

# Chapter 6

## COVID-19 and Post-pandemic Educational Policies in Mexico. What is at Stake?



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**Abstract** The Latin American region is experiencing an educational crisis due to the COVID-19 pandemic since efforts to contain the outbreak will grow the deep educational and economic gaps characterizing this region. During the pandemic, Mexico's central intervention to continue instructional activities in the basic education system was implementing distance education based on educational television. As expected, this intervention raised different concerns on its effectiveness and how different student populations will be affected. This chapter has four main goals: (a) to describe and analyze educational gaps before the pandemic, identifying the central educational policies implemented in previous decades; (b) to describe and analyze educational policies implemented during the pandemic and how these may affect students at risk; (c) to conduct a prospective analysis to identify potential effects of the sanitary crisis in the administration of the education system in Mexico, and (d) to identify the main policy lessons resulting from the Mexican government initial response to the COVID-19 sanitary crisis.

### 6.1 Introduction

The Latin America and the Caribbean region is experiencing a humanitarian crisis considered a perfect storm. Most of the efforts to contain the COVID-19 outbreak will increase the deep educational and economic gaps characterizing this region, such as those recently described in the Regional Report of the Global Education Monitoring Report (UNESCO, 2020). Furthermore, educational achievements that took decades to accomplish, mainly surrounding enrollment rates and intergenerational education mobility, will have vanished in a couple of years (Lustig et al., 2020).

The COVID-19 pandemic will affect millions of students and their families for years. According to preliminary information about how this virus was transmitted, the required lockdown policies and the mandatory closure of nearly a quarter-million

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schools across this country beginning on March 23rd, 2020, was a rational response (Viner et al., 2020). However, due to the rapid transition to distance education, it was challenging to design effective interventions to support students, parents, and teachers during this period, resulting in an interruption of instructional activities for a significant part of this country's student population. This condition may explain why nearly 46.5% of surveyed primary school teachers reported that "it was difficult to guarantee a curriculum continuity" during this period (Juntos por el Aprendizaje, 2020).

During the pandemic, Mexico's central intervention to continue instructional activities in the basic education system has been implementing distance education based on educational television, implemented through a public-private partnership (Compañía García, 2020; Dietz & Cortés, 2020). However, different concerns arose on the technological divide and whether educational television effectively supports students already at risk before the pandemic (Baptista Lucio et al., 2020). Furthermore, almost a year after the mandatory school closures, it is still unknown how students and teachers have used educational television across the country and whether this instructional modality will result in differentiated learning loss, particularly affecting disadvantaged students (Pozas et al., 2021). In addition, there are no clear strategies for interventions addressing learning recovery when schools reopen after the pandemic. Under these conditions, it is not easy to anticipate how school communities and teachers will support students and their families once lockdown policies are lifted.

This chapter has four main goals: (a) to describe and analyze educational gaps that existed in Mexico before the pandemic, identifying the central educational policies implemented in previous decades; (b) to describe and analyze educational policies implemented during the pandemic and how these may disproportionately affect students at risk; (c) to conduct a prospective analysis to identify potential effects of the sanitary crisis in the administration of the education system in Mexico; and (d) to identify the main policy lessons resulting from the Mexican government response to the COVID-19 sanitary crisis.

## 6.2 Conditions Before the Pandemic

The Mexican education system is organized into three levels: basic, upper secondary, and tertiary education. The education system enrolls 36.5 million students, with 30.4 million in compulsory education (basic and upper secondary). It is largely publicly funded: 89% of students and 85% of teachers attend and work in schools supported by federal and local governments (SEP, 2020), and it is partially decentralized, with nearly 81.9% of the public schools currently managed by 31 state governments (SEP, 2020) (Table 6.1).

In Mexico, just like in other Latin American countries, there is an unequal distribution of educational opportunities, affecting the neediest population. As the Regional Report of the Global Education Monitoring Report 2020 (UNESCO, 2020) points

**Table 6.1** Basic education system in Mexico

		Students	Teachers	Schools
Basic education	Total	25,253,306	1,225,341	230,424
	Public	22,378,681	1,039,290	198,192
	Private	2,874,625	186,051	32,232

(SEP, 2020)

out, in Latin America, “the richest 20% are five times as likely as the poorest 20% to complete upper secondary school, on average”. The digital divide, inadequate instructional practices, lack of support for teachers and principals, inadequate information systems, low academic performance, and rigid—and sometimes outdated—national curricula remind us how the fair distribution of educational quality is still a pending issue in this region (Vegas & Petrow, 2007).

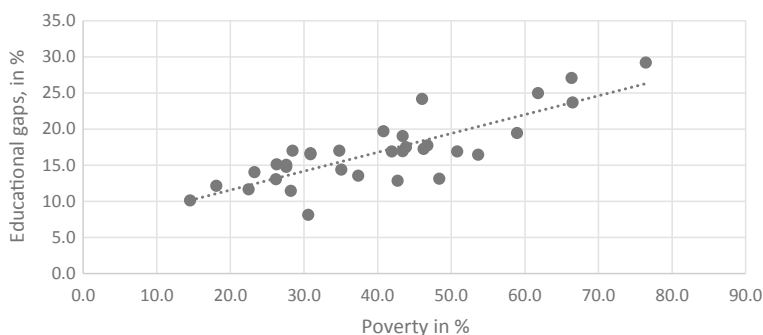
With more than 25 million students enrolled in basic education, 1.2 million teachers, and 230,424 schools, the COVID-19 sanitary crisis created enormous challenges for educational leaders in Mexico by showing the unequal distribution of educational quality across schools and regions (Lee & Koh, 2020; UNESCO, 2021).

