforming the culture of education through a transformation of pedagogy, curriculum, the teaching profession, the organization of schools and lifelong learning. The report underscores the new urgency of strengthening education and reimagining the social contract with education so that it can effectively prepare students to address current disruptions in sustainability, democratic backsliding, the transformation of work, and the challenges of a future ever more reliant on technology (UNESCO 2021).

The report emphasizes the importance of pedagogies that foster cooperation and solidarity, and that connect students with the world via interdisciplinary and problem-oriented curriculum which engages them in collaborative learning. Of special importance in the report is the notion that the curriculum of schools should go beyond the basics and contribute to the development of the full range of human potential, promoting the integration of knowledge and socio-emotional competencies, fostering global competency, strengthening scientific literacy and the humanities, as well as digital skills and arts education. The report also focuses on the primacy of supporting teachers as agents of education transformation, and of leveraging digital technologies in support of schools (UNESCO 2021).

The report emphasizes also that the transformation of the culture of education requires partnership and broad social dialogue with numerous actors involved in education which can help translate these broad principles and aspirations contained into operational strategies which can guide educators with clarity as to what it is they should do differently to contribute to the transformation of the educational experience (UNESCO 2021).

Our study of thirty-one case studies of innovation that emerged during the pandemic focus mostly on innovations to support learning from home. Some of them involve developing multimedia platforms or other technological platforms to support students, teachers and parents, others involve focusing particularly in supporting the socio-emotional wellbeing and development of students, or in supporting teachers in developing new capacities, to engage students, to provide them feedback, to design learning experiences. Most cases contain not just one of these features, but are multidimensional, for example including a platform to deliver digital content, but also support for teachers to develop digi-pedagogies. For example, all the innovations which focus on developing particular student competencies providing them more agency over their learning, are contributing both to develop the competencies which are the focus of the innovation (such as literacy, or numeracy, or science) while also developing the competencies for independent study. Similarly, as some of the innovations provide guidance to parents so they can support their children while learning remotely, they are in effect contributing to parenting education, even if that is not their main goal.

During the pandemic, Universities in Latin America also stepped up to support the emerging needs created by the crisis becoming engines of technological and social innovation to mitigate the impact of the crisis. For example, the EAFIT university in Colombia collaborated with the Ministry of Education, developing the platform for digital teaching which undergird the national remote teaching strategy during the pandemic. In Chile, the President of the Republic invited the presidents of the two main universities in the country, the University of Chile and the Pontifical Catholic University of Chile, to form a social roundtable to collaborate with the government in developing responses to the pandemic. In Mexico, the University of Guadalajara integrated the multiple

campuses of the university with the many high schools governed by the university, in professional development activities for staff to help them teach remotely. In Brazil, the Getulio Vargas Foundation collaborated with municipal secretaries of education, supporting the development of strategies to sustain teaching during the pandemic (Reimers and Marmolejo, 2021).

There were numerous university led initiatives to mitigate the health impact of the COVID-19 pandemic, including: the development of a molecular test to diagnose COVID-19 by the universities of San Martín and Quilmes in Argentina; the design of low-cost pulmonary ventilators by the Pontificia Universidad Católica del Perú; the design of protective masks for medical personnel by the University of San Carlos de Guatemala; the sequencing of the genome of a strain of COVID-19 by the University of San Francisco de Quito in Ecuador to monitor the virus; the development of a biosensor to detect virus cases in a cost-effective way at the National Autonomous University of Mexico; conducting diagnostic tests at the University of La Plata in Argentina; the development of a sanitizing cabin at the University of Chile; the development of a non-invasive ventilation system at the Autonomous University of Manizales in Colombia; the development of a mechanical ventilation device at the University of Concepción in Chile; the development of a rapid test to diagnose asymptomatic cases at the Pontificia Universidad Católica de Chile; the development of a disinfectant that eliminates the virus from surfaces at the Universidad de los Andes in Colombia; the development of an edible vaccine against the virus at the Autonomous University of Nuevo León; the University of Piura in Peru developed high-flow oxygen cannulas to treat extreme cases of infection; a nasal spray vaccine developed by the University of São Paulo in Brazil; the Austral University of Chile developed a low-cost test for mass diagnosis; the evaluation of existing drugs to attack the disease at the National Autonomous University of Mexico; the development of a molecular diagnostic kit at the Universidad Mayor de San Simón in Bolivia; the development of a mechanical ventilator at the Simón Bolívar University of Venezuela; In Uruguay, the Center for Innovation in Epidemiology Surveillance was established (Unesco, 2020b).

5. The bumpy road ahead and opportunities for effective support.

The educational challenges created by the pandemic are not over and may not be over even when the pandemic is under control. The reality that the pandemic will linger for some time, means that there are three kinds of education challenges: those involved in adapting to learning and teaching during the context created by the pandemic, in some cases involving remote distancing; of teachers and students, those involved in mitigating learning loss and ensuring that students learn what they need to learn; and those involved in reverting learning loss and building back better.

Beyond the need to mitigate learning loss and to continue to educate while the pandemic is still a risk, the education impact of the pandemic on the conditions children experience at home will continue during the pandemic's aftermath, in particular for those children whose families experience the brunt of the increase in poverty, food insecurity, and other shocks and vulnerabilities resulting from low income and marginalization.

This will require addressing the mental health challenges triggered by the pandemic, and the learning gaps caused by the pandemic, while also developing the skills necessary to address the new challenges, some of them caused by or compounded by the pandemic, such as social fragmentation and violence, growing poverty and inequality, diminished employment prospects, diminished trust in government, and climate change. Education systems face the triple challenge of recovering what was lost during the pandemic, addressing education challenges predating the pandemic, and aligning their response to prepare students for new societal and economic challenges and to build a better future.

