


Pandemic, Lag, and School Dropout: Their Associated Factors

Pandemia, rezago y abandono escolar: Sus factores asociados

Adriana Carro Olvera^a  , José Alfonso Lima Gutiérrez^a  

^aUniversidad Autónoma de Tlaxcala. Centro de Investigación Educativa. Av. Universidad n.º 1, La Loma Xicohténcatl, 90070 Tlaxcala de Xicohténcatl, México.

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ABSTRACT

This article has as objective to explore the associated factors regarding school lag and dropout during the health crisis in basic education in Tlaxcala, Mexico. This research was carried out using a quantitative descriptive methodology with analysis units associated to school dropout in the COVID-19 pandemic context. The information was obtained through an online survey applied to 840 teachers from all levels and educational modalities. The results reflect a decrease in school enrollment and the difficulty to keep the participation and communication with students, as well as an adverse socio-economic and socio-emotional effect in most of the school population along with the limitations in arrangement and use of educational equipment and materials.

RESUMEN

El presente artículo tiene como objetivo conocer los factores asociados con el rezago y abandono escolar en la educación básica del estado de Tlaxcala, México, durante la crisis sanitaria. La investigación se realizó con una metodología cuantitativa descriptiva con unidades de análisis asociadas al abandono escolar, en el contexto de la pandemia del COVID-19. La información se obtuvo a través de una encuesta en línea aplicada a 840 docentes de todos los niveles y modalidades educativas. Los resultados reflejan una disminución en la matrícula escolar, dificultad para mantener la participación y comunicación con los alumnos, y un efecto socioeconómico y socioemocional adverso en la mayoría de población escolar, acompañado de limitaciones para la disposición y el uso de equipamiento y materiales educativos.

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Introduction

The pandemic deepened the complexity of pre-existing educational inequalities. The world, the country, and the federal states have witnessed situations of school backwardness and dropout where the most affected have been children who were already disadvantaged. Globally, 1.6 billion students dropped out of school to continue their education at home (Ortega, 2020), where 1.184 billion thereof were affected by some constraint (CEPAL & UNESCO, 2020). In 20 countries in Latin America, more than 165 million students were impacted, and in Mexico the figure reached 37 millions, of which no one knows yet how many will ever go back to school (Acevedo et al., 2020). According to experts, learning backwardness together with school dropout due to school closures can result in a loss from 0.6 to 0.9 years of schooling in an average period of five to seven months (García, 2020).

The Inter-American Development Bank (IDB) argues that Latin America's education systems were already marked by high levels of exclusion. Prior to the health

crisis, approximately 7.7 million children and youths between the ages of 6 and 17 were out of school, as it was 18% of youths between 15 and 17 years of age (Acevedo et al., 2020). Accordingly, "learning and educational achievement gaps between students with different socio-demographic backgrounds are expected to become wider." (World Bank, 2020, p. 7.) In México, following the closure of schools, the National Institute of Statistics and Geography –INEGI– (2021) found that 740,000 Mexicans between the ages of 3 and 29 did not complete the school grade in which they were enrolled, and only 3% stated that the reason was not related to the pandemic.

Acevedo et al. (2020) point out that, in addition to the most evident damages of the pandemic (deaths and contagion), the chosen confinement led to risks affecting the students, mainly in terms of their nutritional, mental, and physical health and that of their families: 1) due to the suspension of the daily school meals received by a large part of the student population; 2) due to the fear of COVID-19 and the stress generated by social distancing, which increased the incidence and intensity of anxiety

and depression among students; and 3) due to the increased risk of violence, as they spent the day in potentially less safe environments than their school. Gortazar (2020) states that the disconnection of thousands of students from school could significantly increase disaffection, and that virtual dropout may end up being real dropout, with educational consequences of greater lag in literacy as well as other more complex consequences of economic, social, and political nature in the short, medium, and long terms.

In light of this scenario, identifying the effects of the health crisis on education in regional contexts is crucial. According to Ugalde & Balbastre (2013), the specific cases that can be analyzed with quantitative methodologies to infer generalizable findings from the results are representative, which means an opportunity to contribute some reflections as a means to offer alternatives from an immediate scope. For this reason, the objective of this article is to determine the effect on the factors associated with school lag and dropout in elementary education in the state of Tlaxcala, Mexico, during the COVID-19 health crisis.