Although in previous years there were positive trends (e.g., average years of schooling increased from 8.1 years in 2005 to 9.6 years in 2019 while adult illiteracy rates decreased from 8.4% in 2005 to 3.8% in 2019) (INEE, 2019), significant inequalities remain in the Mexican education system (INEE, 2019), and will increase due to school closures. These longstanding variations in available resources and academic results across regions and populations in Mexico (OECD, 2019) interacted with some of the pandemic’s effects, affecting emergency education program design.

There are several examples of the challenges faced before the pandemic. For instance, the education gap index, measuring the size of the population without access to compulsory education, shows that around 17% of the adult population included does not have access to basic education (CONEVAL, 2019), and this population group is mostly located in the country’s poorest regions (Fig. 6.1).

Dropout rates depicted another challenge the Mexican education system had to address during the pandemic. The pre-COVID analysis estimated that for the 2020–2021 school, yearly dropout rates would be 1.1% in primary school level, 5.3% in secondary schools, and 15.2% in high school (INEE, 2019), under normal operating conditions. Similar to other measurements, there are significant differences in this indicator across regions (rural vs. urban) and associated with ethnicity, suggesting additional challenges regarding the distribution of institutional capacities to support students at risk across the country.

Data from the national school census (*Formato 911*) corresponding to the most recent school year are not public. However, the Ministry of Education estimated a dropout rate of around 10% for basic education due to the pandemic in 2020, representing nearly 2.5 million students out of school (SEP, press briefing, August 8th, 2020). This figure highlights some of the future challenges for educational



**Fig. 6.1** Educational gaps and poverty levels in Mexico (2018), by states (CONEVAL, 2019)

authorities regarding the population's size that will require flexible pathways for students to graduate from compulsory education.

Student academic achievement is a final factor in the estimation of gaps or inequalities across populations and regions. Regarding international assessments, published results point out significant academic performance gaps. Mexico reports “the highest share of students among OECD countries” in performance level two, considered “the minimum level to function in today’s societies” (OECD, 2019).

National evaluations present a similar trend. For instance, the National Plan for Learning Evaluation (PLANEA) is a national test administered in Mexican schools. The most recent secondary education results (2017) showed that, nearly 33.8% of assessed students in language performed at the lowest measured level from the national sample. However, when this analysis focused on students from rural schools, about 60% performed at the lowest level. Significant gaps were also reported on family income, ethnicity, rurality, poverty, and parents’ educational attainment. Finally, according to PISA results (2018), only 1% of Mexican students achieved the top performance level in at least one area, while 35% did not achieve a minimum level of performance.

Evidence suggests that student dropout is explained by different social and economic factors, like living in rural areas, parents’ educational attainment, current employment situation, and learning disabilities (Gibbs & Heaton, 2014). For instance, Campos-Vazquez and Santillan (Campos-Vazquez & Santillan, 2018) found that the lack of a secondary school located in a rural locality increases the probability of dropping out by 6.8%. In addition to this, more recent evidence suggests that the probability of completing upper secondary education is associated with socioeconomic and demographic factors, characteristics of educational institutions students attend, and previous educational experiences (Mendoza Cazarez, 2019).

These conditions are relevant since estimations suggest the population living below the national poverty line will increase to 9.8 million after the pandemic, compared to the previous estimate from 2018. Therefore, the percentage of people living in poverty will increase from 48.8% to 56%, or 56.7% after the pandemic (CONEVAL, 2020). Since available data shows that between 5 and 17% of children

between 5 and 14 years old do not attend school due to lack of financial resources, increasing the population living in poverty will result in additional educational gaps and inequalities to be addressed by post-COVID educational policies.

### **6.3 National and Local Government Responses to the COVID-19 Pandemic**

In January 2020, the first news about COVID-19 began to circulate in Mexico. However, it was not until March 14th when national health and education authorities determined schools should be closed for two weeks starting on March 23rd to decrease the transmission of COVID-19 (SEP, 2020). After this initial period of school closure, the Mexican government decided to extend it for two additional weeks, corresponding to the spring break. When this extension was informed, educational authorities still anticipated instructional activities would resume on April 20th.

The initial reaction defined how local education agencies dealt with the mandatory school closure. There was limited access to information, resulting in a short preparation period for school communities since there was an expectation to return to regular instructional activities promptly. Also, 11 out of the 32 states decided to implement school closures one week earlier than the original deadline recommended by the federal government, closing on March 16th. This decision represented even fewer days for preparation among school communities.

The lockdown finally occurred at the beginning of the second half of the school year. A return to regular instructional activities was announced and postponed several times. In early April, the Ministry of Education reported instructional activities would resume remotely. However, this decision resulted in a steep learning curve for teachers and educational authorities, who had to redesign instructional activities rapidly. Since the pandemic continued its course and the cases of COVID-19 continued to rise, Mexican authorities decided to continue the rest of the school year remotely and later, to start the 2020–2021 school year in a distance mode. This condition would remain for the rest of the school year.