Furthermore, given a likely economic recession and the burden of the costs of addressing the pandemic, it is conceivable that these challenges will need to be addressed in a context of financial austerity, for governments as well as individuals. The pandemic itself and its impact on other challenges is also likely to stretch government capacity, and with it the capacity to focus on education.

The constraints on financial resources will increase burdens on existing staff, already exhausted from the extraordinary efforts expended in sustaining education during the pandemic, having had to learn to teach in new ways, in a short time and with limited support, and learning to face new needs among their students created by the pandemic.

Given the considerable learning loss experienced by many students during the pandemic, learning recovery programs will be essential. To identify what needs to be remedied, assessment of students will be necessary as well as differentiated responses by schools and for different students. Targeted and personalized programs might include accelerated programs, extended learning time, dropout prevention programs, and increasing the capacity to learn and teach online, not just as a preventative measure against possible further interruptions of schooling but to enable extended learning time and to prepare students for lifelong learning. Beyond programs of cognitive support, the emotional trauma caused by the prolonged stress experienced by students and teachers during the pandemic, and by the losses directly experienced by some of them, will need to be addressed through appropriate interventions. For the children experiencing the effects of poverty, those experiencing food insecurity for instance, programs to attend to their nutrition and health will be essential.

To conclude, the COVID-19 pandemic created an education crisis in Latin America which robbed many students of the opportunities to learn what they were expected to and caused them to lose skills they had already gained, it also pushed some students out of school. These losses were unequally distributed among different students and education systems and, as a result, if they are not reversed, the outcome of the pandemic will be increased educational inequality, from which economic and social inequality will follow. These will further complicate other societal challenges, which predated the pandemic but were exacerbated by it: the challenge of increasing productivity, reducing poverty and inequality, increasing civic cohesion and trust in institutions and democratic governance, and addressing issues such as climate change or intra and interstate violence.

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Mr. SIRES. Thank you.

I will now introduce Gabriel Sanchez Zinny.

Mr. Zinny is the managing director of Blue Star Strategies, LLC. He is also a senior advisor to the CSIS Project on Prosperity and Development and a member of the Inter-American Dialogue's Working Group on Innovation and Technology in Education.

He served as a Minister of Education of the Province of Buenos Aires. He held the position of executive director of the Assessment Unit of Education Quality of the city of Buenos Aires and the executive director of the National Institute of Technological Education.

He co-founded two social impact initiatives, Edunexo and Kuepa, working on the introduction of technologies in the education system. He graduated as an economist from the University of San Andres and completed a master's degree in public policy from Georgetown University.

Mr. Zinny, we welcome you to the hearing.

I ask the witnesses to please limit their testimony to 5 minutes, and, without objection, your prepared written statements will be made part of the record.

STATEMENT OF GABRIEL SANCHEZ ZINNY, DIRECTOR, BLUE STAR STRATEGIES

Mr. ZINNY. As an Argentinian, it is an honor to be here today in front of you and this House of Representatives.

As you know, education in Latin America and the Caribbean was already in crisis.

The pandemic made it worse. The region suffers the greatest inequality in the world, beginning with inequality of opportunity to access a good education. Fifty percent of our students do not finish high school in a timely manner, and the region ranks last when measured against international tests like PISA or TIMSS. The pandemic aggravated this, resulting in 3 million students dropping out of school, according to the World Bank, and never returning to the classroom.

Poor educational assessment results were surely due to the length of time schools were closed and the lack of connectivity, particularly in the most vulnerable communities. In addition, it has become clear that online learning is not a sound replacement for in-person education.

This dynamic appears to be widespread, as the latest National Assessment of Educational Progress shows that U.S. students' performance have also suffered for the same aforementioned reasons.

This tragedy seems to be getting worse, but it should also bring about opportunity to overcome ongoing challenges in education.

First, we have an opportunity to give visibility to the educational crisis and to understand, from a foreign policy perspective, that education in the region is key for the U.S., not only because education increases the odds of socioeconomic success and a more stable citizenry, but also because a prosperous Latin America and the Caribbean means more trade, less forced immigration, and the economic consolidation of the continent vis-a-vis the growing presence of China.

There are so many issues that we include in foreign policy discussions, such as geopolitics, trade, transparency, and institutions,

but we must also include human capital. We must give it the necessary relevance and include it in all multilateral and bilateral conversations. We must focus on the skills and abilities necessary for a thriving democracy and boost economic development.

The accreditation of university and postgraduate degrees between and among countries and the mobility of talent in the hemisphere need to be key foreign policy issues moving forward, keeping in mind that remote work and the possibility of exporting education has generated enormous changes and opportunities in the education sector.

Second, we have an opportunity to dare to advance with more audacity and a sense of urgency around necessary reforms in the region, including improving teaching careers and measuring performance more effectively, evaluating schools and teachers in modern ways, generating precise information systems, and building a better transition from high school to the working world.

Third, we have an opportunity to build on lessons learned regarding online education. While technology cannot replace face-to-face schooling, it is true that the pandemic has familiarized the entire educational system with this powerful tool to strengthen learning, especially for the most vulnerable students, who generally do not have access to the best educational content and teaching methods in person.

But to harness online learning to help students make genuine improvements, governments and the private sector must work together to invest in the connectivity of our schools and families.

The experience of the pandemic has shown even more clearly that we all learn in different ways, at different rates, and with different interests. Along these lines, it would be helpful if the governments in the region institutionalized changes that give more freedom to educational offerings, from homeschooling to secondary schools with elective subjects and credits.

Educational offerings continue to be very rigid in Latin America and the Caribbean, ill-suited to individual learning needs and disconnected from the profound changes that the pandemic has exacerbated in the labor markets.

Simultaneously, the prolongation of the closure of schools has led to greater participation of families and more active social demands from them when it comes to their children's education. This is a positive phenomenon for the region, where governments and trade union organizations typically dominate conversations around education.

