



# DETERIORATED ENROLLMENT AND DISRUPTED LEARNING: THE IMPACTS OF THE COVID-19 PANDEMIC ON EDUCATION IN LATIN AMERICA AND THE CARIBBEAN \*

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## Main messages:

- *In late 2021, the attendance rate among school-age children in Latin American and Caribbean (LAC) countries was 92.2 percent, representing a clear improvement compared to the regional attendance levels recorded in mid-2021 (84.4 percent). However, this figure remained 4.4 percentage points below pre-pandemic levels.*
- *From a supply perspective, education systems partially transitioned from virtual to in-person provision during the second semester of 2021. By mid-2021, 92.7 percent of attendees reported that the institution in which they were enrolled was offering virtual learning activities, compared to 25.3 percent of attendees at institutions where in-person classes were offered. By the end of 2021, virtual learning was available to 75.0 percent of attendees, while in-person learning was available to 62.2 percent of attendees.<sup>1</sup>*
- *From a demand perspective, in-person attendance remained comparatively low throughout the second half of 2021: School-age children engaged in in-person and hybrid learning went from comprising 14.3 percent of total attendance in mid-2021 to 48.3 percent at the end of the year. Virtual learning continued to be the predominant means of engagement. However, its relative importance decreased significantly from 83.0 percent of total attendance in mid-2021 to 48.5 percent in late 2021.<sup>2</sup>*
- *Among the reasons behind prioritizing the return to in-person learning, the varying quality of virtual learning might have been the most pressing. By the end of 2021, 56.4 percent of adults with children enrolled in institutions across LAC believed their child was learning less or much less than before the pandemic.*
- *This perception of diminished learning during the pandemic is positively correlated with the length of time that schools were closed on a national scale and the proportion of children engaged in virtual learning activities.*
- *In mid-2021, children enrolled in institutions across LAC cited a lack of resources, such as Internet access, as the main reason for not engaging in virtual learning activities. This barrier was less common by the end of the year, but the proportion of those enrolled who were not engaging due to a lack of time or the need to work increased. Meanwhile, health risks and preventive safety protocols were the main reason behind in-person absence throughout 2021.*

\* This note was prepared by Adriana Camacho and Pablo Hernández from the United Nations Development Programme (UNDP). The authors thank Paulo Vaz for contributing to the first draft. It was made possible thanks to financial support from the World Bank Latin American and Caribbean Regional Vice Presidency and the UNDP Rapid Financing Facility initiative. This collaboration builds on the initial efforts of the World Bank, where three waves of data were collected in 13 countries across Latin America and the Caribbean between May and August 2020.

1 These values refer to non-exclusive availability. Therefore, a student may have access to both in-person and virtual learning in each period.

2 Unless otherwise stated, virtual engagement rates include children who participated in at least one of the following remote-learning activities during the reference period: virtual classes with a teacher, completion of assigned tasks using printed materials, independent learning through digital applications and programs, watching pre-recorded classes, watching educational programmes on television, listening to educational programmes on the radio and/or other remote-learning activities. The remaining attendees (less than 5 percent in each wave) were either on vacation or could not be definitively classified into the in-person, virtual or hybrid learning categories.



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*The ability to adapt to shifting learning conditions resulting from the COVID-19 crisis was closely linked to household wealth, proxied by asset ownership.<sup>3</sup> In mid-2021, children from households owning three assets had relatively lower in-person and hybrid attendance and higher virtual learning rates (12.9 percent and 84.3 percent, respectively), while children in households with no assets had comparatively higher in-person attendance and lower virtual learning rates (20.4 percent and 77.7 percent, respectively). By the end of the year, in-person and hybrid attendance was relatively higher among children in households owning three assets (59.1 percent) compared to those in households with no assets (41.8 percent), while virtual learning rates were relatively lower among children in households owning three assets (38.2 percent) vis-à-vis those from households with no assets (53.7 percent).*

To continue monitoring the consequences of the COVID-19 pandemic on household welfare in LAC, the World Bank and UNDP joined forces to implement the second phase of High-Frequency Phone Surveys (HFPS) in LAC in 2021.<sup>4</sup> The first wave of data in this phase was collected between May 2021 and July 2021, while the second wave was collected between October 2021 and January 2022. This note focuses on education outcomes to unravel the effects of COVID-19 on human capital accumulation in the region.