#### ***6.3.1 Main Strategies***

On April 20th, the Mexican government implemented a recently designed intervention, “Learning at Home”. This initiative was the primary strategy to support students during the health crisis. It was implemented by broadcasting and distributing educational programs through TV, internet, and radio, scheduling broadcast classes for

primary and lower secondary grades. This strategy was based on educational television since 92.5% of Mexican families report having a TV set (76.5% digital), (ENDUTIH) (INEGI, 2019).

The organization and implementation of this program were straightforward. There were different broadcast schedules reserved for each school grade. Each section lasted between 1 and 3 h, depending on the school grade. Different subjects were explained in each section, averaging about 30 min each. TV programs were broadcast on different channels and repeated three times a day, so students had several opportunities to watch them at different times based on what worked best for them or their families, or even to watch different sections to reinforce their learning.

The content corresponded to the official national curriculum, and it was supported by a set of free textbooks distributed to each student at the beginning of the school year. In addition to the TV programs, the course content was published on a website to help teachers prepare and support students. Although this content was not delivered on time in the early stages of the pandemic, affecting teachers' activities, the operation of this website later improved. Also, all programs became available on-demand on SEP's YouTube channel.

In addition to the design and distribution of educational materials, it was expected that teachers would keep in contact with students through phone calls, text messaging, video calls, and digital platforms. Teachers would assign homework and other learning activities and receive evidence of activities conducted at home. In the early stages of this program, teachers even had to submit a digital portfolio of educational experiences as proof of their work. Education authorities also organized professional development activities to support teachers in developing digital skills.

Although these actions were designed to reach most students, part of the population did not have access to television or the Internet since TV stations would cover only 70% of the national territory. Additionally, access to the Internet was only available to nearly 50% of households, systematically excluding student populations due to the digital divide and the emergency curriculum design (Amador Bautista, 2020). For these populations, the Ministry of Education considered delivering printed workbooks and broadcast content from this initiative through radio programs, addressing similar topics to those presented on TV, but with some variations. For the review conducted for this chapter, we were able to confirm that these programs considered primary-school level course content. The schedule for radio programs consisted of one hour every day for each grade, with 30 min allocated to a specific subject taught in each grade and the rest of the time allocated to teach a subject shared with a different school grade. Teachers also had to visit communities to distribute printed materials and provide feedback to students if possible.

In addition to the content designed for primary and secondary education, the Ministry of Education designed instructional materials for early childhood. In these cases, the Ministry designed programs as daily 30-min segments, addressing socio-emotional education, parenting practices, playing activities, and creativity development. A critical issue in implementing the "Learning at Home" program is the decrease in expected instructional time. Some studies point out a slight adaptation

**Table 6.2** Daily expected instructional time

Level	Official curriculum	Learning at home (TV)	Learning at home (radio)
Preschool	3	1	0
Primary	4.5	2.5	1
Lower Secondary	7	3	0

Adapted from SEP (2017) and the description of the Learning at Home Program

of the national curriculum, resulting in inadequate instructional practices (Ducoing, 2020).

The following Table 6.2 illustrates a significant decrease in instructional time reported for every educational level. By design, the Learning at Home TV or radio programs' instructional time would only be part of the students' daily learning activities since teachers would assign additional tasks. However, some studies found that nearly 30% of teachers were not in contact with their students (Baptista Lucio et al., 2020). Other studies suggest that up to 80% of students did not have access to technology (Magallanes Ulloa & Ávila González, 2020). Therefore, since teachers could not guide or support all students, the instructional time decreased, mainly affecting disadvantaged students.

Besides the Learning at Home program, the federal government promoted other interventions during the pandemic, including some already implemented before the lockdown. The "MexicoX" platform, where massive open online courses are available for free, is one example. This platform started in 2015, delivering courses aimed to support teacher professional development activities. During the pandemic, its academic contents were adapted to respond to school communities' needs, particularly for remote work and distance education, providing courses on risk prevention at school, cyberbullying, information literacy, and the use of virtual labs. Another initiative adapted to respond to the pandemic conditions was "aprende.mx". This program aims to develop digital and ICT skills among basic education teachers and students, establishing alliances with other programs and agencies such as Educational Television. Its main goal was to provide online training on digital skills, Microsoft Office 365 applications, lesson planning, educational technology, webinars, digital literacy, digital citizenship, and educational use of digital resources.

Besides the initiatives adopted by the Ministry of Education, other interventions were designed by federal education agencies, like the National Commission for Education Improvement (MEJOREDUE). This agency designed and implemented five professional development workshops to support teachers, school principals, supervisors, and pedagogical advisers. These courses were designed to be distributed online in an editable digital format. The main topics were how to adapt instructional practices, exert leadership, and implement supervision strategies during the pandemic (Comisión Nacional para la Mejora Continua de la Educación, 2020).

### 6.3.2 *Technological Platforms*

An important aspect to understand the Mexican education agencies' response during the pandemic is to analyze how technology platforms designed by Google for Education and Microsoft were used. Agreements signed with Google for Education allowed access to a dedicated website, more than 16 million email accounts for basic-level educational actors, organization of professional development activities through webinars, and distributing digital educational materials aligned with the official curriculum (SEP, 2020). The agreement signed with Microsoft granted access to the Mexican government to accounts and digital tools for distance education and online training (SEP, 2020). Due to these agreements, teachers had access to alternatives to implement distance education. Also, local education agencies across the country had access to these platforms to complement the Learning at Home program. These platforms were part of the central policy to provide support and feedback directly to students and gather evidence to facilitate learning evaluation. However, it is essential to remember the limitations regarding connectivity: according to a national survey administered by the Mexican government, only 56.4% of Mexican families have access to internet services, and 44.3% of families have a personal computer at home (INEGI, 2019).