We must continue promoting the participation of parents, making quality of learning a priority among the demands of citizens who want politicians to invest in education more seriously. We should also encourage citizens to demand that governments provide more information on how schools are progressing and how students are performing, while making it easier for parents to understand a school's curricular content.

Finally, we have seen another positive trend toward greater autonomy and empowerment of schools, which, due to either government action or lack thereof, have been able to make more and different kinds of decisions around student learning and have been

encouraged to innovate and experiment with new ways of reaching their students.

This positive trend could be replicated and cemented as the norm if governments better define institutional frameworks with more freedom for schools and teachers, who can do what they know best—to teach—with less rigidity and fewer regulations from the central ministries of education.

In conclusion, while the pandemic has revealed and sometimes worsened educational challenges in Latin America that have existed for years, it has also widened the possibility for changes that will benefit students, families, teachers, communities, and societies.

Thank you very much.

[The prepared statement of Mr. Zinny follows:]

Gabriel Sánchez-Zinny

Senior Managing Director, Blue Star Strategies

House Committee on Foreign Affairs, Subcommittee on the Western Hemisphere, Civilian Security, and Trade

“Learning Loss in Latin America and the Caribbean: Building Better Education Systems in the Wake of the Pandemic.”

Thursday, September 15, 2022, Room 2172 of the Rayburn House Office Building

Education in Latin America was already in crisis, the pandemic made it worse. The region suffers the greatest inequality in the world, beginning with inequality of opportunities to access a good education. Fifty percent of students do not finish high school in a timely manner, and the region ranks last when measured against international tests, such as Programme for International Student Assessment (PISA), Trends in International Mathematics and Science Study (TIMSS).

The pandemic aggravated this, resulting in 3 million students dropping out of school and, according to the World Bank, never returning to the classroom. Poor educational assessment results were surely due to the length of time schools were closed and the lack of connectivity particularly in the most vulnerable communities. In addition, it has become clear that, online learning is not a sound replacement for in-person education. This dynamic appears to be widespread, as the latest National Assessment of Educational Progress (NAEP) results show that U.S. students’ educational performance results have also suffered for the same aforementioned reasons.

This tragedy seems to be getting worse, but it should also bring about opportunities to overcome ongoing challenges in education:

First, we have an opportunity to give visibility to the educational crisis. And to understand, from a foreign policy perspective, that education in the region is key for the U.S., not only because education increases the odds of socioeconomic success and a more stable citizenry, but also because a prosperous Latin America means more trade, less forced immigration, and the economic consolidation of the continent vis-à-vis the growing presence of China.

There are so many issues that we include in foreign policy discussions, such as geopolitics, trade, transparency, and institutions. But we must also include human capital. We must give it the necessary relevance and include it in all multilateral and bilateral conversations. We must focus on the skills and abilities necessary for a thriving democracy and boost economic development. The accreditation of university and postgraduate degrees between and among countries, and the mobility of talent in the hemisphere need to be key foreign policy issues moving forward, keeping in mind that remote work and the possibility of exporting education has generated enormous changes and opportunities in the education sector.

Secondly, we have an opportunity to dare to advance with more audacity and a sense of urgency around necessary reforms in the region, including improving teaching careers and measuring performance more effectively, evaluating schools and teachers in modern ways, generating precise information systems, and building a better transition from high school to the working world.

Third, we have an opportunity to build on lessons learned regarding online education. While technology cannot replace face-to-face schooling, it is true that the pandemic has familiarized the entire educational system with this powerful tool to strengthen learning, especially for the most vulnerable students who generally do not have access to the best educational content and teaching methods in person. But to harness online learning to help students make genuine improvements, governments and the private sector must work together to invest in the connectivity of schools and families. A stronger and more deliberate online learning ecosystem gives students at all levels more options to find methods that help them learn and attain key educational performance goals.

The experience of the pandemic has shown even more clearly that we all learn in different ways, at different rates, and with different interests. Along these lines, it would be helpful if the governments in the region institutionalized changes that give more freedom to educational offerings, from homeschooling to secondary schools with elective subjects and credits. Educational offerings continue to be very rigid in Latin American and the Caribbean, ill-suited to individual learning needs, and disconnected from the profound changes that the pandemic has exacerbated in the labor markets.

Simultaneously the prolongation of the closure of schools has led to greater participation of families and more active social demands from them when it comes to their children's education. This is a positive phenomenon for the region, where governments and trade union organizations typically dominate conversations around education. We must continue promoting the participation of parents, making quality of learning a priority among the demands of citizens who want politicians to invest in education more seriously. We should also encourage citizens to demand that governments provide more information on how schools are progressing and how students are performing, while making it easier for parents to understand schools' curricular content.

Another positive effect worth highlighting is that schools and teachers have been more valued during the pandemic. Today families recognize the effort and dedication of these educators. And there is a direct correlation between more valued teachers and better learning results. Even during isolation, many teachers have received recognition from society the way doctors and health personnel have. Schools will continue to be seen as that social engine that generates equality, promotes values, and creates a sense of community.

Finally, we have seen another positive trend towards greater autonomy and empowerment of schools, which, due to either government action or lack thereof, have been able to make more and different kinds of decisions around student learning, and have been encouraged to innovate and experiment with new ways of reaching their students. This positive trend could be replicated and cemented as the norm if governments better define institutional frameworks with more freedom for schools and teachers, who can do what they know best, which is to teach, with less rigidity and fewer regulations from the central ministries of education.

In conclusion, while the pandemic has revealed and sometimes worsened educational challenges in Latin America that have existed for years, it has also widened the possibilities for changes that will benefit students, families, teachers, communities, and societies at large. The region has an opportunity to learn from what the pandemic has brought on the education sector and embark on key reforms that would not only reverse the downward trends we have seen but also make Latin America a model of progress for developing nations looking to catch up to developed countries' educational performance.