## **Attendance rates: Before and during the pandemic**

**Following a steep decline in mid-2021, attendance rates of school-age children in LAC bounced back by the end of the year, but not enough to return to pre-pandemic levels.** The attendance rate of school-age children in countries across the region was 92.2 percent by late 2021. This constituted a clear improvement from mid-2021 when general attendance was at 84.4 percent. However, it remained 4.4 percentage points below pre-pandemic levels (Figure 1).<sup>5</sup> Throughout the second half of 2021, attendance in Chile saw very little change, while it increased considerably in Belize, Guatemala, and Guyana, rising from around 64 percent in mid-2021 to approximately 85 percent in late 2021, a ten percentage-point shortcoming from pre-pandemic levels notwithstanding. By the end of the year, attendance was lowest in Honduras, where only 77.2 percent of school-age children participated in some form of education, falling 16 percentage points short of pre-pandemic levels.

<sup>3</sup> Household asset ownership refers to the possession of a motorcycle, washing machine and/or a computer or tablet.

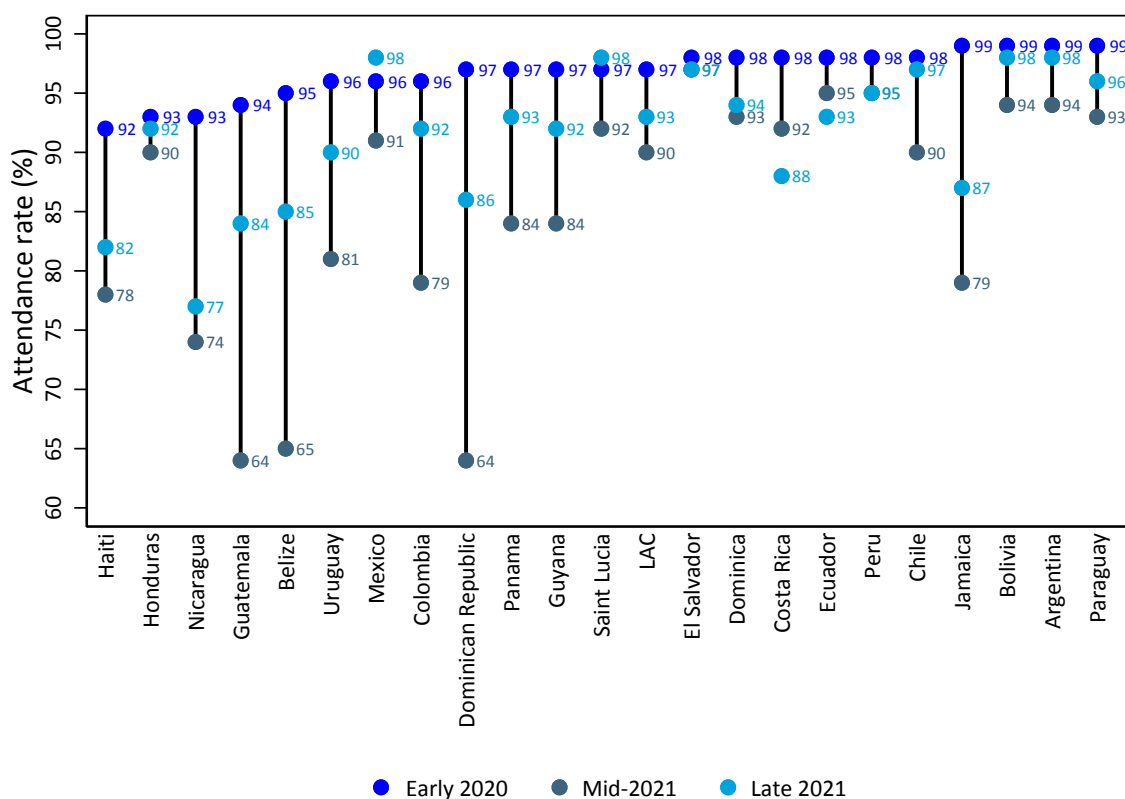
<sup>4</sup> Waves one and two of the second phase of the survey were collected in 22 countries (Argentina, Belize, Bolivia, Chile, Colombia, Costa Rica, Dominica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, and Uruguay) and are nationally representative of the adult population (aged 18 and over) with a phone. Wave one also included data from Brazil and Antigua and Barbuda, both of which have been excluded from this analysis to ensure comparability of the results from both waves. Unless otherwise stated, all indicators thereafter that refer to mid-2021 correspond to the data from wave one of the survey's second phase (PH2W1), while indicators referring to late 2021 correspond to the data from wave two of the survey's second phase (PH2W2).