### 6.3.3 *Local Government Responses*

An essential characteristic of the Mexican education system is its decentralized operation. Although with some legal limitations, state governments design and implement different local initiatives to support students. A review of different efforts implemented to complement the Ministry of Education's national strategy during the pandemic highlights different initiatives, mainly related to professional development activities, connectivity, and support to families and parents. Table 6.3 describes some of these interventions.

Despite the significant challenges the pandemic created and the difficulties it represented for all the actors involved in education, there are valuable experiences from which we can learn and effective practices to be considered for long-term implementation. For instance, the rapid digitalization process of instructional activities and the skills developed by teachers and students necessary to implement the "Learning at Home" program allowed them to interact virtually. It opened doors to diversify instructional practices, as some surveys administered to teachers across the country suggest (Baptista Lucio et al., 2020). Experiences of better coordination and collaboration across different educational communities have also been reported, such as the adaptation of the "*Proyecto Medición Independiente de Aprendizajes*" (MIA), a model designed to adapt the curriculum to students' individual conditions (Hevia, 2020). Besides, teachers' creativity, commitment, and efforts to provide a solution to distance work are noticeable, especially in communities without access to the



**Table 6.3** State government interventions

Area	Example
Professional development	Courses on digital literacy, digital educational skills, use of tools and technological platforms in addition to those implemented at the national level
Technical support	Call centers to support teachers
Certifications	Tools and resources: Google for Education, National Geographic
Educational materials	Repositories for instructional resources, tutorials, and activities aligned with the learning at home program
Monitoring activities	Assessment of student learning, surveys to learn about students' opinions, guidance for evaluation
Equipment and connectivity	Distribution of computers and tablets to teachers and students, connectivity in schools
Support networks	Online meetings, conferences, webinars, repositories of best teaching practices
Information	Information on topics such as hygiene, health, risk prevention, digital citizenship, cybersecurity
Scholarships	For orphaned students due to COVID-19
Support for parents	Guidance and resources for families, mental health care resources and training for teachers

Internet, television, or radio. Although these are isolated experiences, much can be learned from these experiences: documentation, systematization, and dissemination work conducted by education authorities could convert a crisis into a learning experience for the entire education system, particularly to inform innovations aimed to support disadvantaged populations.

## 6.4 What Do We Know About the Effects of the Pandemic in Mexico?

There is preliminary data on the effects of the different programs implemented during the pandemic. For instance, MEJOREDUCIÓN, a public agency coordinating the National System for the Continuous Improvement of Education (Comisión Nacional para la Mejora Continua de la Educación, 2020), administered a survey to teachers, principals, students, and families in June 2020. Nearly 194,000 persons from all over the country responded to their electronic survey, with almost 15,035 school principals (5,442 from pre-school, 5,426 from elementary school and 4167 from middle school); 71,419 teachers (20,025 in preschool, 27,624 in elementary school and 23,770 in middle school); 72,305 parents (19,711 in preschool, 31,535 in elementary school and 21,059 in middle school), and 34,990 students (10,299 elementary school and 24,691 middle school). The survey sample design was not probabilistic due to

the public health restrictions, although the response rate was high. The information collected allows us to describe experiences and perceptions regarding instructional activities during the lockdown. The main results for teachers and students are described as follows.

#### Teachers:

- 75.4% of teachers designed their own instructional activities and resources (YouTube channels, groups on social networks, blogs, worksheets), in addition to Learning at Home offerings.
- According to 69.8% of the teachers, parents were not able to provide support to students.
- 51.4% of teachers consider online activities, television, and radio programs to be boring.
- Content of the Learning at Home program was not enough to facilitate students to continue learning, according to 46.3% of the teachers surveyed.
- The main technological tools available for teachers were cell phones with internet access (87.2%), home computers (73.9%), television (58.3%), with lower access to TV programs in highly marginalized municipalities (39%).
- Regarding professional development activities to support the implementation of distance education, only 56.2% of teachers acknowledged receiving adequate support.
- Providing adequate feedback for students was one of the main challenges, according to 57.4% of the surveyed teachers.
- Teachers reported an increase of more than 50% in their telephone, internet, and electricity bills.

This information confirmed that teachers faced considerable challenges to continue instructional activities during the early stages of the pandemic. Additionally, it points out how technology and family resources were not equally available or distributed, increasing pressure on teachers to support students lacking resources or support from their families.

#### Students:

- Communication between students and teachers has been mainly through messaging apps or telephone calls: WhatsApp (58.3%), telephone calls (41.5%), video calls (24.5%), and email (27.3%).
- 94.5% of primary school and 69.7% of secondary school students required support from their mothers, fathers, or caregivers.
- Not every student had access to the benefits of the “Learning at Home” program. 61.9% reported they received materials and resources from the school, while only 56.7% stated they frequently used the Learning at Home resources.
- Around half of students relied on digital platforms: 65.5% always or regularly used the Google for Education platform, but only 45.3% used the online resources of Learning at Home.

