

Chile's Digital Learning Strategy During the COVID-19 Pandemic: Connecting Policy with Social Realities?

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Figure 1
Students at Colegio Reina Norte in Santiago in 2021, after the school reopened



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Chile on the wake of the pandemic

Chile is located in South America. It shares borders with Argentina, Peru, Bolivia, and the Pacific Ocean. Its territory has an extension of 469,820 square miles, in addition to 776,874 square miles in the Antarctic. It has 16 administrative regions in the mainland, and its capital is Santiago. In 2017, Chile's population was 17,574,003 people, out of whom 17.6% were between 5 and 17 years old, while 12.4% identified as Indigenous (Sistema de Información de Tendencias Educativas de América Latina [SITEAL], 2019).

The 2018-2022 president of Chile is the center-right, Sebastian Piñera, who previously served as president from 2010 to 2014. Piñera's second term was being harshly criticized domestically before the pandemic, to the point that, on October 18, 2018, the Chilean people protested against Santiago's increased subway fares, which originated a series of other claims, including education (Plazas, 2019). In Santiago, teachers suspended classes the Monday following the beginning of the protests. Mario Aguilar, President of the Teachers Union, supported the initiative by inviting teachers to fight in a non-violent way (Meléndez Tormen, 2019). This wave of social unrest was called Chile's Awakening. Then, the summer vacation period started. It seemed like the 2020 school year would start normally but, only after about eight weeks into it, on March 15, 2020, schools had to close due to the COVID-19 pandemic (Economic Commission for Latin America and the Caribbean [ECLAC], 2020). Synchronously, in February 2020, former Minister of Education Marcella Cubillos resigned after being criticized for her performance, but claimed that she wanted to participate in the movement for a constitutional plebiscite (Castillo, 2020; El País, 2020). As a result, Raúl Figueroa took over the country's education policy during COVID-19 at the pinnacle of the corresponding social and educational crisis.

The Chilean education system in context

Chile's education system is composed of four main levels: pre-school for children from 0 to 6 years of age, basic education from 6 to 13 years of age, high school from 14 to 18 years of age, and higher education (SITEAL, 2019). Education is compulsory from the last year of pre-school to the last year of high school, a total of 13 grades. Special education is integrated either in school establishments or special school establishments. Adult education is provided for compulsory levels. At the beginning of 2020, there were about 3.6 million students enrolled in the National Education System (Crespo, 2020). The higher education system is divided into the technical-professional and the university branches. While all high school graduates can access the technical-professional branch (usually two years), those who aspire for public, and some private universities must take the Prueba de Selección Universitaria (University Selection Test). The university branch grants undergraduate (4 to 5 years) and graduate degrees.

During the Chilean dictatorship (1973-1990), neoliberalism heavily influenced the education system. As explained by Ávalos and Bellei (2019), parents were given the choice of schools for their children, and a system of competitive vouchers was set in place for schools that ensured quality and high achievement. The state supported public schools, which were administered by the state, and subsidized schools, privately managed but incorporated the voucher system; private schools also existed. As the dictatorship came to an end in 1990, Chile struggled with erasing inequity while keeping the core features of market-driven schools; the country continues to struggle today – by 2015, only 35% of the student population were enrolled in public schools.

Because Chile's educational system encouraged schools to select their students based on their families' socioeconomic status, and families to select their schools based on comparative standardized results, the neoliberal management has resulted in segregation and inequality (Ávalos & Bellei, 2019). Several high school students quickly realized that they were not given the same opportunities for success. In 2006, these high school students organized themselves as the Penguin Revolution, which sought free, quality education, and the elimination of discriminatory entrance practices (Bellei et al., 2018). In 2011, the Confederation of Chilean Students (Confech) issued another set of demands centered on the bank loans that they needed to pay for their tuition costs, and which led to unpayable debts after graduation (Ávalos & Bellei, 2019). Teacher protests for improved work

conditions added up to the claims, leading then President Bachelet (2014-2018) to issue a set of reforms to ensure social justice (Ávalos & Bellei, 2019).