Theoretical Reference

School Dropout

Dropping out of school is defined as students leaving school without having passed the minimum requirements established for the completion of the related qualification in that stage (Márquez & Gualda, 2013). Hernández & Alcaraz (2018) argue that this problem arises because the student fails to complete his or her formative process, which translates into leaving behind the academic-social life and dynamics in formal educational institutions. This problem is caused by social, pedagogical, economic, political, family, environmental, and health factors which lead students to leave the educational system (Pachay & Rodríguez, 2021).

In the current context of the pandemic in Mexico, the Secretariat of Public Education –SEP– (2020a, section 3) has defined this phenomenon as the natural outcome “when studies cease to be a priority for students due to external factors and the need to meet other types of necessities, fundamentally economic.” In this regard, the risk of dropping out in the face of the health crisis is not only due to financial shortages, but also to the loss of the students’ motivation to continue with their education (Casanova, 2020).

Pachay & Rodríguez (2021) define this scenario as the abandonment of academic activities derived from health situations, in this case, the confinement generated by the COVID-19 pandemic. Many children and teenagers abandoned their studies in the short to medium term due to the loss of family members, lack of household support, shortage of resources for food and basic services, unemployment, absence of technology, among others causes, but it is obvious that a very high percentage of absenteeism becomes the prelude to definitive school dropout (Márquez & Gualda, 2013). In the future, this decision will affect the quality of life of the most vulnerable students and their families, which in turn will increase both educational and social gaps.

In this context, for the purposes of this paper, therefore, dropping out of school will be understood as the student’s definitive withdrawal from the educational sys-

tem due to causes derived from economic, family, health, and emotional conditions, such as those caused by the COVID-19 health crisis.

School Backwardness and the Pandemic

School backwardness is interdependent with school dropout, as it is both a consequence and a cause. Dropping out generates educational backwardness, which in turn creates disincentives to continue schooling in many families. Before the pandemic, school dropout was defined as an indicator to measure poverty. It was a deprivation of the population over fifteen years of age that neither had the mandatory basic education nor attended a formal education center (CONEVAL, 2022). Similarly, educational backwardness in Mexico refers to the situation of the population aged fifteen years or older that has not completed basic education (Mérida & Acuña, 2020). Compañ (2020) argues that the educational backwardness present in people with a high index of economic inequalities is not only related to poor access to the service, but also to the fact of definitively relinquishing it and the benefits it can bring to their wellbeing, such as the food security provided in educational centers, where some students receive their first and only daily food.

School backwardness in Mexico as a consequence of the pandemic will extend to pre-existing inequality realities in those regions with a high poverty index caused by various social deprivations that prevent continuing distance education. This means that education is not the same for everyone, and that there are important gaps in learning: the poor population is faced with the possibility of not having access to education and, or when they have it, lacking access to information and communication technologies (ICT), which generates backwardness (Pérez, 2020). In the context of the current crisis, this phenomenon, although multi-causal, will thus be associated to limited access to electronic devices and the Internet because students live in conditions of moderate to extreme poverty.

School backwardness also affected parents who lack the necessary knowledge to support their children in their distance learning with the “Aprende en casa” (Learn at home) strategy. These new responsibilities were added to those of leaving for work and/or taking care of their children, especially in marginalized regions and vulnerable households (Casanova, 2020). The availability of technological tools, both for teachers and students, is determined by the area in which they live (rural or urban) and by the poverty index (Portillo et al., 2020).

School dropout, in the medium and long term, will have a direct effect on educational backwardness, which can lead to a lost generation due to COVID-19. The goal, according to UNICEF (2020), is to avoid this at all costs. School interruption, which increases dropout probability, will lead to future difficulties in finding jobs and an increase in violence, poverty, mental health problems, and long-term morbidity (World Bank, 2020).

Factors associated with school lag and dropout in the pandemic

CEPAL and UNESCO (2020) identified five types of factors associated with school dropout and backwardness in the pandemic context: socioeconomic factors, tea-

cher and management training and updating, infrastructure factors, factors related to educational practice (such as planning and evaluation), and factors derived from socio-emotional effects.