- Students reported that the main problems they experienced were the lack of support from teachers, a lack of clarity in their instructional activities, and the limited feedback on their academic activities.
- More than 60% of the surveyed students reported having enough physical space to do their homework. However, only 37% in primary school and 49% in secondary school had access to a computer for instructional activities at home.

This information confirms the difficulties faced by school communities, pointing out the limitations of this distance education model and the unequal availability of resources across students.

In addition to the survey administered by MEJOREDU, universities and civil society groups also collected data. For instance, *Juntos por el Aprendizaje*<sup>1</sup> (2020) and the School of Government and Public Transformation of the ITESM (2020) are two examples of available data to analyze how the education system operated during the health crisis. Although none of the surveys represent the educational system as a whole, their results allow for comparing information and guiding potential interventions to address the most pressing issues.

*Juntos por el Aprendizaje* found that parents, teachers, principals, and supervisors reported similar conditions regarding schoolwork perceptions during the lockdown. The strategies teachers and students found most helpful were distributing digital resources, using portfolios, and providing individual tutoring for students. The most used platforms were Zoom, WhatsApp, and Google Meet.

Almost all of the surveyed students reported having internet access, and all reported having at least one device to access digital content. Also, communication between parents and teachers increased. In contrast, communication between principals and parents decreased. More than 70% of school principals and teachers agreed they had digital skills to search for information on the internet and create and distribute instructional material. However, all considered, they needed support to facilitate students' school activities, mainly in technology and socio-emotional fields. Regarding challenges, more than half of the surveyed school principals and teachers reported feeling more stressed than before. The most significant challenges perceived by students are those related to socio-emotional and learning aspects; in the case of teachers, there are administrative and technological obstacles that continuously add pressure.

Similarly, the School of Government and Public Transformation of the ITESM (2020) administered another survey, focused on collecting parents' perceptions, specifically about the "Learning at Home" program. This study was conducted during October 2020, 7 months after the school closures, and it was administered to 500 parents whose children attend public schools. Among the main findings is that 70% of

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<sup>1</sup> *Juntos por el Aprendizaje* is an initiative supported by different educational independent groups. They conducted the survey "Education during the COVID-19 contingency" (*Juntos por el Aprendizaje*, 2020) during May and June 2020, that is, three months after the closing of the schools and the start of remote schoolwork. This survey was administered to parents, teachers, principals, and supervisors (65% public schools and 35% from private schools), for a total sample of 7,114 respondents.

parents considered that the lack of face-to-face instructional activities affected their children emotionally. More than half of parents surveyed detected anger, anxiety, and sadness in their children. 90% of surveyed parents had access to a television device or a cell phone, and 70% had access to the internet. However, parents reported that their children do not like or are not interested in the televised lessons. Also, 80% of surveyed parents considered televised classes to be less effective than face-to-face lessons. In comparison 62% expressed the need to get better support from teachers since parents addressed most of the questions raised by students about classes and homework in this period. 75% maintained contact with school staff, but only 16% reported they had observed good feedback from teachers. Among some worrying aspects, three stand out: their children are not interested in continuing their studies, the students' difficulty concentrating increased, and parents observed reduced initiative on behalf of students to study without teacher support (Fernández et al., 2020).

Other studies pointed out additional perceived effects among students. For instance, in a study conducted in a Mexican state, 21.3% of surveyed students considered that their learning experiences were affected due to the COVID-19 crisis. In comparison, 47.3% believe finding a job will be more challenging when they finish their studies.

Recently, the National Institute of Statistics and Geography (INEGI, 2021) administered a Survey to Measure the Impact of COVID-19 on Education (*Encuesta para la Medición del Impacto COVID-19 en la Educación*). Among the findings, it is worth noting that 738,394 students did not complete the 2019–2020 school year; the percentage of male students who dropped out (2.1% in public schools and 5.5% in private) is slightly higher compared to female students (1.9% in public schools and 2.8% in private). 58.9% of these students dropped out due to reasons associated with the pandemic, including loss of contact with their teachers, decrease in household income, permanent school closure, or because they lacked access to the internet and technological devices. The remaining 41.1% of students mentioned other reasons, such as the need to find a job and the lack of funding. This report also highlights that around 5.2 million students did not enroll in the 2020–2021 school year. 44.2% of students reported not enrolling due to COVID-19, and 55.8% did not enroll because of a lack of financial resources. The survey pointed out that the percentage of male students who did not enroll (10.1%) is slightly higher than that female students (9.1%). It is worth noting that out of the 5.2 million students who did not enroll in the current school year, 2.9 million (57%) belong within the basic education level (Table 6.4).

Regarding those who did not enroll in the 2020–2021 school year due to COVID-19, 26.6% of students expressed that classes held on a distance model were not functional, 25.3% did not enroll because their parents were unemployed, and 21.9% did not enroll because of a lack of technological devices or access to the Internet.

