Uncovering Educational Inequalities: COVID-19 Digital Learning Strategies in the Dominican Republic

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The Dominican Republic's shifting socio-political and economic environment

The Dominican Republic (República Dominicana) is a nation with a mountainous area of 48,000 square kilometers, or roughly 18,532 square miles, occupying "two-thirds of the island of Hispaniola," making it the "second largest territory of the Great Antilles archipelago" (Ministerio de Asuntos Exteriores, Unión Europea y Cooperación de España, 2020, p. 1). The government is organized into 31 provinces and 158 municipalities with one national district (International Institute for Educational Planning [IIEP] and United Nations Educational, Scientific, and Cultural Organization [UNESCO], 2019). Currently, 10,847,904 million people live in the country (World Bank, 2020 a), with 49.9 % identifying as men (5,259,642 residents) and 50.07% identifying as women (5,275,893 residents) (Oficina Nacional de Estadísticas, 2021). As for the country's make up, 70% are of mixed African and European descent, mainly Spanish, 16% of residents identify as black, and 14% identify as white (Minority Rights Group International, 2018).

At the beginning of the COVID-19 crisis, the country went through economic, political, and social changes. On July 5th, 2020, the center-left Dominican Liberation Party (DLP) lost the presidential election to the Modern Revolutionary Party (MRP), represented by Luis Rodolfo Abinader, an outcome which ended the DLP's 16-year political influence (*The New York Times*, 2020). With this political change came several economic impacts: the country's gross domestic product (GDP) increased by 5.04% annually from around US$33.416 billion in 2000 to US$68.989 billion in 2015 (International Monetary Fund [IMF] in Ministerio de Economía, Planificación, y Desarrollo et al., 2017), and tourism attracted foreign investments, opening up employment in its related subsectors such as recreation, housing, or food and drinks (World Tourism Organization [WTO] & Pro Dominicana, 2021). However, the country's GDP took a hit by about 6% when the private sector closed because of the pandemic (Sans & Madrid, 2021). Social issues grew, with misinformation becoming rampant among media outlets and digital platforms – people had a continued mistrust of the government, which impacted its attempt to provide accurate health information when the COVID-19 pandemic started (Tapia, 2020).

Education in the Dominican Republic before COVID-19

Education in the Dominican Republic is structured within four levels: pre-primary, primary, secondary, and tertiary (UNESCO & World Monitoring Report, 2020). From ages 3-17, attending school is compulsory in response to a recent extension by the government to require more schooling (UNESCO & World Monitoring Report, 2020; The International Institute of Educational Planning [IIEP] & UNESCO, 2019). The primary level provides education for children 6-14 years old (Organization for Economic Development [OECD], 2008). Secondary education provides schooling for children ages 14-18, with four years of additional schooling to strengthen alternative skillsets outside academics, including

general education in the first cycle, and vocational, continuing general courses, and art options in the second cycle (IIEP & UNESCO, 2019).

The education system is hybrid, that is, decentralized-centralized, with the government overseeing both public and private schools (OECD, 2008), and three agencies overseeing the system. First, the Ministry of Education (Secretaría de Estado de Educación [SEE] or MINERD) focuses on primary and secondary schooling; second, the Ministry of Higher Education, Science and Technology (Secretaría de Estado de Educación Superior, Ciencia y Tecnología [MESCYT]), oversees colleges and universities; and third, the National Institute of Professional and Technical Training (Instituto Nacional de Formación Técnico Profesional) provides vocational courses on automobile mechanics and civil engineering; other studies are offered such as art design, culinary arts, and cosmetology (National Institute of Professional and Technical Training, 2017). Further, the Ministry of Education's Special Education Directorate (Dirección de Educación Especial) offers schooling to special needs children. Through the Dominican Association of Rehabilitation (Asociación Dominicana de Rehabilitación), children and adolescents with disabilities from ages 0-18 receive education and physical therapy services (Asociación Dominicana de Rehabilitación., n.d.). As of 2018, there were 2.7 million students enrolled in the whole education system (Oficina Nacional de Estadística de MINERD, 2019).