1) Economic status is highly correlated with school lag and dropout. Reduced or lost income due to unstable working conditions as a result of the pandemic made it more difficult to pay for education, which led to school absenteeism. A second consequence of this phenomenon was the incorporation of children and adolescents into the labor force to support their households' income (Acevedo et al., 2020), and a large portion of them will never return to school. In fact, it estimated that between 109,000 and 326,000 children and adolescents in Mexico would enter the labor market as a result of the pandemic (García, 2020). The economic crisis is likely to force poorer households to reduce their investment in human capital by withdrawing their children from school and transferring them to cheaper schools, or reducing their food expenditures (World Bank, 2020). As the average household income decreased, additional expenses derived from distance education were generated: in Mexico, 28% of families had to invest in purchasing smartphones, 26% in acquiring internet, 21% in adapting a study space, and 14% in purchasing a computer (INEGI, 2021).

Another impact of the pandemic on students is the increase in food insecurity. In many cases, the closure of schools meant interrupting or suspending school feeding programs. These assistance programs benefited 85 million children in Latin America; for 10 million of them, the food they received at school was the main source of nourishment (García, 2020).

In response to the crisis caused by the pandemic, Reimers & Schleicher (2020) highlight the guaranteed provision of social and food services to students as an educational priority. However, current educational policy actions in Mexico do not envisage the economic and nutritional conditions of disadvantaged populations, at least not at the time of this writing. The disappearance of the Full-Time Schools Program in 2021 and the non-definition of the actions to replace it affects the nutrition of students who previously remained in their schools during the extended school day. According to UNICEF (2020), 45% of children and youth lack at least one of the following basic needs: nutrition, education, health care, sanitation, and social protection services.

2) The teacher and management training processes for distance education are a related factor that was not as visible prior to the pandemic due to face-to-face method. The health crisis highlighted the existence of obstacles and teachers' lack of training and digital competencies to move their professional practice from face-to-face to virtual, which discouraged many students from taking classes at home. At the beginning of the pandemic, teachers in Mexico were trained in developing digital skills, distance teaching, and learning methodologies and socio-emotional care. However, this was more an emergency action than a training strategy to define a new way of developing teaching activities in the future. As Mérida and Acuña state (2020), from these standpoints, virtual education should be seen more as an additional support to face-to-face education and as a successor to the post-pandemic educational modality.

In joint reports by UNESCO, UNICEF, and the World Bank, several countries reported that they plan to make changes when reopening schools for face-to-face education: 23% of countries plan to hire more teachers, 23% will increase class time, 64% will establish remedial programs, 32% will introduce accelerated learning programs, and 62% will adapt curriculum content (UNICEF, 2020).

3) The problem of materials and equipment for distance education is closely associated with the previous factor. Distance education was adopted by more than 90% of teachers during the pandemic but was accessed by less than 70% of students. Vulnerable households during the pandemic reported low accessibility to devices, as well as poor connectivity; moreover, if available, it was not fully utilized for educational purposes (Acevedo et al., 2020). Television was a widely used resource in distance education; however, only 62% of students worldwide had access to it. On the other hand, only 24% of students have internet service, which reveals the economic inequality and the digital divide due to the pandemic (UNICEF, 2020). In other words, educational exclusion was evident by not giving opportunities to all, particularly to those who were already facing hardship and had one foot out of formal education.

The situation in Mexico is not very different, where 92.5% of households had free-to-air television, and only 45.9% had channels that were restricted at a fee; 44.3% had a computer and 56.4% had Internet access, but with a large difference between urban (73.1%) and rural (40.6%) areas (INEGI, 2019). Regarding the Internet, 70.1% consider themselves users: of this percentage, 61% use it from home, 40.9% from an Internet café, 24.8% from school, 29.3% from work, and 10.6% from their mobile device. Regarding the use of computers, only 44.6% of users used the computer as a school support tool.¹

4) The educational planning and evaluation processes had to move from the face-to-face to the virtual modality. During the health emergency caused by COVID-19, the Ministry of Public Education (2020b and 2020c) implemented the "Aprende en casa" television strategy designed upon the student's textbooks, in order to continue providing educational services in accordance with the current study plan and programs (SEP, 2020d).

In this context, the State Public Education Secretariat and the Educational Services Unit of Tlaxcala² (SEPE-USET, 2020a) aligned their actions for the planning of the national strategy "Aprende en casa" (Learn at home). Teachers were suggested to consider their students' needs, the school community's characteristics, and the didactic resources available to carry out their activity plan. The General Directorate of Educational Television, Channel Eleven, and Televisión de Tlaxcala added materials and content for preschool, elementary, and high school using Google for Education and YouTube tools. These actions were aimed at achieving the objectives of the school cycle.