It is important to note that out of the 32.9 million students enrolled in the 2020–2021 school year, 30.3% indicated that they had not received support from a member of the household with their schoolwork; this situation is worse at the secondary level, where 48.3% of the students reported not receiving support. Finally, a significant

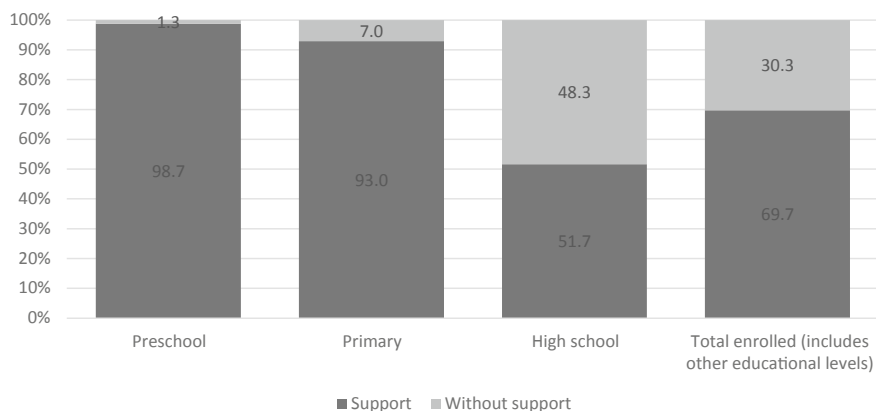
**Table 6.4** Dropout in education due to COVID-19 as estimated by the INEGI survey

Level	Students who dropped out during the 2019–2020 school year			Students who did not enroll in the 2020–2021 school year, due to COVID-19 or because of lack of resources		
	Total	%		Total	%	
		COVID-19	Another reason		COVID-19	Lack of financial resources
Preschool	98,163	94.7	5.3	737,992	86.9	13.1
Primary	146,065	73.2	26.8	753,997	32.5	67.5
High school	219,181	57.7	42.3	1,493,528	30.9	69.1
Other	274,985	39.6	60.4	2,244,397	43.0	57.0
Total	738,394	58.9	41.1	5,229,914	44.2	55.8

Source Own elaboration based on INEGI (2021)

percentage of the students interviewed declared that they are willing to return to face-to-face classes if the government allows it (Fig. 6.2 and Table 6.5).

Despite differences across the surveys regarding the sample and timing, collected data provides a panoramic vision of the educational system's situation around the public health crisis. The recurring challenges are supporting students and teachers regarding socio-emotional aspects and technology use, both in terms of access and teacher professional development. Any intervention in these areas needs to go beyond technical aspects like hardware and focus on a pedagogical approach for a more motivating and practical use. It is essential to understand that none of the surveys presented focuses specifically on the most vulnerable population, particularly those



**Fig. 6.2** Distribution of the population aged 3–29 enrolled in the 2020–2021 school year. Source SEP (2020)

**Table 6.5** Percentage distribution of the population aged 3–29 enrolled in the 2020–2021 school year by availability to attend face-to-face classes if the government allows it in the current school year, by age groups

Age	Willingness to return to face-to-face classes		
	High	Medium	Little or nothing
3–5	53.8	16.5	29.7
6–12	60.7	18	21.4
13–18	64.1	15.4	20.6
19–29	55.9	16.1	28

Source Own elaboration based on INEGI (2021)

located in rural contexts without access to the technology through which these surveys were administered. By the end of the 2020–2021 school year, a detailed diagnosis of student and teacher performance is yet to be reported. Also, the publication of information about enrollment and dropout rates is still pending, and there is a need to administer representative surveys to assess different populations' conditions. This information will be valuable to design policies and interventions to mitigate the negative impacts of school closures in the years following the pandemic.

## 6.5 What Do We Know About Potential Interventions?

We still know very little about the actual magnitude of the effects the COVID-19 crisis will ultimately have in Mexico. Initial global estimates identify potential significant losses in academic achievement (Azevedo et al., 2020a) and personal income (Psacharopoulos et al., 2020). Other studies describe potential adverse effects in dropout rates, concluding that more than 9 million students may permanently be out of school, nearly 40% of them from low-income families (Acevedo et al., 2020). These estimates point out the importance of implementing timely and effective government interventions. Furthermore, it reminds us about the relevance of adopting a “Building Back Better” approach once schools reopen. Adopting this approach would mean prioritizing the most vulnerable populations and promoting a redesign of public institutions to avoid the reproduction and continuity of unfair educational inequalities that characterized educational systems before and during the pandemic. The effectiveness of national government interventions to address the negative consequences of the COVID-19 pandemic depends directly on the availability of robust scientific evidence regarding causes and corresponding interventions. Despite some limitations, available research highlights the leading causes explaining some of the inequalities associated with the COVID-19 crisis, like the digital divide, differences in the cultural capital across families, inadequate learning environments at home, mental health issues, unemployment, lack of educational materials, nutritional deficiencies, and the low quality of available distance education programs (Acevedo

et al., 2020; Akmal et al., 2020; Aristovnik et al., 2020; Asanov et al., 2020a; Dorn et al., 2020; Grewenig et al., 2020; Hanushek & Woessmann, 2020; Lopez Boo et al., 2017; Lustig et al., 2020; UNESCO, UNICEF, & The World Bank, 2020).

Identification and analysis of these causes will help evaluate the feasibility and potential effects of educational interventions. Available research identifies different interventions, like promoting collaboration across education and public health agencies, implementing programs to specifically reduce dropout rates, designing summer learning programs, providing free access to the Internet, and modifying grading criteria. Other suggested interventions include organizing workshops to teach students how to use distance learning platforms, supporting students and families in creating and improving learning environments at home, distribution of scholarships and conditional cash transfer programs, nutrition programs, and psychological support. Regardless of the combination of interventions, it is essential to emphasize that learning recovery programs must be prioritized (Acevedo et al., 2020; Akmal et al., 2020; Aristovnik et al., 2020; Asanov et al., 2020a, b; Dorn et al., 2020; Grewenig et al., 2020; Hanushek & Woessmann, 2020; Lopez Boo et al., 2017; Lustig et al., 2020; Marinoni et al., 2020; Reimers & Schleicher, 2020; Sanchez et al., 2020). As expected, these recommendations provide some insights regarding different options governments have to address educational inequalities in a post-pandemic period.