Mr. SIREs. Thank you very much.

We will now turn to questions. I will recognize myself for 5 minutes for questions.

Mr. Folgar, this goes to you. I listened to your statements very attentively, and it is obvious to me that Uruguay made preexisting investment in remote education before the pandemic.

So how much did that help? And did you have enough money to do this? Which, it always comes down to money.

Mr. FOLGAR. Thank you, Mr. Sires.

Yes, actually, Uruguay has been making a sustained investment in technology and infrastructure for 15 years now, with the creation of Ceibal's organization.

And, no, it is never enough money invested in this infrastructure, because it is a perpetual challenge to make technological infrastructure available for every student—high-quality technological infrastructure for every student. We know that technology is evolving at a very, very high pace, and trying to make this technology available for every student in the country is a big challenge in terms of investment as well.

Right now, Uruguay has invested around \$700 million in the creation of this infrastructure during these 15 years. And it is true that this infrastructure was of paramount importance to have the results that we had, but it was not only the money, but the way in which the investment was made, to make it sustainable in a country with the GDP that we have. It is not the same financing matrix that more developed countries can use.

And that is the interesting thing about Uruguay. We found a model in which we can make cheaper technology work for us in a good way for our educational system to be online as well.

Mr. SIREs. Great. Terrific.

Dr. Reimers, this is for you. One of the concerns that I have with students spending so much time on the screen: How susceptible are they to political extremism? How susceptible are they to be influenced, obviously, by what is going on out there in the world?

Mr. REIMERS. It is a very important question, because, as you know well, by all indicators, democracy is under siege everywhere, including in some of the oldest democracies. And it is under siege by extremist groups of various sorts that essentially prey on the ignorance of the population.

And so I think we should be very concerned about education taking a back seat in the wake of this pandemic and disinvesting in the development of the capacities of people to discern facts from fiction.

I do think that there are two things that make people susceptible to become hijacked by extremist ideologies of any kind: One is ignorance, is a lack of opportunity to be educated. And the second one is, of course, spending a lot of unsupervised time on various online environments.

So I think it is very important to learn the lessons of history. The Federal Reserve produced a very good report on the consequence of the pandemic of 1918 in Germany, which, through mechanisms that had to do with the reduction of municipal spending in education and health, threw a lot of people into despair and made them very susceptible and prey of individuals like Adolf Hitler, who

were totally marginal individuals at that time and who 15 years later became elected chancellors of Germany.

I think it is very important that we continue to prioritize education and an education that cultivates human reasoning. I just spent a little time on the Library of Congress visiting Jefferson's Library, and it is so clear that the Founding Fathers understood that democracy is a twin institution with public education and with public research universities. And I hope we don't forget those lessons.

So I am so grateful to see a former teacher such as yourself calling attention to the importance of education at this time, not only to advance human well-being and the capacity of individuals to become architects of their own lives, but to retain the capacities that make it possible for them to collaborate with others in a world where we are all fundamentally equal in democratic societies.

Mr. SIRES. So I assume from what you are telling me that we should be really focusing on more policing on what is going on on some of these screens, to see the content that is there.

Mr. REIMERS. I certainly think we should be developing media literacy of students and developing their capacity for rational thinking, their capacity to understand the difference between fact and fiction. And I think that our teachers, both in the United States and in other countries, do a very good job when they have access to the students teaching them digital literacy, which is an essential foundational skill in the 21st century. I think that should be the priority.

We also should be paying attention to what goes on online. And I think dialog with technology companies is essential, to make sure that they all behave responsibly, understand that they have a public trust that they should sustain. They have a public trust in creating these modern cyberspheres that bring people together and that can be used for good and for bad, as we know, sadly.

In the old days, when people met in the physical public square, there were always some individuals that were a little bit odd and crazy, but they were isolated. But these people now can find each other, and they can create a virtual universe where they can spread their lies and misinformation and hijack others.

And whether those individuals are extremists like al-Qaeda and similar groups or the groups that are trying to undermine American democracy, it is all of the same ilk. These are people who are challenging the very idea that we are all equal and that we are all capable of collaborating with each other to build a society where we recognize the basic equality of individuals.

I think those are very serious risks for American democracy and for other democracies around the world.

Mr. SIRES. Would you like to add something to that?

Mr. ZINNY. I agree that critical thinking is key and an ability that we should be speaking of in a dialog with the private sector. Technology companies have an important responsibility, as well, to continue dialog with the government.

Mr. SIRES. In Uruguay, do you keep an eye on what is going on?

Mr. FOLGAR. Yes, we do. We have a whole department in Ceibal that is working within digital citizenship and global citizenship skills.

It is on the ranks that Fernando Reimers was sharing. We believe that the students, their families, and the teachers need to have tools to actually curate the content and use it proactively in ways that they can, let's say, apply all the possibilities of their digital citizenship skills and make them an extension of their citizenship in general and the rights.

Mr. SIRES. You know, obviously, this pandemic has had a profound effect on learning and disengagement and student dropout and teacher burnout. How should policymakers continue to work to mitigate these effects that the pandemic has left us with?

All three of you can answer that if you would like.

Mr. ZINNY. Thank you, Mr. Chairman.

And there is a lot of research on this that governments can work to eventually recover that loss. Many governments extending the calendar year, in terms of adding more days to the calendar year, so students can recover classes, especially the most vulnerable students that lost more education and more learning because they didn't have access or didn't have connectivity. Some governments are adding some hours during the week or are bringing some after-school programs to try to catch up.

But I think that the key here is to understand that we need to recover that loss, especially for the most vulnerable communities in Latin America. They will never recover, and they might be losing 1 year or 2 years of schooling. So we need to work on that. And governments should work on recovering that and not only improve quality of education for the future.