In terms of digital learning, in 2016 officials implemented the initiative Digital Republic (República Digital), which aimed to provide technology access for all citizens while ensuring gender equity and social inclusion, and "enabling economic and social development" (Muñoz et al., 2020, p. 81-83). Its goal was to bridge the digital divide among vulnerable populations who did not have access to technology – low-income families, those from rural areas, and families with limited education – which included reinforcing the technological infrastructure, providing access to the Internet, and bringing in devices into schools (Dominican Republic Government, 2017). As presented by MESCYT's (n.d.) Deputy Minister for Science and Technology Plácido F. Gómez Ramírez, Digital Republic is structured upon seven concepts: "human capital, education, productivity and employment, digital government, infrastructure, connectivity, and access" (p. 3), with five additional goals: "legal and regulatory framework, sustainable development goals, national development strategy, social inclusion, and cybersecurity" (p. 3). Based on the above goals, the initiative implemented projects such as amplifying WIFI access and revamping infrastructure for better access (Dominican Republic Government, n.d. a).

The Dominican Republic Government (n.d. b) implemented other initiatives to encourage the use of technology. Among them are the Digital Public Service (Servidor Público Digital), which is a capacity-building program to train civil servants in technology and Women in ICT (Mujeres en TIC), focused on offering technological training programs to women and girls. The government also implemented the Digital Native (Nativo Digital) learning programs for vulnerable communities to use technological tools and T-Include (T-Incluye), a project that encourages seniors, young adults, and individuals with disabilities to use technology. In schools, the government launched the initiative One Computer for Higher Education Students and Professors (Una computadora para estudiantes y maestros de educación superior), which provides university professors and students with a computer or tablet and access to technological workshops. Alongside these programs and initiatives, the government implemented a digital ID initiative for students and increased the number of computers at educational centers.

Although the programs above were initially welcomed, the media called into question whether these strategies were actually reaching students across the country. For example, the Dominican Republic Government reported in 2017 that "almost 90% of the population ha[d] access to mobile telecommunications, 54% ha[d] internet access, although only 27% ha[d] their own access through computers or tablets" (p. 10). However, local newspapers such as *Diario Libre* (2020) pointed to these projects only reaching 5% of the student population.

Digital learning strategies during the COVID-19 pandemic

Regardless of the scrutiny, the programs above were put to the test at the beginning of the pandemic. Officials closed all schools for the 2019-2020 academic year starting in March, 2020, (Instituto Dominicano de Evaluación e Investigación de la Calidad Educativa, [IDEICE], 2020; United Nations Children's Fund [UNICEF], 2022). When schooling transitioned online in early March 2020, MINERD unveiled the Educational Support Plan (Plan de Apoyo Educativo), which outlined three goals to continue providing education: "1) to contribute to access of non-in-person educational activities to the student population, 2) to reinforce learning and avoid the loss of study habits, and 3) to provide orientation to the educational community about COVID-19" (IDEICE, 2020, p. 10). The government further expanded WIFI access to facilitate distance learning. The Dominican government defines distance learning as "a form of teaching in which students do not need to attend physically at an educational center or place of study" (IDEICE 2020 p. 11). Distance learning is also implemented through information technology and communications (ICT) (IDEICE, 2020). In other words, the work previously done on digital learning was readapted to respond to the emergency situation.

With a plan and definitions in place, MINERD, MESCYT, the Community Technological Centers (Centros Tecnológicos Comunitarios [CTC]), and the National Institute of Public Administration (Instituto Nacional de Administración Pública [INAP]) established separate online resource hubs in addition to the policies already implemented, comprising of resource websites and platforms for children (World Bank, 2020 b). These resources provided online skill courses and communication apps for students and teachers (Cobo et al., 2020; Ramírez, 2020). For those who did not have access to the Internet or online resources, the government invested around RD $1,575,043,073 (US $28,558,681)[1] to implement television educational broadcasting programs (*Acento*, 2021). In terms of online platforms, several initiatives were implemented, including Eduplan, a teaching resource website to help teachers plan lessons and maintain a schedule, and Educando (Educating), which is an online resource hub that provides learning and curriculum resources. Additionally, the government implemented Intelligencia Quisqueya (Quisqueya Intelligence), a virtual program to ensure that students are prepared for national tests, and Informática Prepara (Informatics Prepares), a portal to access videos about computer basics (Presidencia de la República Dominicana, n.d.).