<sup>5</sup> Unless otherwise stated, pre-pandemic values are generated using recall information from wave one.

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**Figure 1.** School-age children engaged in some form of education in Latin America and the Caribbean, by country, 2020–2021



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

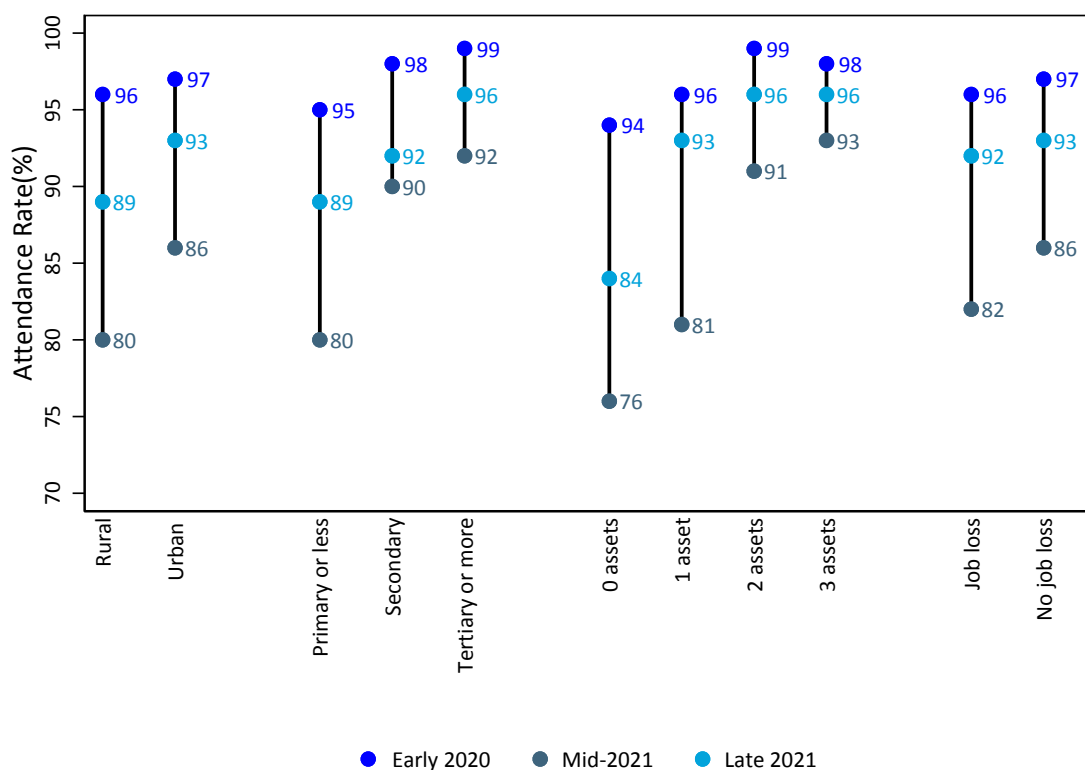
Children in urban households, where more-educated adults are the head of the household, which have a greater level of asset ownership and were not exposed to job losses during the pandemic, all experienced a comparatively smaller decline and faster catch-up in attendance. In rural areas, attendance rates declined from 96.1 percent in February 2020 to 80.5 percent in mid-2021, reaching 89.3 percent by the end of 2021 (Figure 2). In contrast, attendance rates among children in urban areas displayed a less pronounced drop, from 96.7 percent in early 2020 to 86.0 percent by mid-2021, followed by an increase to 93.4 percent towards the end of the year. The decline in attendance rates was concentrated among children in households where the head had completed only primary education or less. Of these children, 79.5 percent and 89.1 percent were attending school in mid and late 2021, respectively (6.3 percentage points below pre-pandemic levels).