1 Carro and Lima's study (2017) on the use of the web in high school students identified that 79% of young people accessed the Internet for entertainment purposes - 51.6%, to connect through digital social networks; and 27.4% to music and video sites. Only 8% used it for homework. Of this last percentage, only 21% did it regularly in a self-taught manner and only 25.8% used tutorials on a permanent basis for their learning.

2 The State Public Education Secretariat and the Educational Services Unit of Tlaxcala (SEPE-USET) are two public entities in charge of educational services: the first, centralized, and the second, decentralized from the Federation.

Regarding the second aspect –assessment–, it is important to remember that failure has been one of the most relevant factors historically linked to dropout and educational backwardness, and at the beginning of the pandemic it was seen as an urgent issue to be addressed. One of the strategies proposed to combat school dropout is student promotion to prevent an increased repetition rate and the consequent early dropout (World Bank, 2020). SEP in the country and SEPE-USET in the State of Tlaxcala established the immediate and guaranteed promotion of all students as a way to mitigate the consequences. However, García (2020) points out that this approach entails a risk since students move on to the next grade level without having fully developed their knowledge, which calls for differentiated didactic strategies in the future.

In relation to assessments, Gortazar (2020) suggested conducting them upon a diagnosis of basic competencies and a rescue program during the years 2021 and 2022, on a temporary and exceptional basis. At the institutional level, the SEP established Agreement 26/12/20, which provides that such process should be adapted to the situation, provide information for improvement, recognize the efforts of students and their families, and allow the recovery of students at risk (SEP, 2020e).

Assessment is subject to some specific situations, depending on the levels of communication and participation. Those students who keep a sustained level will have to be evaluated according to art. 10 of Agreement 11/03/19 (SEP, 2019). In the case of an intermittent level, the teacher should record the insufficiency with the respective observations. For a non-existent level, the teacher will only indicate that the information is not available.

5) Emotions play an important role in learning achievement, and in times of crisis, emotional support and care are decisive for staying or dropping out of school. In this sense, the SEP points out that it is necessary to strengthen the development of social-emotional skills in order to help the members of school communities to face the situations caused by the changes in the way of life brought about by the pandemic. To this end, it is essential that teachers foster abilities that allow them to identify, understand, and regulate emotions in order to establish positive and constructive interpersonal relationships, as well as to favor learning processes in the current context (SEP, 2021a).

Under this scenario, the educational system is expected to address the crisis by providing psychosocial and emotional support tools. Such instruments emphasize the teaching of self-care, which is necessary for students to better face multiple future scenarios and develop socioemotional competencies and life skills (SEP, 2021b). Being in daily contact with students, teachers and school staff play a protective role against possible violations of their physical and mental safety at home. The closure of schools, together with the confinement of children and adolescents and parental pressure due to the deteriorating economic situation, increased the risk of violence and abuse (García, 2020). Evidence from some randomized controlled experiments has shown a positive relationship between school dropout rates and levels of violence and delinquency (Heller et al., 2017).

Context of the study experience

According to official data from the Directorate of Basic Education, 292,469 students were enrolled in the basic level of education in the State of Tlaxcala in the 2019-2020 school year, served by 23,392 teachers in 1885 schools and 2154 elementary schools with 32 educational modalities. For the 2020-2021 school year, school enrollment will be reduced to 277,620 students, 23,034 teachers, 1,872 school sites and 2,214 schools (SEPE-USET, 2020b).

In terms of educational levels, the initial level comprised an enrollment of 3420 students, 957 teachers and 75 schools. The special education subsystem included 881 students, 1406 teachers and 115 schools. Preschool education had 48,868 students, 3,3736 teachers, and 785 schools. Elementary education had an enrollment of 151,693 students, 9004 teachers and 780 schools, while secondary education had 74,758 students, 7931 teachers and 387 schools (SEPE-USET, 2020b).

In 2020, there were 55,567 children and adolescents of mandatory school age who were not attending school: 29,792 males and 25,775 females. Among Tlaxcalan households with access to electronic devices and internet connection, 38.7% have connectivity, only 28.3% have a computer or tablet, and 85% have a cell phone (INEGI, 2021).

Methodology and materials

The research used a quantitative methodology because it allows, through statistical analysis, to establish associations between variables and make causal inferences that explain why a certain event or phenomenon occurs (Neill & Cortez, 2018). The information was obtained by conducting an online survey addressed to the teaching staff. The sample consisted of 840 teachers from all registered educational levels and modalities (see Table 1), who answered a Google form sent to the main educational authorities (directors and supervisors), with prior authorization from the Basic Education Directorates of the State Public Education Secretariat and the Educational Services Unit of Tlaxcala. The survey was aimed to teachers because they could be a representative sample and they knew the situation of the students and their homes.