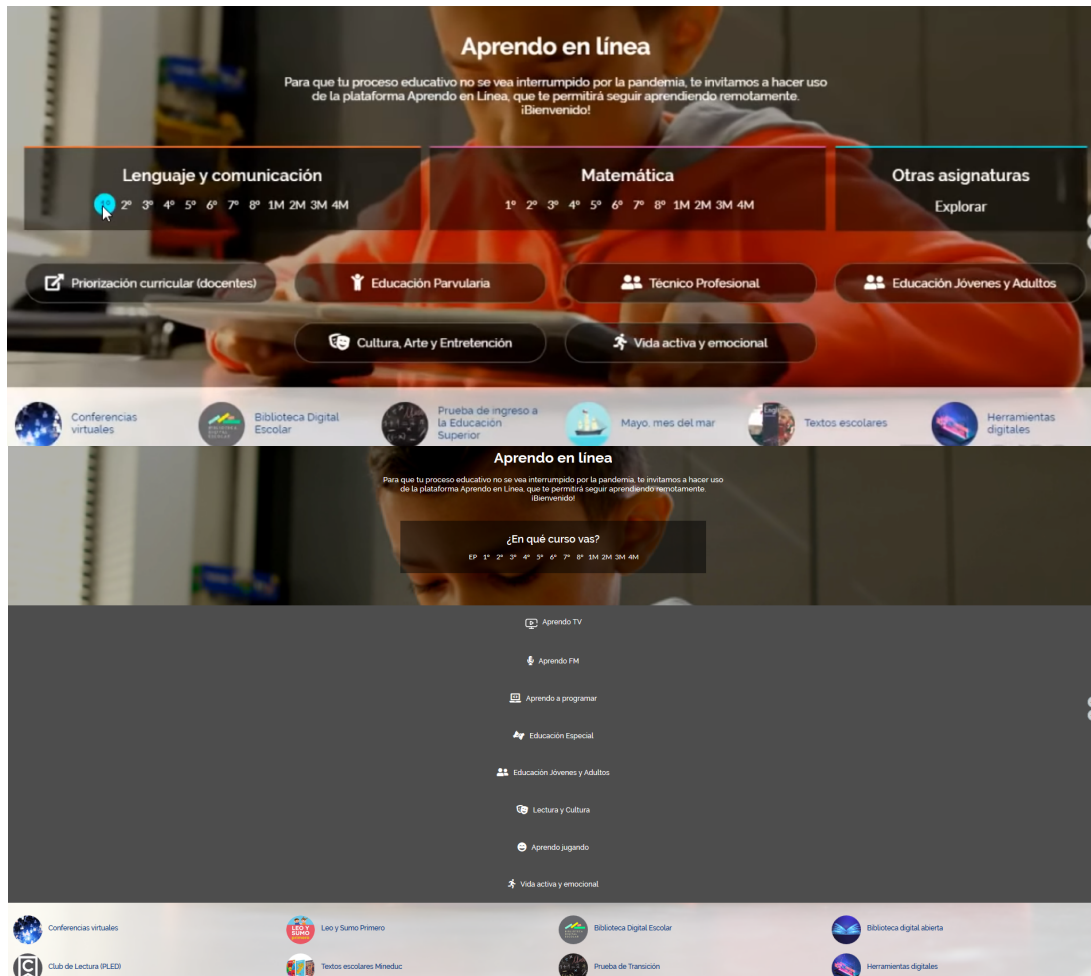
Chile's neoliberalist education system, seeking to meet the demands of the market by encouraging domestic private management and emphasizing international rankings, has remained in place, but its implementation has alternated along with the country's presidents (Ávalos & Bellei, 2019). President Bachelet's (2014-2018) educational reforms aimed at reducing socio-educational segregation by granting more authority to schools and teacher councils through a local network to manage public schools at a larger level than municipalities (Ávalos & Bellei, 2019; Muñoz Stuardo & Weinstein Cayuela, 2019). However, since swearing off, Chile's President Sebastián Piñera has issued law projects that return to prioritizing subsidized schools. Specifically, the Admisión Justa (Fair Admission) nationwide project aimed at creating a merit-based system of admissions where parents can choose schools for their children, which reversed Bachelet's main tenets. The unstable educational reforms in Chile fed the discontent of the population, eventually contributing to Chile's Awakening in late 2018.