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Children from vulnerable households proxied by asset ownership faced a considerable decline in attendance, which ranged from 93.8 percent before the pandemic, 76.1 percent in mid-2021, and 83.8 percent by the end of 2021. In addition, children from households in which the survey respondent had lost their job during the pandemic were less likely to be attending than those in households with no exposure to job losses. The attendance rates of the former reached 81.6 percent in mid-2021, while those of the latter rose to 86.2 percent. Both groups' attendance had increased by the end of 2021, reaching 91.6 percent and 93.4 percent, respectively. In both cases, attendance was still four percentage points below pre-pandemic levels.

Figure 2. School-age children engaged in educational activities by household characteristics



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.  
 Note: The general attendance rate comprises in-person, hybrid, and virtual learning.



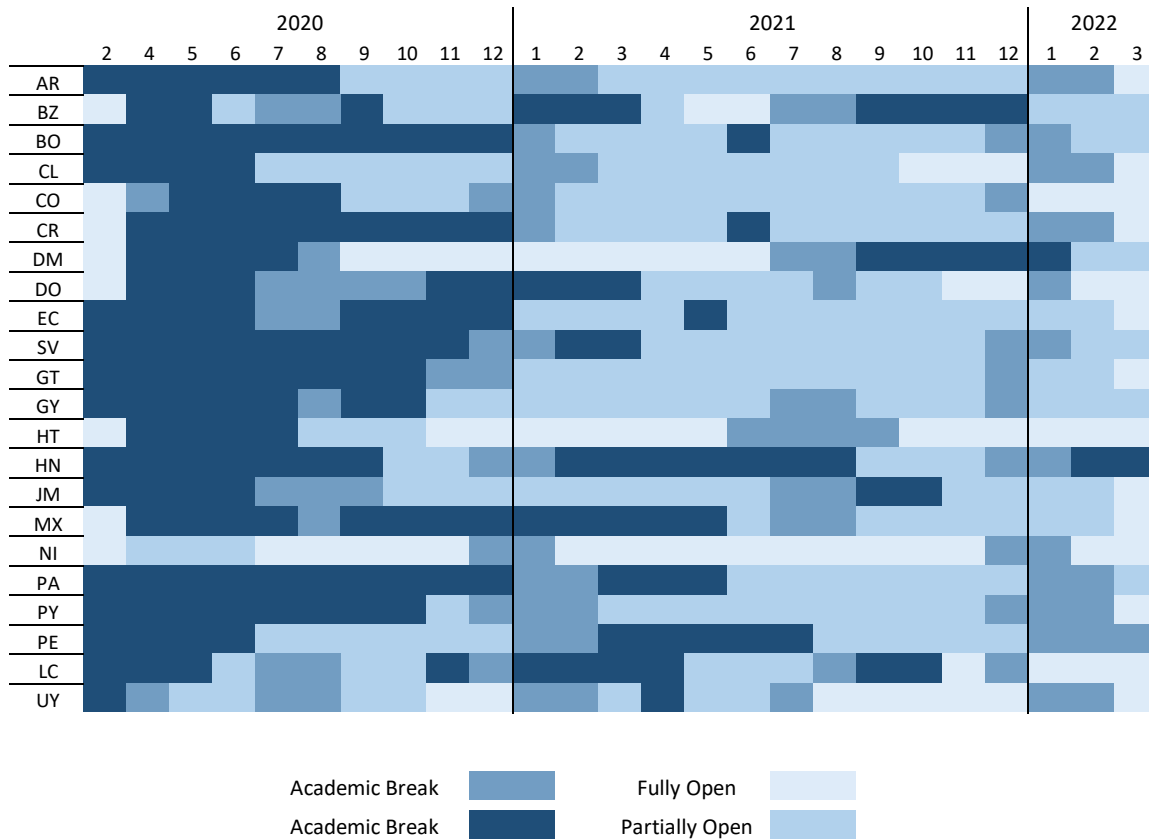
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## Lockdowns, school closures, and learning