The programs to continue learning online were promising in early 2020. According to UNICEF (2020), at least 75% of the Dominican Republic's residents managed to use the Internet for distance learning, while 59% used social media, and 80% used mobile devices. By May 2020, "over one million booklets were distributed to centers across 18 educational regions" as part of the Educational Support Plan (Peña in IDEICE & Observatory of Educational Policies in the Dominican Republic [OPERD] 2020, p. 2). In June 2020, the government moved on to provide "33,000 electronic tools to teachers and students" (IDEICE & OPERD 2020, p. 2) as a plan measure, especially to those with little access to

technology. In total, the government reported that thousands of households benefited from television programs because:

> Among the 175,908 households with third-grade students, 51.1% had radios and 91.1 % had televisions; out of the 159,824 households with sixth-grade students, 40% had radios and 80% had televisions, and among the 134,689 households with third-year students in secondary school, 45.4% had radios and 81.4% had televisions. (IDEICE, 2021, p. 3)

Revealing educational inequalities in digital learning

The following exploratory study addresses the country's digital learning efforts by reviewing the effectiveness of remote learning during the COVID-19 pandemic. This includes challenges and implications that arose during the implementation process. Semi-structured interviews were conducted with the following individuals: a public-school English teacher in Santo Domingo, an administrative coordinator at a private school in Santiago, and a policy coordinator (técnico) overseeing teachers in eastern provinces of the country. The interviewees were selected based on their different levels in the education system. In this way, perspectives were acquired from the classroom level to the policy making level. The interviews were conducted in 2021 on January 29, February 5, and February 6, respectively. The interviews focused on participants' perspectives about the country's education system and their experiences implementing digital learning strategies. The analysis of the interviews identified issues such as lack of priority in teaching and infrastructural problems. As a result, low-income and rural students had little access to digital tools. The findings below suggest that remote learning placed a strain on the government's abilities to provide quality education for all students.

Digital learning reinforced pre-existing issues in education

At the time of the interviews, school officials and teachers were facing difficulties in acquiring the necessary skills to teach virtually, which affected education quality in the country. One of the issues was the negligence to train teachers that could provide quality education. In 2017, the government's Evaluation of Educator's Performance test (Evaluación de Desempeño Docente) revealed that only 3% of teachers were able to perform above the acceptable levels set by the government (Vice Presidency of the Dominican Republic et al., 2019). Confirming this issue, the policy coordinator interviewed said that "I know we have bad schools and badly trained teachers – educators who are neglectful, teachers who work based on what they work for, which we call vocational educators" (personal communication, February 6, 2021). Those capacity issues led to learning problems. The interview with the private school coordinator highlighted how the content for current school curricula is basic and with little depth: "I don't see the new planning for educational curriculum as well structured nor does it meet the benchmark for which individuals will be prepared for university" (personal communication, February 5, 2021).

Many more teachers probably struggled to use digital learning tools due to poor investments in infrastructure. At the Conference on Access to Information, Latin America and the Caribbean (CAI: LAC), non-profit Political Observatory coordinator Vladimir Rozón (in Lebrón, 2021) remarked how the Dominican Republic has not been able to invest adequately into the country's educational infrastructure. As a result, there have been infrastructural issues, in which "a range of 700 or 600 institutions [did] not have electricity" (Malagon in Garrido, 2021, para. 22). Therefore, many institutions could not grant access to the Internet. Looking back at his students' struggles, the public-school

teacher saw "how gaining access was not easy for everyone" (personal communication, January 29, 2021). As for his own difficulties, he said:

> *At that time, teachers – including myself – did not have resources available and the institution did not provide these tools. Especially, since the institution is run by the government which manages a small budget.* (personal communication, January 29, 2021)

The private school coordinator also recognized that "while the government tries to provide laptops to cover this gap, if individuals don't have WIFI, they can't do anything" (personal communication, February 5, 2021). Looking into this issue and other technical difficulties, MINERD incorporated the social networking platform WhatsApp to "support teachers and parents" and relay "helpful content" (Cobo et al., 2020, para. 9) and MESCYT, along with other partners provided low-cost internet access for "600,000 students and 30,000 professors/teachers" (MESCYT, 2020). However, among the approximately 91% of students who took some form of online class through the messaging app WhatsApp, 41% were only able to take classes online for two hours or less (*Diario Libre*, 2020, as cited in Garrido, 2021).