Chile's digital agenda and online resources during the pandemic

In his 2018-2022 Presidential Program, President Piñera (2017) declared that the first priority in education was for children to achieve proficiency in English language and Information and Communication Technology (ICT), and the second was to get ready for the digital revolution. The 2013-2020 Imagina Chile Digital Agenda, by the Under-Secretariat of Communications (Subsecretaría de Comunicaciones, 2013), proposed five pillars towards the digital revolution: connectivity and digital inclusion, environment for digital development, education and training, innovation and entrepreneurship, and services and applications. In addition, three national projects have accompanied the digital agenda. In 2009, the program Yo elijo mi PC (I choose my PC) was created to reduce the digital gap between 4th through 6th grade students with the highest income and those with the lowest income by granting those with the lowest income a PC of their choice (Ministerio de Desarrollo Social, 2018). A similar program, Me conecto para aprender (I connect to learn), aims at granting all 7th graders enrolled in public institutions a computer and Internet access for one year (Ayuda Mineduc, n.d.). Finally, in 2018, Chile's Ministry of Education (Mineduc) began implementing the Plan nacional de lenguajes digitales (Digital Language National Plan), which focused on providing training to teachers and students from schools that meet the quality standards set by the Government, called Liceos Bicentenario, this with help from the Kodea Foundation and Fundación Telefónica Chile (SITEAL, 2019).

Immediately after the COVID-19 pandemic hit the country, Chile launched the online platform Aprendo en línea (I learn online). The first case of coronavirus in Chile was identified on March 3, 2020 (Reuters, 2020). On March 18, President Piñera called for the implementation of the dynamic quarantine, based on social distancing practices only in the most affected neighborhoods and regions (Diario las Américas, 2020). Due to social distancing, on March 20, 2020, Chile announced the planning of Aprendo en línea, which contains curricular content for students from all 13 compulsory levels to continue their studies (UNESCO, 2020). The platform, created by Mineduc's Unit of Curriculum and Evaluation (UCE), is of free access and available at <https://curriculumnacional.mineduc.cl/>. Figure 2 shows the initial interface of the platform, and its main page for students a year after the launch of Aprendo en línea.

Figure 2
Aprendo en línea's student interface on May 28, 2020 (in Crespo, 2020), showing the initial curriculum prioritization, and its equivalent on July, 28, 2021, showing the evolution in priorities



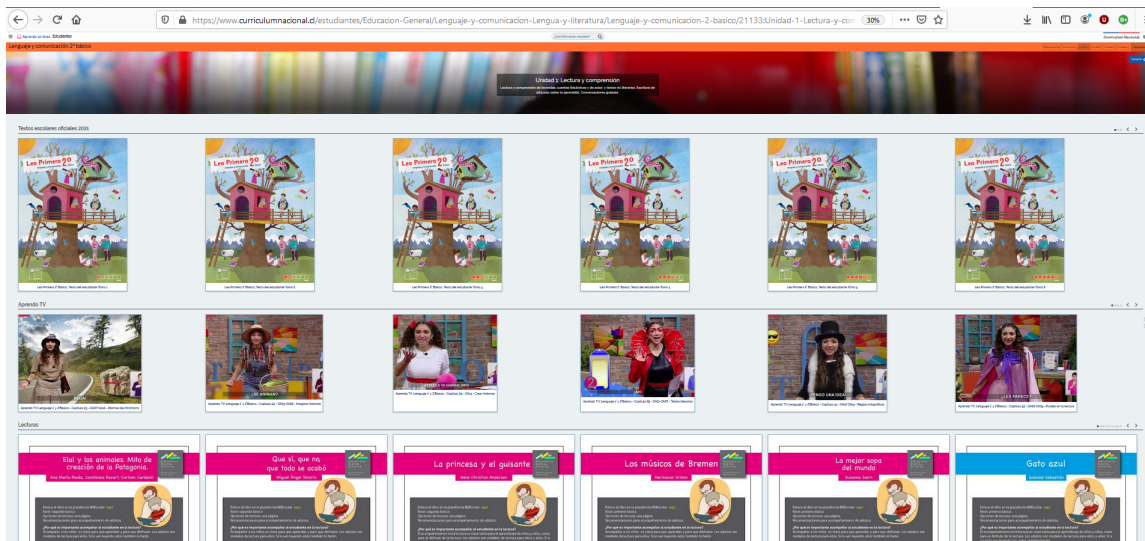
According to UCE (Crespo, 2020), *Apredno en línea* was designed to create dialog between textbooks and technology. Manuals for parents and teachers to understand how the platform worked were also created, and digital versions of the textbooks could be accessed on their corresponding link. At first, the platform was in line with the curriculum, but priority was given to Spanish language and math, with other subjects covered to a lesser extent. In addition, each subject was divided by grade. Each grade displayed a weekly plan to be used four times a week and indications on when to use the textbooks. Each lesson had a corresponding video where a teacher briefly explained the learning content (all videos were linked to YouTube). Finally, there was an exit ticket, which provided evaluation on the learned concepts. As the platform evolved, the content of each subject increased and became closer to the national curriculum. In 2021, the platform focused on linking textbooks with videos, activities, and other online resources, in a more consistent way across grades and subjects. Emphasis on Spanish and math