School closures were among the most prevalent challenges imposed by the COVID-19 pandemic on education systems across the region, with the aim of controlling the virus's spread. However, such closures challenged schools and students to adapt to the new reality of virtual interaction. Along with the decline in general attendance rates across all countries, school closures dramatically affected in-person contact and transformed most learning activities into virtual ones. In LAC, the gradual reopening of schools, which happened slowly and to varying degrees between early 2020 and June 2021, was mostly complete by the last semester of 2021 (Figure 3). This pattern is simultaneously reflected in the relative increase in in-person and hybrid learning and the decrease in virtual learning.

Figure 3. School closures during the COVID-19 pandemic by country (2020 to early 2022)



Source: Authors' calculations based on data from UNESCO Global Monitoring of School Closures.  
 Note: Full school closures refer to situations where all schools were closed at the national level due to COVID-19. Partial school closures refer to school closures in some regions or for some grades, or with reduced in-person instruction. Months are classified according to their modal closure status.

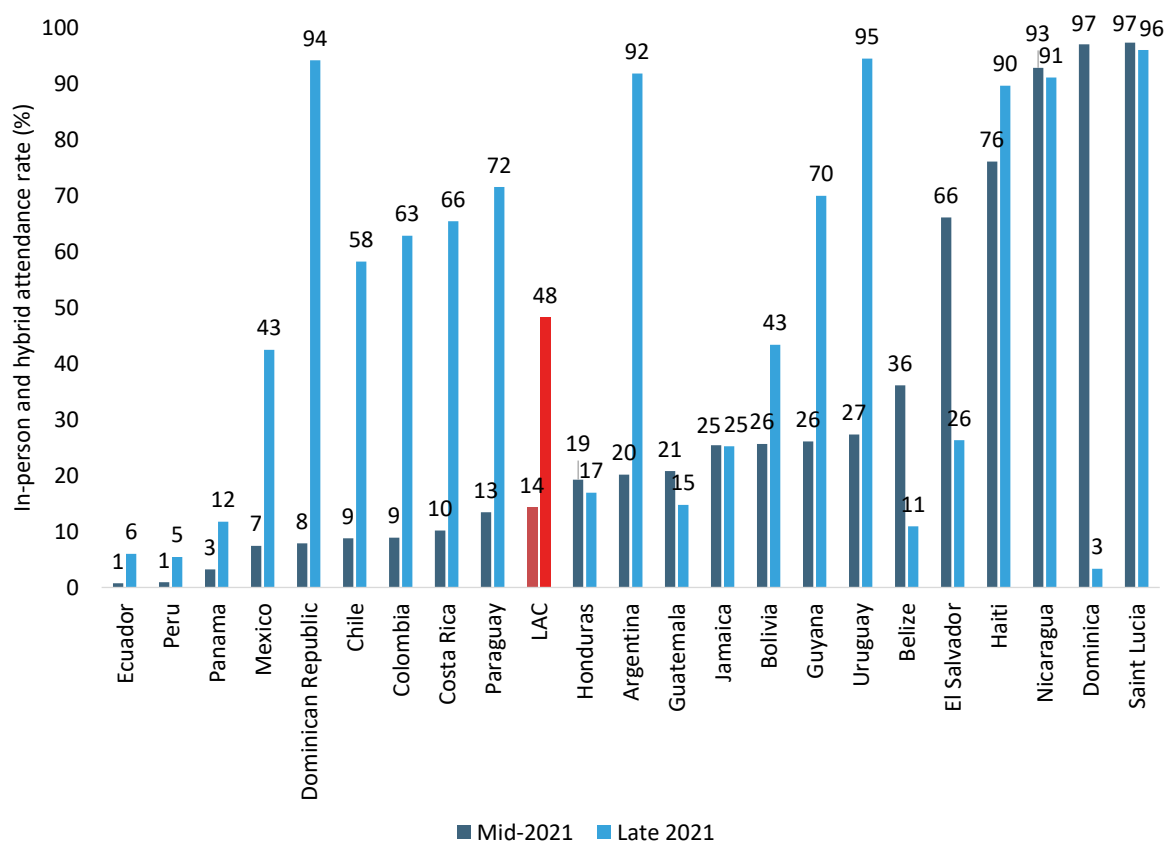
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## In-person and hybrid attendance during the pandemic in LAC