### **6.5.1 Policy Options**

As pointed out, several restrictions limit the evaluation of currently implemented programs, and therefore the identification of preliminary results. Most of the available research is still descriptive, with limited access to program evaluations. Furthermore, to the best of our knowledge, no official estimation of current dropout rates has been published. These conditions limit the potential use of evidence to support different policy options. Therefore, some options suggested are mainly based on assumptions resulting from comparative analysis or broad international recommendations. However, it is necessary to understand the context and collect new evidence to better explain how the education system will respond to challenges resulting from school closures. The following activities are supported by available studies as an incremental approach to be explored considering there is still limited information on potential educational policies to be implemented in a post-COVID recovery period.

#### **(a) Improve information collected**

The described conditions anticipate challenging contexts for school communities. The interaction between old and new educational inequalities will result in a complex context to design recovery policies. The reviewed interventions represent different approaches, whose effectiveness in Mexico's case might be difficult to evaluate since there is limited data about current enrollment, dropout rates, and the effectiveness of the different policies implemented during the public health crisis. An essential initial

activity is to assess the conditions currently observed in the education system in this context. Collecting reliable and updated information is necessary to understand key aspects, like how teachers interacted with students, or how school communities supported teachers and school principals. Data from three sources will be needed in the first stage: schools, families, and students who abandoned formal education programs. The following Table 6.6 describes specific information needs to conduct a preliminary diagnostic.

Collecting reliable data is a priority since currently available information is not nationally representative in several cases, and there is a limited analysis regarding current students' and teachers' conditions. Furthermore, there is limited analysis and information about the type of instructional practices implemented, how students were taught or monitored, as well as how teachers may address learning loss problems once schools reopen.

### (b) Learning recovery programs

The information collected suggests a significant part of the student population in Mexico has experienced substantial challenges to continue learning during the pandemic. As available data points out, the distribution of students across academic performance levels in national tests administered before the pandemic demonstrates that a significant percentage of the population did not achieve adequate academic performance before the interruption of classes. Given the expected differentiated effects on student performance, the design and implementation of learning recovery programs will be required.

**Table 6.6** Information to be collected

Group	Information
Students	<ul style="list-style-type: none"> <li>– Learning assessment</li> <li>– Socio-emotional status</li> <li>– Specific needs based on individual characteristics (family status, special education, immigrant condition)</li> <li>– Health conditions</li> </ul>
Teachers	<ul style="list-style-type: none"> <li>– Socio-emotional status</li> <li>– Knowledge of effective teaching practices</li> <li>– Demands for professional development activities</li> <li>– Health conditions</li> </ul>
School principals	<ul style="list-style-type: none"> <li>– Information about infrastructure and educational materials available in schools</li> <li>– Socio-emotional status</li> <li>– Health conditions</li> <li>– Evaluation of community conditions</li> </ul>
Out of school students	<ul style="list-style-type: none"> <li>– Socio-emotional status</li> <li>– Health conditions</li> <li>– Factors explaining dropout</li> <li>– Future plans and specific needs</li> <li>– Perceptions on policy options</li> </ul>



An essential aspect is the capacity to identify non-traditional venues to provide additional learning opportunities to disadvantaged students. An effective intervention will require exploring interventions like modified curriculums, diversification of instructional materials and activities, extended school days or years, education technology (repositories and digitalized materials), afterschool activities, intensive summer learning programs, hiring specialized teachers to accelerate learning, and most importantly, the adoption of these initiatives in nearly every school in the country.

To implement learning recovery programs, the participation of parents will be essential in the post-pandemic stage. As the different surveys pointed out, parents' roles in supporting students at home determined better learning experiences. Unfortunately, policies designed to promote parental involvement in Mexico have not been effective (Flores-crespo & Ramírez Ramón, 2015; Martin & Flores, 2015).

Regardless of the limited parental involvement observed before the pandemic, its associated positive effects with academic performance (Martínez Rizo, 2004) suggest promoting their involvement will be an effective strategy to complement instructional activities at schools. Since learning recovery requires exploring any venue outside of schools, defining new policies to encourage parental involvement will be necessary to diversify interventions and increase school effectiveness to support disadvantaged students.

#### (c) **Adopting a lifelong learning approach**

Lifelong learning policies create learning opportunities “rooted in the integration of learning and living, covering learning activities for people of all ages (children, young people, adults and the elderly, girls and boys, women and men), in all life-wide contexts (family, school, community centers, museums, workplaces) and through a variety of modalities (formal, non-formal, and informal)” (UIL, n.d.). Adopting flexible approaches to create multiple learning opportunities inside and outside schools will be necessary during the recovery process. Considering these characteristics, adoption of this approach may result in (a) increasing and diversifying the number of stakeholders involved in the reorganization of education systems; and (b) creating “safety networks” to support drop-out students by promoting flexible learning pathways and reorganizing non-formal school options. Adopting this approach may result in different benefits, including the collaboration of local authorities, the diversification of learning delivery methods, and increased participation and funding to support recovery programs.