remained through a special thumbnail at the bottom of the main page that directed to content only in those subjects.

Resources from other platforms or in other formats complemented Aprendo en línea. At first, for those places without Internet connection, Mineduc made available TV EducaChile, an open signal that reached up to 90% of the territory, including the Easter and Juan Fernández islands (CNTV, 2020; Mineduc, 2020 b; Prensa Presidencia, 2020). At the same time, some lessons in the platform had links to Aprendo en casa (I learn at home), a series of printable activities designed to reinforce learning and help parents guide the process at home (Crespo, 2020). For rural areas, physical Aprendo sin Parar (I learn nonstop) booklets were distributed among 380,000 students in 3,800 schools in rural areas (Mineduc, 2020 c). Third, Mineduc offered Google Classroom for educational establishments at all levels, from pre-school to higher education. School directors could request access at www.comunidadescol.cl. By the end of May, 2020, more than 900 superintendents in 4,000 educational establishments had G Suite accounts (Crespo, 2020; Mineduc, 2020). In addition, the digital literacy platform gathered more than 400,000 teacher-members who created reading clubs with their students. Its goal is to become the largest reading platform in the country (Crespo, 2020), and it can be accessed at <https://planlectordigital.mineduc.cl/#!/>. In 2021, the platform had already incorporated the Aprendo TV block that TV EducaChile initially broadcasted (Mineduc, 2020 d), as well as Aprendo FM. Figure 3 illustrates how some Aprendo TV blocks and textbooks were displayed in 2021.

Figure 3

Aprendo en línea's upper half of the portal for 2nd grade, reading and comprehension unit, showing digitalized textbooks, Aprendo TV blocks, and suggested reading titles



Aprendo en línea gathers previous efforts and the future vision of Chile's digital agenda. Prior to the pandemic, Mineduc had started Aprendo+, a portal which supports the Ministry's current priorities, such as fostering the knowledge on indigenous peoples; it can be reached at www.yoaprendomas.cl. Another initiative previous to the platform is EducarChile, available at www.curriculumnacional.cl. When comparing contents, Aprendo en línea built on those resources for its content, eventually concentrating most

of these websites and platforms. A list of the resources mentioned in this section can be found in Appendix A.

Digital learning measures: Narrowing gaps in access to quality education?

The change from in-person to at-home schooling and the rapid digitalization of the education system impacted the access to education and the quality of the outcomes during the pandemic; however, the extent to which digital measures helped school administrators to face that impact is difficult to understand without hearing from them directly. To give those who had to adapt to digital learning some voice, this report discusses the experiences of the following: 1) one national education policy expert, 2) one Learning Resources Coordinator in a public school in Northern Chile, and 3) one Technology Coordinator in an elite private school in Santiago during the process of adapting to digital learning. The goal of these semi-structured interviews was to explore the different digital learning strategies among systems and regions at the school-home level, and then compare them with the national vision and the information that official documents and *Aprendo en línea* provide. The interviews took place between November, 2020 and February, 2021, between two academic years.

The findings of the exploration indicate that school administrations, but also the type and position of schools within the education system, determined which digital strategy schools adopted and how successful it was. They further revealed the social disparities that prevailed by the lack of digital tools, as well as new socio-educational challenges. All in all, current Chilean officers stood out as the ones accountable for addressing the digital divide, which in this case can be understood as those who learned how to use digital tools (US National Telecommunications and Information Administration (NTIA), 1999), and those who are learning to create them. The main takeaways from the interviews are presented below.