On average, the in-person and hybrid attendance rate in LAC countries increased by 34 percentage points between mid-2021 and the end of the year. In-person and hybrid attendance increased from 14.3 percent to 48.3 percent during this period (Figure 4). The results show that the Dominican Republic, Argentina, and Uruguay displayed the most significant increases in the rate of in-person and hybrid attendance (86.4, 71.8, and 67.2 percentage points, respectively). The largest decreases were observed in Dominica, El Salvador, and Belize (-93.9, -39.8, and -25.2 percentage points, respectively).

Figure 4. In-person and hybrid attendance rate by country (mid-2021 vs. late 2021)



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

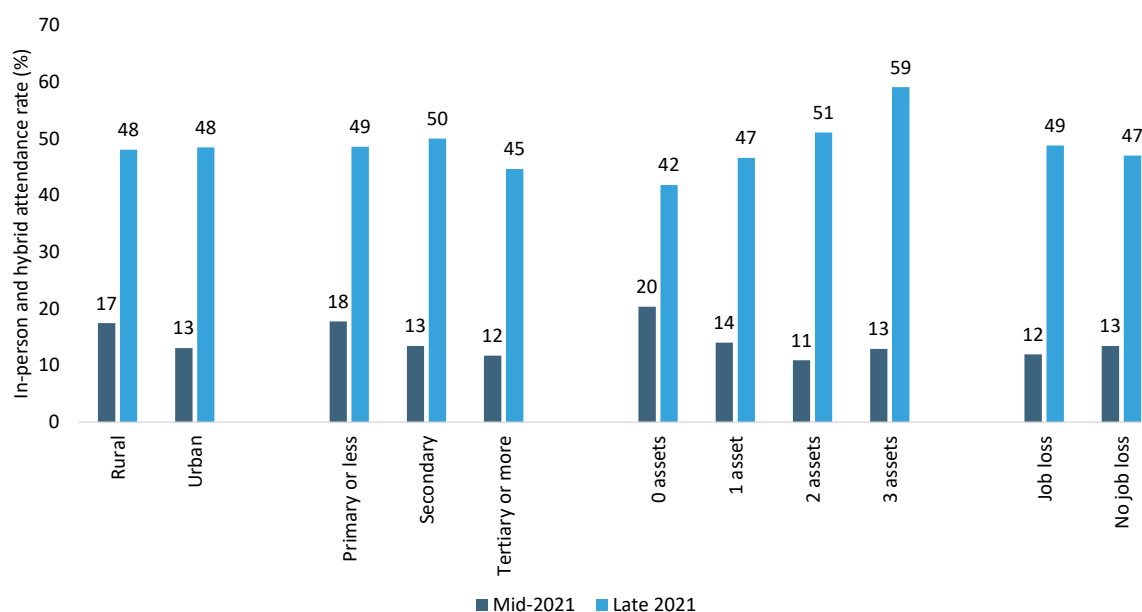
Note: The attendants are enrolled children of school age who attended in-person classes exclusively and/or participated in hybrid learning activities. Given the difficulty in determining the type of learning they would be engaged in, children on vacation were excluded from this calculation.