Given the difficulties above, several students fell behind and lost over one year of instruction (Vegas, 2021), with around 4% (roughly 140,000 students) "not learning at all," and 20,000 students dropping out altogether (Castellanos, 2021, para. 11).

Digital learning confirmed that wealth determines access to education

The class divide between wealthier families and those with resource constraints continues to impact the country's education system, now more than ever with remote learning. On average, the monthly household income for those who are considered poor is RD $17,636 (US $321.363), while the income of middle class individuals ranges between RD $44,089 and RD $220,444 (US $803.39 and US $4,016.93); individuals below the poverty line earn between RD $4,809 and RD $11,022 monthly (US $87.62 and $200.843) (Ministry of Economy, Planning, and Development, 2018).[2] In line with these figures, the public school teacher commented that gaining access to technological resources is a "class privilege" (personal communication, January 29, 2021). The private school coordinator reaffirmed the impression by saying that "there were people who could participate and others whose parents could not continue working and therefore were unable to pay" (personal communication, February 5, 2021).

As large amounts of money fund private institutions, their students learned more in-depth and structured content throughout the school day and for more hours (personal communication, February 5, 2021). The private school coordinator explained that, prior to the COVID-19 pandemic, public schools usually ended the school day at around noon, while private schools continued providing lessons until 2:00 p.m. Teachers went further into developing their students' understanding of materials, especially in mathematics, reading comprehension, writing, spelling, and oratory lessons. Classes were supplemented with tutoring and office hours to help reinforce understanding of materials. During the pandemic, the private school coordinator highlighted, private school students continued their schooling with as little interruption as possible: "in the first two weeks of the pandemic, we decided to work through the mail with guides for each material" (personal communication, February 5, 2021) Classes at the time were not virtual but, after April, institutions decided to continue teaching online. "The schools provided e-mails to each student with the institution's domain on Google Suite and then we opened our classrooms to work on this platform via Google Meet," she said, "…as the

days and months went by, students were becoming skillful and able to connect virtually" (personal communication, February 5, 2021)

As time went on, private schools started the 2020-2021 new academic year with virtual learning in September, 2020, but public schools began the year officially two months later, in November of the same year (personal communication, February 5, 2021) and, even then, access to education could not be guaranteed. The policy coordinator noted that "not every child has access to the Internet nor the electronic tools to connect or use them" (personal communication, February 6, 2021). This account was confirmed by Morales (2020), who explained that "around 400,000" technological tools "reached less than 12% of the student and teacher population" (p. 81). Additionally, 76,236 teachers need technology and "2.8 million tools and resources [are] needed to integrate students into the classroom" (*El Dinero*, 2020, para. 6). Even with television programs aimed at bridging this gap, the public school teacher emphasized that there were families who did not have a television in their homes: "in the community where my cousins live, my family was the only household in a long distance with a television," he said, "…the children in the community met at their house to watch the television program together" (personal communication, January 29, 2021). He also noted discrepancies in the content: "sometimes the curriculum presented in the television was not being taught at schools." Ultimately, only 26.5% of students "used the booklets" for the television programs (*Diario Libre*, 2020, in in Garrido, 2021, para. 3). In the Dominican Republic, socioeconomic gaps greatly affected access to digital learning and impacted the quality of the education offered.