Accessing digital learning: the role of school administration and the limits of state administration

The evidence hinted at school administrations being key to ensuring the continued provision of education in Chile during the pandemic. According to all three interviewees (personal communications, November 13, 2020; December 28, 2020; February 4, 2021), engaged instructors and intuitive directors made a difference to adapt to digital learning and meet demands. School principals in the interviewees' public and private schools organized training workshops for their teachers, although private schools responded faster than public schools. In the words of the private school interviewee (personal communication, February 4, 2021): "We urgently called that same company who had trained us [in education programming] to see if they could help us implement Google Classroom because nothing was digital...and they helped in record time. The platform was working a month later". In that way, timely reactions by the interviewees' school administration greatly contributed to the provision of schooling, even when money or technology were not an issue.

Fear to see dropouts increase was latent within the public school's administration, while the private school's concern was the provision of quality digital education. The interviewee from the public school described how the principal deployed a team of teachers to tutor students who were dropping out, which brought them back to class: "I was assigned three kids who had been missing and one, for example, had dropped out and gone to work, he did not want anything...later, teachers were able to communicate with students, via the telephone and all." (personal communication, December 28, 2021). Meanwhile, the Technology Coordinator in the private school was in charge of the

technical aspects of education – setting up Google Classroom, watching over Zoom, making sure that all students were accessing the material –, and a coordinator that ensured that the quality of education remained steady. Each situation was very different, but schools prioritized digital tools whenever needed according to the profile and context of each institution.

Directors played a key role in guiding their schools through the pandemic, but the profile of each school often facilitated or delayed the acquisition of technological tools for class. The private school where the Technology Coordinator works, for instance, could access and readjust funds faster, but faced parents' demands to keep the same quality education for their children. While these demands posed a challenge to teachers and administrators, school staff were able to find solutions within the school. Similarly, as the interviewee from the public school explained (personal communication, December 28, 2020), subsidized schools had to go through their *sostenedores*¹ to obtain funds but, since *sostenedores* are usually directors or owners in subsidized schools, these could respond more rapidly to financial needs. Public schools, however, go through government dependencies called municipalities to make requests. In that way, devices such as projectors and tablets reached schools in Northern Chile after a protracted period of time. It is thus a probability that the acquisition of technology followed a much faster pace in private schools, faster in subsidized schools, and much slower in public schools. In the public-school interviewee's own words, "private education, despite being subsidized, is speeding up, and public education is stuck behind due to very serious administrative, bureaucratic issues" (personal communication, December 28, 2020).

Addressing social vulnerability: prior issues and post-digital challenges

Socially vulnerable student populations like Indigenous youth, those living in remote areas, and students with disabilities were prone to be affected by a digital learning strategy that did not take connectivity issues or special needs into account, but most of them continued to receive an education, at least in urban areas. Regarding Indigenous students, the teaching of Aymara in Northern Chile, for instance, had been increasing one level per year before the pandemic, for all public schools. In urban areas with a majority of indigenous students, the impact of the pandemic on the Aymara population was not greater than that of other populations. Although the teaching of Aymara could not continue increasing by level as usual, grading Aymara became part of the language exams that the Ministry of Education required from students (personal communication, December 28, 2020). In isolated, remote urban areas like Easter Island, schools were able to re-open faster due to the low rates in COVID-19 cases, so Rapa nui students also continued with their learning (personal communication, November 13, 2020). Finally, students who receive special education kept up with their studies as well. During the quarantine, Chile mandated that all schools wishing to welcome students in their establishments needed to petition for reopening. While many of them submitted petitions, many others found a way around, with teachers going to their students' homes to teach (personal communication, November 13, 2020).

Digital learning was harder to implement in rural areas. When schools closed in March, 2020, many rural schools did not have the technological infrastructure to use digital tools (personal communication, November 13, 2020). Neither *Aprendo en casa*, *Aprendo TV* nor radio were mentioned by the interviewees. In the few, remote public boarding schools that welcome Chile's most vulnerable youth, education was secondary because students were sent back home during the pandemic and, as such, could not receive their daily school meal: "Those students...and are few in number, so nobody pays much attention...When they have managed to connect, one sees them under an umbrella next

to the river – the place that has Internet connection” (personal communication, November 13, 2020). Therefore, not all students or teachers could make use of the digital learning platform, which further increased the gap between urban and rural areas.