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**Children in households with more assets were more likely to return to in-person and hybrid classes by the end of 2021.** However, in mid-2021, during one of the critical moments of the pandemic, children in households with more assets were less likely to participate in in-person and hybrid classes (Figure 5). In this respect, only 12.9 percent of children from households with three assets were attending in-person and hybrid classes, compared to 20.4 percent of children from households with no reported assets. However, by the end of 2021, in-person and hybrid attendance followed the opposite pattern: The proportion of children from more vulnerable backgrounds attending school (41.8 percent) was comparatively lower than that of children in households with greater asset ownership (59.1 percent). Meanwhile, within each period, differences across other household groups were less pronounced.

**Figure 5. In-person and hybrid attendance rate, by household characteristics**



Source: The World Bank and the UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

Note: The attendants are enrolled children of school age who attended in-person classes exclusively and/or participated in hybrid learning activities. Given the difficulty in determining the type of learning they would be engaged in, children on vacation were excluded from this calculation.

**During the second half of 2021, health risks and safety protocols continued to be the main reasons behind in-person absence, despite the increase in attendance towards the end of the year.** On average, school-age children who were not attending during either period cited health risks and poor safety protocols as the main reason for not doing so. The number of students not attending in-person classes due to quarantine

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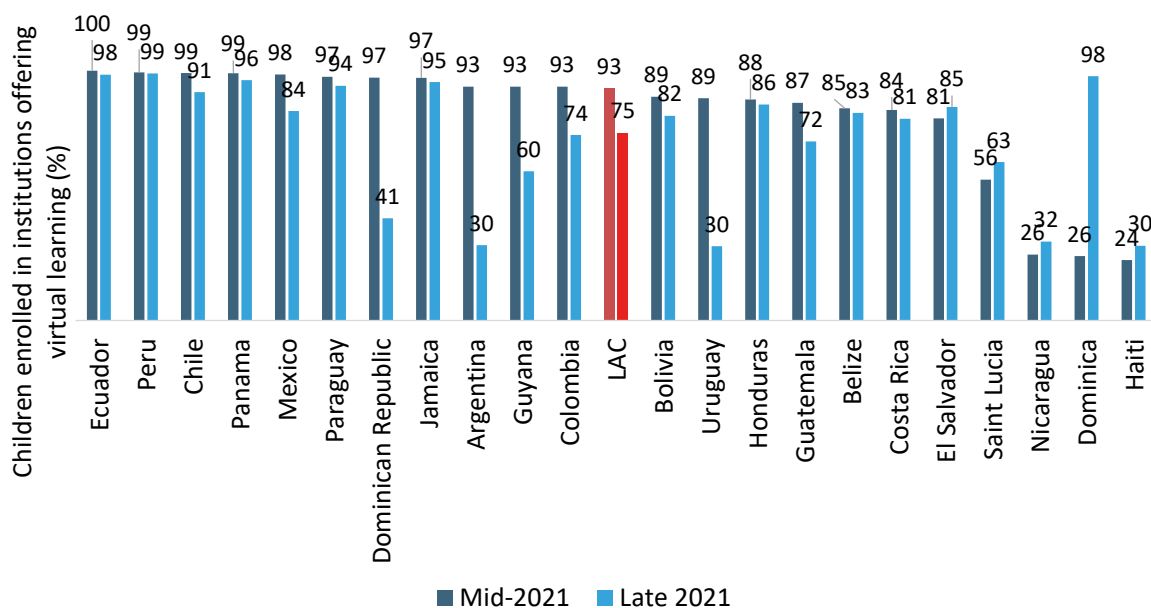
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or mobility restrictions was high in mid-2021. However, this number fell significantly in late 2021. Although a small number of students did not attend due to lacking resources or the need to work, this number increased between periods.