#### (d) **Increased funding**

As pointed out in different reports on post-COVID 19 educational policies, implementing recovery programs will increase the pressure to increase and improve educational spending. In Mexico, educational spending equals 6.1% of the GDP, with nearly one-third allocated to basic education. A problem to be considered for the post-COVID period is that nearly 98% of current educational spending is allocated to salaries, making it challenging to fund additional recovery programs, like extended school days, after-school activities, or summer programs.

Based on the only officially published dropout rate for basic education during the lockdown, estimated at 10% (representing about 2.5 million students), creating out-of-school learning opportunities to obtain a basic education diploma will require investing nearly 344 million US dollars. Likewise, based on the number of students who were not enrolled in basic education in the 2020–2021 school year (INEGI, 2021), creating out-of-school learning opportunities would require nearly 406 million US dollars. These estimations are obtained based on current spending on adult education programs. Furthermore, the worst-case scenario described in Table 6.7 would mean investing 665.1 million dollars, increasing by sixfold the current federal budget allocated to INEA, the National Adult Education Agency (Fig. 6.3).

**Table 6.7** Required investment

Dropout rate	Scenarios according to dropout rates					
	19%	13.3%	10%	8.0%	4.6%	2.1%
US million dollars	665.1	406.5	343.8	245.1	157.3	71.1
GDP %	0.05	0.03	0.03	0.02	0.01	0.01

Source Own elaboration

19% is based on dropout for upper secondary education (SEP, 2021)

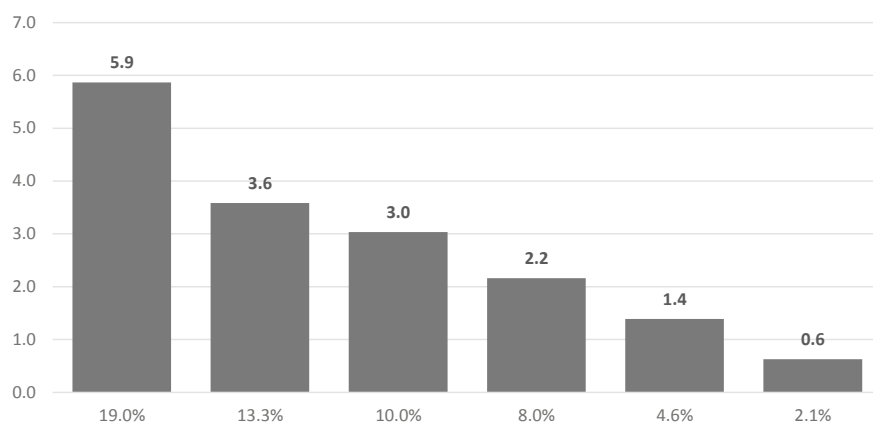
13.3% is based on the number of students who were not enrolled in basic education in the 2020–2021 school year (INEGI, 2021)

10% is based on official estimated dropout for basic education during lockdown

8.0% is based on the number of students who were enrolled in the 2019–2020 school year and are not enrolled in 2020–2021 due to COVID-19 or lack of resources according to type of school (INEGI, 2021)

4.6% is based on dropout for secondary education (SEP, 2021)

2.1% is based on the highest level of dropout in primary education (SEP, 2021)



**Fig. 6.3** Ratio total cost of reinserting/ current federal budget allocated to INEA, in number of times

As in previous recommendations, these estimations may help to identify some of the potential challenges to be addressed in a Post-COVID period. A more detailed estimation will require identifying strategies to be explored in the near future, in addition to better identifying target populations.

## 6.6 Final Comments

Beyond the ideal selection and implementation of specific interventions or programs supported by evidence, there are three key aspects to be considered by decision-makers during the design of education recovery plans in Mexico. First, it is necessary to raise awareness among national actors and stakeholders about the magnitude and seriousness of the post-COVID education crisis. Raising awareness is crucial since that may help to increase the public education budget. Furthermore, it is necessary to effectively communicate that any effort to address educational inequalities associated with the COVID-19 crisis will require a long-term commitment, considering periods of at least nine or ten years.

The second aspect is that a policy window is now open to promote significant transformations on how education systems in the region must be organized. This situation opens an opportunity to diversify delivery methods (mainly through digitalization) and promote the adoption of lifelong learning policies since non-formal and informal education programs might become effective routes to develop skills among disadvantaged populations, including those who drop out from formal education programs. It can also help engage new educational actors (like local governments, community centers, or museums) and promote flexible and diverse learning opportunities. In other words, the design of educational policies in a post-pandemic period may result in an opportunity to organize strategies to create all kinds of learning opportunities - formal, non-formal, and informal. Finally, implementing an education recovery plan may inadvertently create new inequalities or deepen inequalities resulting from previous decisions, contexts, or policies. Reducing unfair conditions must be a permanent guiding principle while defining any intervention or recovery plan's characteristics.

The COVID-19 pandemic brought new and unpredictable challenges to education systems. However, almost 12 months after the school closures, it is necessary to understand better the harmful effects of the COVID contention measures in Mexico, the characteristics of the exacerbated educational inequalities, and how school communities may respond to these challenges. Furthermore, it is essential to design potential interventions considering the pandemic's long-term effects, avoiding a simplistic perspective where the simple reopening of schools (a "business as usual approach") will be the main—and only—immediate policy goal.

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