Mr. REIMERS. I think we need to understand that public education is undergoing the most serious crisis in its history since public schools were invented and that solving this crisis is going to require a whole-of-society effort.

Now, I think that we have good experience to draw on. In the United States, for example, in the 1990's, I remember a bipartisan initiative—I believe it was under the Presidency of George Bush—that involved the Department of Labor, the Department of Education, our two main teacher unions, and our main technology companies, where they understood that technology was going to fundamentally transform the opportunity to participate economically and civically.

And the result of that effort was something called the Partnership for 21st Century Skills, an unprecedented effort. I saw its impact in my State, in Massachusetts, helping our States to understand that we had to broaden our view of the competencies that students needed to develop.

I think that examples like that tell us what the road forward is. The road forward is to come together for the future of the Nation and of democracy itself, in a bipartisan way, understanding that this is going to require not only a whole-of-government effort, but is going to require the private sector, is going to require civil society, is going to require our teacher unions—an exercise, what is known as collective leadership, for the interest of the children.

Right now, as we speak, as the United Nations meet on the 77th General Assembly, the Secretary-General of the U.N. has convened a Global Summit on Education. And this summit, which will begin this weekend, is precisely designed to place education at the center

of the agenda of societies, not just of governments but of societies, recognizing that the enormous challenges that we are facing—the challenges of democratic backsliding, the challenge of social fragmentation, the challenge of increasing conflict within nations and across nations, the challenge of growing poverty, inequality, and of climate change—none of those challenges can be addressed without education as a bedrock and the cornerstone of building those.

So I think the answer to your very good question, Mr. Chairman, is: The way in which policymakers can lead is facilitating a coalition, a multistakeholder coalition, of all the forces of society to come together to support children and youth in their learning. Because nothing less than the further of societies as we know them is at stake.

Mr. SIRES. Thank you.

Mr. FOLGAR. I would agree with the last part of what Mr. Reimers was saying, but I would like to add that we have to take into consideration that the importance of education should be addressed in a team way.

We cannot put—you referred to the burnout problem teachers are having. I have been following the reality here in the United States where teachers are actually dropping from the profession, and in the States there is a teacher shortage because of this. And I think that that is because we put all of the pressure in education and none of the teamwork in education.

Teachers are responsible for this very important relationship between the student and the school, but they are also people who need to be seen as part of a team. And if policymakers don't create regulations and laws that foster that ecosystem of teamwork between families, schools, the State, and the private sector, making education a social issue, an everyday social issue, we are not going to have good results in the near future.

And I think that that is the point in what Fernando was saying about this coalition should be not about policing and controlling but about teamwork and a virtual circle of better education for everyone.

Mr. SIRES. Thank you.

I am going to ask you this question on behalf of the chairman of the Foreign Affairs Committee. He asked me to ask you this question.

How has the pandemic impacted learning loss in marginalized communities, particularly indigenous, Afro-descendent, students with disabilities? How can we address this gap?

Mr. REIMERS. That is the question of the hour. The pandemic has most significantly affected the most marginalized students, because they experience not only the impact of deficient arrangements of their schools to reach them, but they also experience the greatest impact—health impact, economic impact—of the pandemic.

So, in Latin America, as is the case in other places, the pandemic has increased inequality. In one study that we conducted of the Global Initiative, looking comparatively at how the pandemic had impacted students in 20 countries, the single conclusion is that the most important factors that mediated the impact of the pandemic on education were nationality and social class.

Nationality because the choices governments made made a huge difference. If you carry a Finnish passport, a Portuguese passport, or a Singaporean passport, you were impacted significantly less than if you carry an American passport, a Brazilian passport, a Mexican passport. Because, in those countries, the choices that governments made actually did not protect, in particular, the education of the most vulnerable students.

And the second factor is social class, because, as the pandemic moved the responsibility for education to the home, the enormous differences in the home circumstances of teachers played an even greater role than they normally do.

So I think that is the priority of the moment, is to concentrate our efforts in those students who are most vulnerable, who are today further behind than they used to be from their peers.

Mr. SIRES. Well, I am very interested in this topic. My wife spent 37 years in education. So did I.

Unfortunately—and I want to thank you for being flexible with the time today. And the reason we did that is because we have, obviously, votes and things that are going. And you have been very kind to be flexible and not abandoning me, so I thank you. I thank you very much.

I will now proceed to closing the hearing. Votes are going to be called in a while. So I thank you.

Obviously, this is a topic that needs a lot of looking into. I think we are going to be impacted because of what COVID did to education in the next decade or more. And we have to keep an eye on how our students are progressing that have fallen behind, not only here but, obviously, in the rest of the world, because COVID impacted just about everybody.

So I thank you, and I now move to close the hearing. Thank you.
[Whereupon, at 1:39 p.m., the subcommittee was adjourned.]

APPENDIX

**SUBCOMMITTEE HEARING NOTICE
COMMITTEE ON FOREIGN AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515-6128**

**Subcommittee on the Western Hemisphere, Civilian Security,
Migration and International Economic Policy**

Albio Sires (D-NJ), Chair

September 8, 2022

TO: MEMBERS OF THE COMMITTEE ON FOREIGN AFFAIRS

You are respectfully requested to attend an OPEN hearing of the House Foreign Affairs Subcommittee on the Western Hemisphere, Civilian Security, Migration and International Economic Policy, to be held in Room 2172 of the Rayburn House Office Building. Members who wish to participate remotely may do so via Cisco WebEx. The hearing will be available via live webcast on the Committee website at <https://foreignaffairs.house.gov/>:

DATE: Thursday, September 15, 2022

TIME: 2:00 p.m., EDT

SUBJECT: Learning Loss in Latin America and the Caribbean: Building Better Education Systems in the Wake of the Pandemic

WITNESSES: Mr. Leandro Folgar
President of Plan Ceibal
Oriental Republic of Uruguay

Fernando Reimers, Ed.D
Ford Foundation Professor of the Practice in International Education
Harvard Graduate School of Education

Mr. Gabriel Sánchez Zinny
Director
Blue Star Strategies

By Direction of the Chair

The Committee on Foreign Affairs seeks to make its facilities accessible to persons with disabilities. If you are in need of special accommodations, please call 202/225-5021 at least four business days in advance of the event, whenever practicable. Questions with regard to special accommodations in general (including availability of Committee materials in alternative formats and assistive listening devices) may be directed to the Committee.