Adapting to the digital world made some students and teachers vulnerable in terms of health and wellbeing. Many students were required to sit in front of a computer device as many hours as if they were attending school in-person, which is about 40 hours a week. Meanwhile, all teachers had to learn how to use *Aprendo en Línea*, Zoom, Google Classroom, or any other requirement from their establishments; school administrators had to be available to parents at all times, and some schools had to dismiss some of their personnel due to school closures. In the case of the public school, the Learning Resources Coordinator noticed that many teachers and students gained weight and declared feeling more stressed (personal communication, December 28, 2020). In this sense, the prolonged use of digital learning was detrimental to school communities, making them vulnerable in their personal lives.

In terms of enrollment, the role of parents, and whether they could support their children with their digital academic tasks, are possibly related to lower enrollment rates. Those parents whose children attended private schools were oftentimes better equipped to help them study because of their cultural capital, but even they struggled with following up on the education of their offspring. For example, the private school from the interviews provided technology tutorials for parents (personal communication, February 4, 2021), while the public school remained available through WhatsApp to address technical or curricular questions (personal communication, December 28, 2020). Even so, parents with limited resources did not have Internet access at home and had no choice but to pick up printed material from schools and try to teach their children without the proper basic knowledge. As a result, some parents were unable to provide academic support to their children. Some parents even revealed to have reading comprehension difficulties. Those parents “were exhausted, and there was the difficulty of not understanding [...] You begin to realize that illiterate parents begin to surface when they cannot return the questionnaire we sent” (personal communication, November 13, 2020). Those socio-economic differences that digital tools unveiled affected enrollment. Previous to 2021, about 186,000 individuals ages 5 to 21 were out of the system, but another 39,500 did not enroll in the 2021 academic year (Mineduc, 2021).

Implementing digital learning policies now and beyond the pandemic

Beyond urban-rural gaps in accessibility, the implementation of digital resources that the government made available to the Chilean population was not always the most suitable option to communicate with students. If there was a need to communicate, the public school interviewee noted that teachers in public schools opted for public access communication channels to stream their courses and speak to their students. WhatsApp and Facebook emerged as the most available and reliable communication channels (personal communication, December 28, 2020). In contrast, the private school used its own resources, such as a Google application to teach students in kindergarten and up until 4th grade, and where parents could communicate with teachers (personal communication, February 4, 2021). *Aprendo en línea* remained a complimentary communication tool.

In terms of content, *Aprendo en línea* was effective in prioritizing the teaching of certain topics that met minimum learning standards like Spanish and math mentioned above, but not the standards of private schools, increasing the impacts of the pandemic on education inequality. According to all three interviewees (personal communications, November 13, 2020; December 28, 2020; February 4, 2021), teachers rarely ever resorted to the platform

for additional material; instead, they continued to create their material, usually adapting their own lesson plans to a digital format. In the public school from the interviews, teachers referred parents to the platform in case they were looking for supplementary material for their children, but they did not use it in class. If parents or teachers made use of the platform, it was to ensure that their children were learning the core points of the normal curriculum (personal communication, December 28, 2020). Meanwhile, the interviewee's private school did not reduce its school hours in order to have students learn as much as they would do in person (personal communication, February 4, 2021), so *Aprendo en línea*, as a resource adapted for learning with reduced hours, could not become the main teaching platform. These results suggest that *Aprendo en línea* worked as a material repository to guide teachers and parents in assisting their children to learn, but it has not become an equalizing tool in narrowing quality gaps in education.

Figure 4

Minister of Education Raúl Figueroa in 2021 visiting a school in Valparaíso, where only some students were taking in-person classes



Source: Mineduc (CC BY NC ND 2.0 license, no changes made).

The reactions of the Chilean government in education during the pandemic showed uncertainty in the path schools should follow to include ICT learning and programming in their curricula. While the pandemic did push teachers to use emails, Zoom, and social media, it has been unable to reassert its plans to teach subjects such as programming and robotics. The private school interviewee mentioned that “there is a very good plan on digital languages. That’s what it’s called [...] The issue is that that program’s intended use is during free disposition hours² [...] I think it should be integrated to the national curriculum” (personal communication, February 4, 2021). This quote reflects the position of the national education policy: a strong will to create policies that reduce the digital divide, but a long way to go before they can be effectively implemented.