Table 1. Number of participants per educational level

Educational Level	USET	SEPE	Total
Pre-school education	111	27	138
Indigenous pre-school education	16	inexistent	16
Elementary education	152	57	209
Indigenous elementary education	4	inexistent	4
Special education	53	18	71
General high school education	134	inexistent	134
Technical high school education	79	inexistent	79
Tele-high school	90	36	126
Physical education	13	27	40
Artistic education	inexistent	17	17
Technological education	inexistent	6	6
Total			840

Authors' own elaboration using SEPE-USET (2020b) data and questionnaire records.

The questionnaire included 37 items (see Table 2), comprising the indicators of the five units of analysis (excluding the first, which refers to official information.) The number of indicators is lower than the number of questions because cases such as indicators 2.2, 2.5, 4.4 and 5.1, among others, included more than one question. The response options incorporated dimensions on a scale of three or five ratings: *a lot, a little and not at all; always, almost always, regularly, almost never, and never*. The survey was available on the digital platform between April 19 and 27, 2021.

Prior to the integration of field data, the official information on student enrollment and school status was reviewed as the first unit of analysis (see Table 2), based on the SEP definition, which established three levels of communication and participation of students in their learning activities 1) *sustained communication and participation*: monitoring of the programming of the “Aprende en casa II” strategy through any media, communication between the head of the group or subject and his or her students, participation in sessions, and completion of the indicated didactic activities; 2) *intermittent communication and low participation in school activities*: occasional follow-up of the strategy’s programming, sporadic communication between the head of the group or subject and the students, and partial delivery of assignments; and 3) *practically inexistent communication*: unable to follow up on the students’ educational process (SEP, 2020e). This information was obtained from the two periods of three moments that comprise the evaluation of the 2020-2021 school year.

Table 2. Factors related to school backwardness and dropout due to the COVID-19 pandemic in basic education in the state of Tlaxcala: Units of analysis and indicators.

Analysis and Dimensions Unit	Indicator
1. Educational backwardness and school dropouts (enrollment)	
Identifying the condition of educational backwardness and school dropout in basic education.	Enrollment in the 2019-2020 & 2020-2021 school cycles. Progressive comparison during the 2020-2021 school year of students with whom sustained communication is held. Progressive comparison during the 2020-2021 school year of students with whom intermittent communication is held. Progressive comparison during the 2020-2021 school year of students with whom inexistent communication.
2. Socioeconomic factors	
Understanding the socioeconomic conditions of families during the pandemic.	2.1. Percentage of students in need of work. 2.2. Percentage of students who dropped out of the distance learning program. 2.2. Socioeconomic effects of the pandemic on the family (income and employment.) 2.3. Housing characteristics for educational services (basic public services.) 2.4. Affectations in federal programs to address child food and nutrition. 2.5. Students who have study space and equipment (television, internet, and computer) for distance education.

3. Teacher and directive training processes for distance education

Determining the relevance of teacher and directive education training courses for distance education in the context of the pandemic.	3.1. Percentage of teachers and directors who have received training during the contingency. 3.2. Outstanding topics for teacher and directive refresher courses. 3.3. Relevance of training and updating courses. 3.4. Training and updating needs. 3.5. Courses’ contribution to the teaching process. 3.6. Knowledge of digital platforms. 3.7. Main tools used.
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4. Materials and equipment for distance education

Identifying the educational materials and equipment used by teachers in distance education.	4.1. Availability and knowledge of educational platforms. 4.2. Availability and knowledge of didactic material for distance education. 4.3. Design of educational material individually or by the school collective (for distance learning and for students’ needs.) 4.4. Use of main digital tools for distance education (digital platforms and digital social networks.) 4.5. School Technical Council sessions where didactic materials are shared.
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5. Educational planning and assessment

Learning about the educational planning and assessment processes developed by teachers during the pandemic.	5.1. Resources for distance education planning (textbook, “Aprende en casa”, study plan and programs, etc.) 5.2. Distance education planning approach and content (methodology, curricular adaptation, project-based planning, transversality, etc.) 5.3. Educational assessment criteria for distance learning (regulatory frameworks, formative assessment, and pandemic effects.) 5.4. Knowledge of the evaluation process (parents, students’ situation, and students’ knowledge.)
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6. Socioemotional effects

Describing the emotional conditions and their effects on the educational community’s daily life in the contingency.	6.1. Recognition of teachers’ emotions. 6.2. Recognition of students’ emotions. 6.3. Resources and materials for social-emotional care during pandemics. 6.4. Emotional stress factors in the educational community.
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Authors’ own elaboration.