COMMITTEE ON FOREIGN AFFAIRS

MINUTES OF SUBCOMMITTEE ON Western Hemisphere, Civilian Security, Migration and International Economic Policy HEARING

Day Thursday Date 9/15/2020 Room R110B 2177

Starting Time 12:40 PM Ending Time 1:39 PM

Recesses (to) (to) (to) (to) (to) (to) (to)

Presiding Member(s) Chair Albio Sires

Check all of the following that apply:

Open Session
Executive (closed) Session
Televised

Electronically Recorded (taped)
Stenographic Record

TITLE OF HEARING:

Learning Loss in Latin America+ the Caribbean: Building Better Education Systems in the wake of the pandemic"

SUBCOMMITTEE MEMBERS PRESENT:

- Rep. Andy Levin - Rep. Mark Green
- Rep. Vicente Fox-González

NON-SUBCOMMITTEE MEMBERS PRESENT: (Mark with an * if they are not members of full committee.)

N/A

HEARING WITNESSES: Same as meeting notice attached? Yes No
(If "no", please list below and include title, agency, department, or organization.)

STATEMENTS FOR THE RECORD: (List any statements submitted for the record.)

TIME SCHEDULED TO RECONVENE _____
or
TIME ADJOURNED _____

Max Price
Subcommittee Staff Associate

RESPONSES TO QUESTIONS SUBMITTED FOR THE RECORD

Questions for the Record from Representative Castro
House Foreign Affairs Subcommittee on the Western Hemisphere
Learning Loss in Latin America and the Caribbean in the Wake of the Pandemic
September 15, 2022

Questions for Dr. Fernando M. Reimers:

I. In his opening remarks and questions, Representative Sires highlighted the increased gang violence and membership we've seen during the pandemic, particularly in the Caribbean.

a. How should U.S.-funded partnerships target at-risk children in order to restore their participation in the education system, reduce crime and violence, and enhance social stability?

While I have not studied this specific issue, I am aware that lack of opportunities for youth to integrate socially, as a result of finding work and transition to adult roles, can lead to them engaging in oppositional behaviors, such as joining groups engaged in illicit activities contributing to violence¹. In this domain, prevention is probably the most cost-effective approach, helping young develop skills and mindsets that allow them to integrate into the economy and society. There are programs and organizations that have successfully worked with groups that had already joined groups such as gangs or guerillas, such programs typically involve skill development, psycho-social support and job placements. In the United States, while rigorous evaluations of gang prevention programs are scant, the existing consensus is that strengthening schools and communities are the most effective tools². Given the demographic structure of the population in Latin America, with a large percentage of youth, it is very important to attend to those who have been pushed out of the education system during the pandemic, and who may lack the skills to integrate effectively into the labor market, because they are at risk of joining such criminal organizations, which would further aggravate violence and contribute to social instability.

b. How should young boys be a particular focus of U.S.-funded programs to address their drop-out rate in order to reduce the rising violence, particularly homicides, in certain parts of Latin America and the Caribbean?

There is compelling evidence that students in Latin America drop out of school after repeated failures to progress academically³. Grade repetition typically precedes dropout. In turn, at the

¹ Rafael de Hoyos y Vicente Vargas. *Ninis en Mexico. Entre la crisis y el crimen organizado*. Nexos. June 13, 2016. <https://www.nexos.com.mx/?p=28630>

² Gang prevention. An overview of research and programs. <https://youth.gov/feature-article/gang-prevention-overview-research-and-programs>. Accessed Oct 16, 2022.

³ Laura Randall and Michael Anderson. *Schooling for success. Preventing repetition and dropout in Latin America primary schools*. Routledge. 1999.

root of grade repetition are low levels of literacy skills. Many children repeat grades because they never developed foundational literacy skills. An effective long term strategy to prevent school dropout is to support early literacy instruction, for boys as well as for girls. Beyond foundational literacy, it is necessary that schools offer an education that is authentic and relevant, that helps young students see the value of the effort they make in attending school. A curriculum that is largely content based and primarily geared for college preparation, may not be a compelling proposition for a student who knows their opportunity to access college are very limited. A two pronged strategy to address this challenge includes developing a skill-based component in the curriculum that most directly helps students prepare to access jobs, as well as expanding access to post-secondary education for the most disadvantaged students. There is some evidence that experiencing violence in school may lead students to join gangs, so addressing the socio-emotional climate of schools should be part of a preventative strategy.

c. Have any countries paid particular attention to creating or expanding vocational apprentice programs to enable at-risk youth to find viable alternatives when other forms of education are unavailable or ineffective?

Yes, many countries in Latin America and the Caribbean have technical education tracks at the upper secondary and tertiary levels, which include programs in partnership with employers⁴.

2. What can be done to ensure that women and girls can equally access educational opportunities?

Provide real opportunities to enroll in all levels of education, and provide health education for girls and for boys that provide young women more agency over their sex and reproductive lives. Mobilization campaigns to educate parents on the benefits of girls education can also be helpful as well as adequate school infrastructure --working bathrooms--.

3. How are countries in Latin America and the Caribbean taking steps to address the teacher shortages and teacher burnout, that we have seen reported here in the United States?