Digital learning revealed great regional disparities in access to quality education

Just like wealth determined access to schooling during the COVID-19 crisis, living in specific regions of the Dominican Republic impacted access to education. With more individuals living in urban areas compared to rural ones, urban cities tend to have more resources; compared to their wealthier city counterparts, rural communities are plagued by poverty because more investments and policies are being funneled to urban cities (MINERD National Office of Statistics, 2019, p. 89; Vicepresidencia de la República Dominicana, 2018). As a result, there are "insufficient economic resources to cover basic necessities like education" (Vicepresidencia de la República Dominicana et al., 2019, p. 8). Several rural towns have only public schools with poor facilities, are either under-enrolled or overcrowded, have multigrade classes, and teachers are unwilling to instruct in those areas (Peréz, 2020). Given the distance it takes to arrive there, the policy coordinator said, digital access is also scarce (personal communication, February 6, 2022).

According to the International Organization for Migration [IOM] et al. (2020), border territories had difficulties acquiring the technology during the pandemic. The report highlighted that 16% of "school-age individuals who attended an educational center in February 2020 and were in quarantine, were not able to continue their education through the internet, phone, television, and/or radio" (p. 1). Among this percentage, 40% lived in border territories (IOM et al., 2020). These statistics were not surprising. According to the private school coordinator, southeastern areas near the border tend to lack resources (personal communication, February 5, 2021). Even traditional media is scarce in the southwestern province of Barahona where 62% of residents "do not have a radio" and "35% do not have a television" (IDEICE, 2021, p. 12). Households in the Bahoruco province also struggle, where 60% of residents are without radio and 38% without television (IDEICE, 2021). Therefore, the border territories seem to have been amongst the most affected by the COVID-19 pandemic in educational terms.

Students from remote areas of the Dominican Republic seemed to have suffered from a lack of access to quality education because they depend on the public education system, and this one did not respond effectively enough to their needs. The policy coordinator (explained how remote communities in the regions she oversees suffered from limited access to technological resources: "during this time, quality education depends greatly on digital strategies," but "the education quality through these tools did not have a great impact because access is limited for children in our remote communities," She recognized that most children with resources go to private schools in urban areas, where they have "their own systems" in place with digital platforms (personal communication, February 6, 2021 This situation is different from that of students who live in the "zona" (countryside), where "digital access does not reach [students] (personal communication, February 6, 2021)." The public-school teacher corroborated those remarks. His family, who lives in the countryside detailed how, at the beginning of the pandemic, students had "no classes at all" (personal communication, January 29, 2021). These testimonials hint at the link between regions and access to tools that impact learning – even more so despite the government's efforts to address these gaps. In doing so, the government once again placed rural students at a disadvantage throughout their remote learning.

Conclusions

In recent years, the Dominican Republic has seen a new wave in education reforms – where technology and online learning aim at improving education quality for students – but it was put to the test during the COVID-19 pandemic and achieved little success. The Dominican Republic deployed a national digital learning strategy to help students continue their education, including online resource hubs, educational platforms, laptops/computers, and television programming. However, initiatives were not practical or accessible to all students because of years of infrastructural issues caused by poor investment in education, lack of priority in teacher training, and the unequal distribution of educational spending within regions. Efforts were made to rectify them with TV and radio programs that accommodated students' needs. However, these measures became unrealistic for rural public schools and low-income students, while only urban private schools and wealthier students benefited from them. As a result, less wealthy, vulnerable, and rural students were very much left behind by their peers in private schools.

Aware of the lessons above, the Dominican Republic is aiming to integrate online tools within classrooms by replacing the Digital Republic initiative with a comprehensive plan to address those gaps (personal communication, February 6, 2021). Nevertheless, the report is limited in addressing the issues because of small-scale interviews with few perspectives, policy analyses focusing on one initiative over another, and more media reports than academic literature reviews. To build on this research with new perspectives, interviews must be conducted across all levels in the education system (i.e., national, provincial, and city officials) and types of institutions (i.e. at least two perspectives per public, private, rural, and urban schools). Having interviews from other academic institutions could offer different experiences and issues not yet explored in this study. Interviews with families, students, and journalists could also provide on-the-ground direct testimonials. By doing so, the Dominican Republic may be able to break the barriers in place mentioned in this report while ensuring access to a quality education for every student in the country.

Notes
[1] Calculated on ExchangeRates.org on March 27, 2022.
[2] Calculated on ExchangeRates.org on March 27, 2022.

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