Subsequently, as part of the global analysis of the data, a descriptive analysis of each of the variables or units of analysis studied is included, taking into account the scale of measurement of the variables and their distribution (Flores et al., 2017). The analysis of the data obtained is shown as a percentage.

Results

School enrollment during the pandemic

2019-2020 school year began with 292,469 students enrolled in basic education (SEPE-USET, 2020b). Even though it was officially determined that no student would be dropped from promotion and that they would be automatically re-enrolled for the next grade, enrollment for the

2020-2021 cycle dropped to 277,620, and at the time of the evaluations was 272,426, i. e., 20,043 (6.8%) fewer students.

In the first period of the 2020-2021 school year, of the 272,426 students served in the State of Tlaxcala, 250,999 (92.1%) were in the sustained level of communication; 11,220 (4.1%) were in intermittent and low participation; and 10,207 (3.8%) were in inexistent communication (Table 3). The figure for the second evaluation period decreased to 246,831 (90.6%), and the levels of intermittency and non-communication increased to 13,312 (4.8%) and 11,800 (4.6%), respectively.

Table 3. Educational level and service on the levels of communication and participation of students during the two assessment periods of the 2020-2021 school cycle.

		Number of students with communication & participation levels during the 2020-2021 school year												
		First Assessment Period						Second Assessment Period						
Educational Level	Service/sustainment	Enrollment	Sustained	Intermittent & low participation	Practically inexistent		Sustained	Intermittent & low participation	Practically inexistent					
Preschool	Public	41,691	38,396	92.2%	362	0.8%	2,933	7.0%	36,693	90.7%	220	0.5%	3,711	8.8%
	Private	5,357	5,274	98.5%	10	0.2%	73	1.3%	5,045	96.6%	3	0.1%	178	3.3%
Elementary	Public	138,192	132,005	95.5%	1,056	0.8%	5,131	3.7%	133,095	96.7%	625	0.4%	4,105	2.9%
	Private	12,915	12,821	99.3%	30	0.2%	64	0.5%	12,573	99.1%	19	0.1%	108	0.8%
High School	Public	69,311	57,595	83.1%	9,731	14.1%	1,985	2.8%	53,452	77.4%	12,213	17.6%	3,504	5.0%
	Private	4,960	4,908	99.0%	31	0.6%	21	0.4%	4,537	93.2%	229	4.6%	114	2.2%
Total		272,426	250,999		11,220		10,207		246,831		13,312		11,800	

Source: Statistics disaggregated by educational level and service on the levels of communication and participation of students during this period of the 2020-2021 school year, Educational Evaluation Directorate, and School Registration and Certification Department.

By modalities and levels, private schools registered a lower percentage of dropouts compared to public schools. The most affected educational level during this period of analysis was high school: public education only registered 83.1% of students with sustained communication during the first evaluation period, which dropped to 77.4% in the second period. It is worth noting that the highest results for inexistent communication were recorded at preschool level (7.0% and 8.8% in the first and second assessment periods in the first and second assessment periods, respectively), and the same was true for intermittent communication (14.1% and 17.6%, respectively.) However, the risks of dropping out are higher in high school because the reasons revolve around the need to work to contribute to the family's income.

Socioeconomic Factors

On the results obtained with the online questionnaire, teachers identified that 99% of the families were affected financially by the COVID-19 pandemic. Out of this percentage, 73.3% were strongly aggravated, 25.8% suffered minor repercussions, and only less than 1% were considered to be unaffected. With regard to the parents' employment situation, about 16% of them lost their jobs, 65% of them found it greatly diminished, and only 17.9% were slightly affected. The above data were reflected in the fact that around 7% of households lost their income, and three quarters (74.4%) saw it considerably decreased.

Although the accumulated official data was available, the percentage of students with whom each teacher carried out his or her activities individually (in a range of five options) was also inquired: 18.2% of the teachers recorded student absences of less than 10% of their groups; 34.3% recorded absenteeism of between 10% and 30%; 35.7% recorded absenteeism of between 30% and 50%; 11.8% had more than half of the group absent; and no teacher recorded a total absence. On the other hand, 64.6% of the students changed their activities due to the need to work or to contribute to household activities.