The potential teacher burnout caused by the pandemic has been relatively ignored to date in research or programming in Latin America. I am aware of emerging evidence of increases in leaves of absence and medical leaves in Chile, following the pandemic, but have not seen similar evidence elsewhere in the region. I am not aware of evidence that there is a shortage of teachers following the pandemic. Before the pandemic, there had been efforts in many countries to align teacher selection and preparation with more ambitious curriculum standards, and I expect that those efforts will continue as the critical importance of teachers to sustain a quality education is a topic well established in the education policy agenda in the region. I do think that the pandemic has altered the 'institutionalization' of education, in some cases diminishing trust between teachers and communities, and between teachers and education authorities, and that this de-

⁴ International Labor Organization. The Future of Technical and Vocational Training in Latin America. 2017. https://www.ilo.org/sites/default/files/file_publicacion/future_VT_ORCinter.pdf

institutionalization of education could undermine efforts to recover from the multiple negative educational effects of the pandemic for students.

Questions for Mr. Sanchez Zinny:

In your testimony, you referenced that there is an opportunity to bring greater visibility to the issues of educational inequality and widen the possibility for change.

- 1. How can all stakeholders in Latin American and the Caribbean societies work together to address the gap in education opportunities for under-privileged communities? In particular, what role should domestic and international private sector actors play in addressing this gap, both domestically in Latin America and the Caribbean, and internationally?**

It is essential that all actors in society get involved, civil society, private sector, multilaterals, but the main role is that of governments. Ministries of education must become more effective, focus on results, on achievements, and systematically evaluate schools and teachers. They should measure results and use that to define more effective educational policies. If you look at the compared results, this is clearly not happening.

The private sector can contribute in different ways to improve education and has been getting more involved in Latin America. The educational crisis in Latin America is over-diagnosed, we have to focus on acting, with boldness and a sense of urgency, and the private sector do so by generating ideas and debate around the issue. Discussing the issues, presenting proposals, and having the courage to be politically incorrect and talk about the necessary reforms, such as those of the teachers' careers, and evaluations of schools and universities, and the need to be transparent with educational spending are enormous contributions that the private sector can make to education.

There are many other ways to contribute as well. The first has been going on for decades, although critics of private education never mention it, which is the provision of products and services. The private sector has always contributed through donation of benches, chairs, books, school construction, or computers and Internet connectivity to educational systems. More public-private partnerships must be promoted to provide other materials that are necessary for teaching and learning.

Another point is the private sector's continuous contribution to innovation and their approach new technologies, teaching processes, contents. This innovation is often difficult to generate from the public sector, which is usually slower, less prone to change and more averse to risk. But in order to expand and scale, the government can seek partnerships with the private sector to bring innovation to public schools.

The other great contribution that the private sector has made and can continue to do so, is to attract and train people through social, for-profit and impact startups to work on education and acquire experience. These people could not only to have an impact on the private sector

workforce but, they could also join the public sector. Ministries of Education usually form completely homogeneous teams, where all come from work in schools, with very little experience in management and administration, or in other sectors of the economy. I believe that the combination of people who have experience across industries and sectors of the economy, can be very helpful in promoting disruptions and reforms with greater impact on the system.

Questions for the Record from Chairman Sires
House Foreign Affairs Subcommittee on the Western Hemisphere
Learning Loss in Latin America and the Caribbean in the Wake of the Pandemic
September 15, 2022

Questions for Dr. Fernando M. Reimers:

- 1. Rural students and students of indigenous and African descent have failed to match the educational attainment of their city-based peers. How have students residing in rural areas been impacted by school closures during the pandemic?**

Indeed, evidence pre-dating the pandemic demonstrated that students living in rural areas, as well as indigenous students and students of African descent had more limited educational opportunities in Latin America than their white peers and that those students living in urban areas, particularly in terms of the quality of instruction available to them, in the opportunities to access and complete upper secondary education as well as in opportunities to access tertiary education¹. Because progress made in expanding educational opportunity to those groups is most recent, and because those populations of students face multiple forms of vulnerability –greater poverty and greater social exclusion more generally— those students represent the ‘*last mile*’ in terms of educational inclusion, they are those for whom the right of education is most fragile and least consolidated. It is reasonable to expect that the educational chances of these students have been disproportionately impacted, leading more of them to attend school less regularly, with the consequent negative results in their learning and progression in school and eventually leading some of them to drop out of school. Empirical evidence to examine the specific impact of the pandemic on these groups of students is still limited. Partial evidence suggests that indeed school dropouts in high school are higher among these groups. More evidence, however, will be necessary to reach definitive conclusions in this respect.

- 2. In your opinion, what types of learning recovery programs should countries in Latin America and the Caribbean begin implementing to offset the learning loss caused by COVID-19?**

The education recovery programs in Latin America should target the specific educational effects of the pandemic. A clear effect, for many students, has been learning loss, the knowledge and skills they did not learn during the protracted period of school closures. In order to help students catch up and develop those skills it will be necessary to reprioritize curriculum and to implement accelerated forms of instruction, as well as extend learning

¹ Reimers, F. 2022. Education. In Carey, H. (Ed.) Understanding Contemporary Latin America. Fifth Edition. Lynne Rienner Publishers. 2022.

time. To do this, teachers will need support to reprioritize curriculum and to teach to groups of students of greater heterogeneity in their levels of knowledge and skills in their classrooms. Students will need extended learning time, either in the form of longer school days or longer school years, including summer recovery programs. Tutoring programs, deploying additional human resources to help support students, particularly those most impacted by the pandemic, would help extend opportunity to learn and provide the personalized support, in small groups, that the students that have been furthest left behind will need.