Conclusion

Chile's dynamic quarantine aimed at keeping communes³ with low COVID-19 rates open and active. However, a spurious uprising in cases took over the country in late April, 2020, going from 520 to 888 overnight (T13, 2021), indicating the failure of the virus contention strategy. Chile only went below 888 on July 27, 2021, after a few months of a vaccination campaign, with 753 new cases (T13, 2021). In the meantime, the protests from Chile's Awakening achieved the national plebiscite in October 2020, where 78% of the population voted for a new constitution and a constituent convention to draft the new document (Gobierno de Chile, n.d.). As foreseen by the plebiscite and Chile's political climate, on December 19, 2021, left-wing candidate Gabriel Boric – and a former leader of the student protests in the early 2000s – won the presidential elections (The Washington Post, 2021). Boric's administration's main task in education will certainly have to address the advantages and disadvantages of the digital learning strategy led by the Piñera administration.

Equality in education is at the center of Chile's demands for the years to come, but the way in which it has been approached during the COVID-19 pandemic created new challenges for policymakers. The digital divide may have decreased when understood as the ability to have and use a device, but the most marginalized sectors are not keeping up with the pace at which digital learning is occurring in the country and globally. The urban-rural gap requires immediate solutions. In terms of quality, Aprendo en línea offered a set of guidelines to achieve the core components of the national curriculum, but it did not lessen digital knowledge gaps between private schools, and subsidized and public schools. As establishments reopened, Mineduc has offered remedial resources, including material on Aprendo en línea. Still, many students lagged behind, and those who dropped out of the system because of socioeconomic hardships and lack of Internet services will still be unable to access those opportunities. More familiarization with vulnerable populations and all school types throughout the country might help policymakers find ways in which to reduce the divide left in use of ICT, and to face the ongoing divide in digital programming while the new Constitution comes into place.

Notes

[1] *Sostenedores*, which literally translates into sustainers, are physical or moral figures of the Chilean school system in charge of schools. They may be school principals or school owners. In the case of public schools, municipalities were in charge of financing funding up until 2020, when Mineduc became the direct manager of local public school funds (personal communication, November 13, 2020; December 28, 2020).

[2] Free disposition hours (*horas de libre disposición*) are hours within the school schedule where students can take activities or classes that are not part of the mandatory curriculum.

[3] Similar to neighborhoods.

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Figure 2: Quezada Morales, R. (2021). Screenshot 1 taken on August 10, 2021, from Crespo, D. (2020, May 28). In Seminario web no. 5 América Latina: recursos y plataformas para la respuesta educativa [video]. <https://en.unesco.org/events/webinar-5-latin-america-resources-and-platforms-educational-response-covid-19>;

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Appendix A

Resources made available by Mineduc and used during the COVID-19 pandemic as of December, 2021

Name of resource	Type of resource	Availability
Aprendo en línea	Online platform, initially prioritizing language and mathematics, but eventually comprehensive	https://curriculumnacional.mineduc.cl/
Aprendo+	Website (existing prior to the pandemic)	https://www.yoaprendomas.cl/614/w3-channel.html
Educar Chile	Website (existing prior to the pandemic)	https://www.educarchile.cl/
Plan de Lectoescritura Digital (PLED)	Online platform offering reading syllabi from schools around Chile	https://planlectordigital.mineduc.cl/#/
Aprendo en Casa	Printable activity booklets that reinforced educational practices at home	Available on Aprendo en línea at the beginning of the pandemic
Aprendo sin Parar	Booklets that covered prioritized areas during the COVID-19 pandemic, in printed form, specifically distributed to rural areas	In print for rural areas

Aprendo TV	Video blocks that reinforce educational practices	At first, available through different TV services and on Chile's National Television's website at https://www.tvn.cl/ (Mineduc 2020 e); available on Aprendo en línea at https://curriculumnacional.mineduc.cl/
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Aprendo FM	Radio capsules that reinforce educational practices	Available since late 2020 on Spotify's Aprendo FM channel, 122 radio stations throughout the country, and on Aprendo en línea at https://curriculumnacional.mineduc.cl/ (Mineduc, 2020 f)
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