Regarding the availability of basic services at home for the development of distance activities, 82.5% had more than 60% of the necessary services and only a small proportion (5.3%) lacked most of them. Regarding the number of students who have physical spaces for their distance activities, 50.3% had such spaces. Concerning food support, 81.2% of students no longer receive it.

With respect to access to electronic and digital devices for distance education, 39.5% of the teachers indicated that more than 80% of their students had television, 10.4% had total access to the Internet, and only 4.3% had computers. Only in terms of television is the lack of the device insignificant (3.6%).

Processes of directive and teacher training for distance education

It was found that six out of ten managers and teachers took courses related to distance learning technologies. Forty-eight percent received training on emotional care issues, and 53% on methodological aspects of distance learning, including planning and evaluation (the sum is greater than 100% because they could select more than one option.)

Teacher participation registered 85.9% attendance and, concerning training needs, 92.5% stated that they were met and 91.3% that the courses had an impact on educational improvement. However, 14.2% of teachers declared that they never or almost never participated, 7.5% that the courses failed to meet their needs, and 8.7% that they failed to contribute to the improvement of teaching and learning processes during the pandemic.

Materials & equipment for distance education

Regarding knowledge of the platforms for school support, 92.8% of teachers agreed with their use. However, in relation to the use of the main tools (textbooks and "Aprende en casa" strategy), 25.4% disagreed with their use.

With respect to sharing materials at the School Technical Council sessions to improve teaching processes, 90% of the teachers considered that they always or almost always did so. The use of digital social networks was highly employed by teachers during the pandemic for academic activities: almost two thirds (62.3%) used it always or almost always (62.3%).

On the other hand, 50.4% used educational platforms almost always, and 20.6% always used them always. The significant finding was that 23% almost never used them and 6% never used them. This percentage was not reflected in the adaptation of didactic materials: 2% declared that they never or almost never adapt them, and 6% that they never or almost never design didactic materials for distance classes. On the other hand, 98.2% almost always or always

worked on the adaptation of didactic materials, and 94.8% designed didactic materials for distance education.

Educational Planning & Assessment

Distance educational planning was based mainly on the study plan and programs. These were used by 81.1% of the teachers, followed by 60.9% who used textbooks. Third place was given to the institutional strategy of distance work "Aprende en casa", with 55.7%. Peer-to-peer work was only used by 24.2%. In relation to the use of planning approaches, during the contingency, the most used was curricular adaptation (66.2%), followed by diversification of needs (56.4%) and the cross-cutting approach (50.7%); the least used was project-based planning (41.1%).

Regarding student assessment, 59.6% of the teachers always assessed students upon the projected planning and 39.3% almost always did this. A greater proportion (77.1%) of the teachers stated that they always considered the effects of the pandemic; 22.3% stated that they almost always took them into account. With percentages similar to the above, 68.8% of teachers always took into account the 26/12/20 Agreement for assessment and 29.5% almost always took it into account.

Regarding the knowledge of parents and students on how to assess and the assessment criteria, 71.2% of the teachers stated that they were always informed, and 26.1% almost always. Regarding the contents of the distance learning materials to be evaluated, only 32.5% of teachers informed parents and students always and 62.6% almost always; as a significant fact, 5% almost never did so. In relation to the knowledge of learning recognized as relevant for life, 49% of teachers answered that they always took them into account and 48.8% that they almost always did.

Emotional Effects

In terms of emotional care resulting from the effects of the pandemic on teachers, their students, and their families, 67.4% of teachers reported always recognizing their own emotions and 31.4% almost always. However, only 38.8% reported always identifying the causes in students and their families, 58.1% almost always, and 3% hardly ever. Regarding the results of the impact on learning, 67.7% of the teachers stated that they always recognize them, and 31.9% almost always.

Regarding the availability of resources for emotional care, only 28.8% said they always had them; 63.5%, almost always, and 8.7%, almost never or never. Forty-five point one percent of the school group stated that stress factors were always identified among teachers, parents, and students; 50.4%, almost always; and only 4.6% answered that almost never or never.