In addition, specific outreach efforts will be needed to re-enroll those students who dropped out of school before completing the compulsory cycle and who entered the labor market prematurely or, worse perhaps, those students who dropped out of school and are currently neither studying nor working. Those efforts should include not only efforts to motivate students to complete their studies, but more flexible programs which allow students to complete their studies even if they are unable to reenroll in traditional schools on a full-time basis.

In addition, the long school closures and other stressors brought about by the pandemic have hampered the socio-emotional development of students, expressed for instance in higher levels of violence among students and among students and teachers upon return to school. This will require greater efforts to support students develop essential life-skills.

Finally, in some contexts in Latin America, the long school closures translated into loss of trust on teachers and schools from communities. This was expressed, for instance, in the vandalization of school infrastructure during the time when schools were closed. It will be necessary to rebuild that trust with appropriate outreach and family engagement programs.

3. Rural students in the region have failed to match the educational attainment of their city-based peers. How have students residing in rural areas been impacted by school closures during the pandemic?

Indeed, there are significant gaps between the educational attainment and achievement of students who live in rural areas and those who live in cities and, in all likelihood, educational opportunity has been disproportionately affected in rural areas during the pandemic. Evidence on this subject, however, is still limited, consisting of few studies that do show larger dropout rates for students in rural areas than in cities.

4. The World Bank estimates that learning losses may translate into \$1.7 trillion in lost earnings, equal to about 16% of the regional GDP. Can you explain how these figures affect everyday individuals in the region in practice?

These estimates, based on extrapolations of the earning differentials associated with the completion of various levels of education and on the predicted decline in educational

attainment that would be induced by the long school closures, would translate into diminished wellbeing for individuals. Because the dropout rates and learning losses have disproportionately affected the poorest children, the estimated lost earnings would also have important distributional effects, translating into diminished opportunities for social mobility for the children of the poor. These diminished earning prospects of those whose education was cut short by the pandemic could translate into increases in educational exclusion, and perhaps in increases in social cohesion and political stability. Already before the pandemic, public opinion surveys documented declining support for democratic institutions, particularly among the younger cohorts many of whom would be willing to trade off freedoms and democratic institutions for economic security². These trends are likely to deepen as a result of diminished economic opportunities for those most affected by the pandemic.

Questions for Mr. Sanchez Zinny:

1. According to the World Bank, 77% of 15-year-olds in Latin America have at-home internet. Conversely, 45% of low-income students have access to the internet. What are Latin American and Caribbean countries doing to bridge this connectivity gap? How can the U.S. be supportive in this effort?

Countries had been investing in greater connectivity, but this does not seem to have increased after the pandemic. In turn, it is no longer enough to connect schools, but it has become necessary to provide connectivity to all families at home as well and greater involvement of the private sector is necessary to achieve that. The United States can collaborate through greater innovation that allows access to different forms of connectivity, at lower prices. There is an opportunity here for the United States to counter China's existing efforts in the region. To do this, the US government can help focus funding from multilateral organizations such as the World Bank, the Inter-American Development Bank, and the Development Finance Corporation to attend this issue across the region.

2. What impact will COVID-19 have on literacy rates in the region, which are already in decline?

The pandemic has been shown to have very negative effects on literacy levels, particularly among students in more vulnerable areas. It is true that literacy rates in the region were already in decline, and we hope this tragedy gives this issue more visibility, and that it prompts governments to focus on improving reading and writing from the primary and pre-primary levels.

² Latinobarometro. Informe 2021.

Opening Statement: Learning Loss

- A defining feature of the COVID-19 pandemic was its ability to worsen societal issues that predated it.
- Latin American and Caribbean nations have struggled against a legacy of educational scarcity, stagnation, and inequality.
- While some countries have made significant strides towards universal access to education, literacy and drop-out rates in the region were trending in the wrong direction before the first case of COVID-19 was detected there.
- The pandemic brought about an unprecedented disruption of the region's academic institutions, interrupting the education of nearly 200 million students.
- Latin America and the Caribbean had longer school closures than any other region in the world, due in large part to limited resources and inadequate capacity to adapt.
- Students who were lucky enough to access virtual education still lost out on critical face-to-face services such as school meals and access to social support and mentorship.
- Those who reside in rural areas, live with disabilities, or face economic adversity are now at heightened risk of falling out of the system entirely.
- The long-term impact of this could be devastating.
- According to the World Bank, pandemic-related school closures in Latin America and the Caribbean could leave nearly two out of every three students incapable of reading and writing at grade level, and nearly eighty percent have already fallen behind on basic, foundational skills.
- In the absence of interventions to make up for lost instruction, this generation of students will not be prepared to participate in the modern economy.
- A recent study estimates that current students in the region could lose out on one point seven trillion dollars in future earnings. Without the prospect of economic mobility, more young people will turn to gang affiliation, informal employment, and migration to our southern border.
- Further, they will be increasingly susceptible to online disinformation and political radicalism.
- Long before I was elected to Congress, I taught teenagers at Memorial High School in West New York.
- Over half of my students were free lunch eligible, a third spoke English as a second language, and many of them had endured financial hardship from an early age.
- As a teacher, I saw firsthand the impact that a student's environment has on their ability to learn.
- I can only imagine how difficult it is to navigate these challenges in isolation, or to attempt to reach students through a screen.
- The immediate, sweeping effect of the pandemic on education in Latin America and the Caribbean is a wake up call for many who are focused on the region.

- However, the repercussions of this crisis can be mitigated with a recognition of the problems that were present before the pandemic, as well as an acknowledgement of our past failure to provide equal access to quality education in the region.
- It will take a coordinated international effort, with the support of the United States, to move beyond confronting the damage done by the pandemic and take on the challenge of building better education systems in Latin America and the Caribbean.
- We are lucky to have the opportunity to learn from experts who can illustrate the scale of the problem and provide us with recommendations for supporting student achievement across the Western Hemisphere.