Discussion

School dropout in the state of Tlaxcala was identified in distance education from the first months of the pandemic. However, official figures were recorded from the moment when almost 15,000 students from the 2019-2020 school cycle stopped enrolling for the next one, despite the (understandable and justified) flexibility of the assessment and re-enrollment processes. During the 2020-2021

school cycle, another 5,000 students dropped out, and 25,000 were at risk of dropping out due to intermittent or almost total absence in class attendance. The most known causes were limited financial and material resources, lack of family support, and limited availability of technology.

The results obtained show different effects on the basic education modalities. Public schools decreased their enrollment to a greater extent, despite receiving the children of many parents who gave up private schools due to lack of resources. The most affected level was high school due to structural problems where children and adolescents are forced to work, at the cost of their schooling.

The strategy of limiting non-essential economic activities at the beginning of the pandemic to stop contagion severely affected the situation of families, and therefore it is not surprising that, among the factors related to school dropout and backwardness, the socioeconomic aspects were the most visible, as a negative impact was identified in practically all the students' homes. The effects on employment and family income ranged from very serious to serious in almost all of them, and only a small percentage were unaffected. In addition to the above, in many cases, households had to make new expenses to continue with the distance learning modality due to the lack of infrastructure and equipment, one of the factors associated with dropout and educational backwardness. Many students in vulnerable socioeconomic conditions lacked (and most of them still lack) physical spaces at home for virtual learning, in addition to the absence of electronic and digital devices and Internet access.

Teachers also reflected limitations for distance work in terms of training and availability of equipment. This factor, associated with backwardness and school dropout, was a strategic element for the transition of teaching to the distance modality. The response of the Ministry of Public Education was to develop technological materials and resources available to teachers, which, as stated above, were not fully used and capitalized due to limited knowledge of the platforms and of the link between the contents of the curriculum, the study program, and what was broadcasted on television with the "Aprende en casa" strategy. Besides, the use of this resource was not deemed appropriate by a group of teachers.

Regarding the related factor of educational planning, the main change during the pandemic was the curricular adaptation to the virtual modality of the free textbooks, which limited teaching through other didactic alternatives.

School evaluation, in determining student passing and failing grades, underwent substantial modifications. Initially, the challenge was to have information on students under the new modality; however, due to a high percentage of intermittency and lack of communication with students, the mechanisms were made more flexible and, as an official provision, it was determined that all students would be promoted to the higher grade and automatically enrolled in the following school year. Notwithstanding, this was insufficient to prevent school dropout and avoid the consequences pointed out by García (2020), such as the fact that students advance to the next grade without having developed their learning in its entirety.

The emotional effects will have short-, medium-, and long-term consequences on school dropout. Like many

new problems, they were detected during the pandemic, but attention was limited since teachers do not have the specialization for their treatment and not all schools have sufficient personnel with this professional profile. Some of the investments that Latin American countries will make to mitigate the effects of the pandemic and to face the new normality were mentioned at the beginning, but in Mexico the details are still unknown.

Conclusions

In Mexico, educational backwardness and school dropout were already among the main problems and priorities of the national educational agenda before the COVID-19 pandemic, but this phenomenon has aggravated them. School dropout is one of the most visible consequences of the pandemic and it will contribute to accentuating the inequality of educational opportunities, mainly in more advanced grades.

The impact of the pandemic on students from the most vulnerable and least resilient households in the Mexican context, as well as the national education system's operating conditions, demand rethinking. This is what Fernandez et al., (2020) point out by highlighting the importance of the current window of opportunity for education authorities to work together with teachers to develop a successful back-to-school program for Mexico's 36.6 million students. The biggest challenge, however, is to get them all back. An initial problem was to keep as many as possible in school from home, but a similar one will be to avoid exacerbating the educational backlog, because little could be done for those who skipped classes or those who were absent, but even less for those who could no longer enroll in Tlaxcala and in Mexico.

The impact of the pandemic reflects the immediate need to define restitutive and compensatory educational policies. As Gortazar states (2020, para. 17), "a more decisive commitment to the transformation of the educational system is necessary for reforms that are yet to come to achieve the greatest possible impact". In addition, he adds that "investment proposals include rescuing students after COVID-19, digitalizing educational management and assessment, investing in infrastructure, and training the system to deal with educational transformations" (para. 25), so that the damage can be repaired for those who were excluded by the impact of the pandemic, and also for all those children and adolescents who had never been enrolled. This is the area of opportunity to truly address the school problem in both the states as a local space and in the federation as a general strategy. Crises in the end are the scenarios or turning points that most justify the revision and redirection of what has failed.

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