## Supply and demand for virtual learning during the pandemic

From a supply perspective, 92.7 percent of children in LAC were enrolled in institutions offering virtual learning alternatives in mid-2021, a proportion that decreased to 75.0 percent by the end of 2021 (Figure 6). The greatest decrease in virtual learning availability among enrolled children was seen in Argentina, Uruguay, and the Dominican Republic (63.3, 59.0, and 56.1 percentage points, respectively). This is directly related to the increase in the in-person attendance rates previously described in Figure 3. On the other hand, the greatest increase in virtual education provision occurred in Dominica, equivalent to 71.9 percentage points, followed by Saint Lucia, Nicaragua, and Haiti, with an average increase of approximately six percentage points.

**Figure 6.** Share of school-age children enrolled in institutions where virtual learning activities were offered (%) by country, 2021



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

Note: Virtual learning availability is defined as the proportion of school-age children enrolled at institutions where virtual learning was offered.

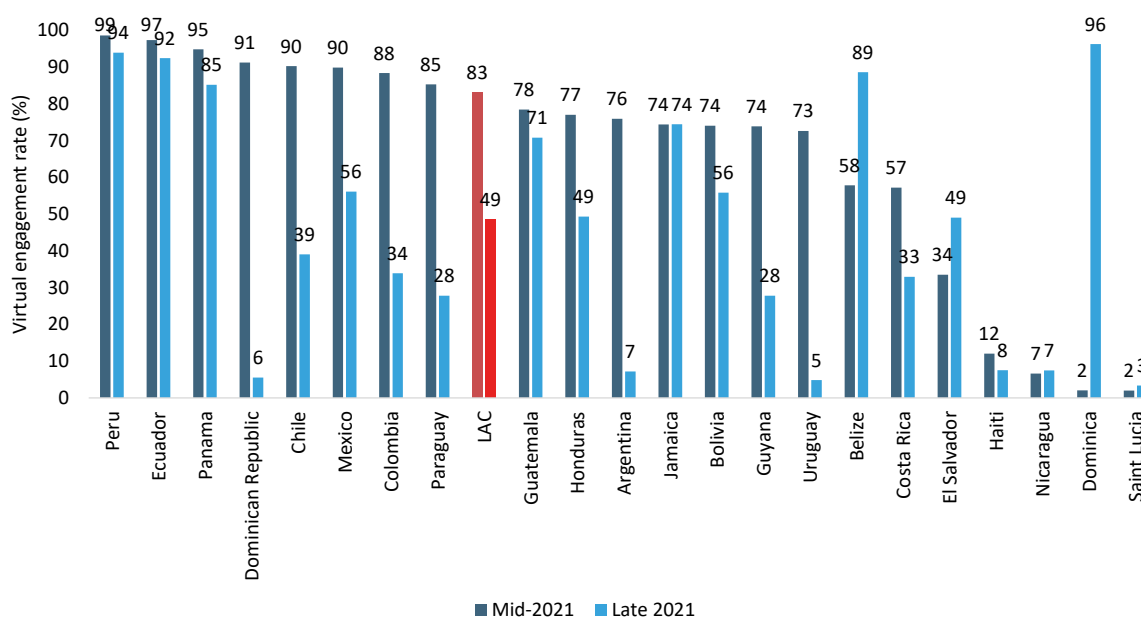


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**From a demand perspective, engagement in virtual learning activities was high in mid-2021 but decreased during the second semester of 2021.** On average, virtual learning activities decreased by 34.5 percentage points in LAC countries, from 83.0 percent in mid-2021 to 48.5 percent in late 2021 (Figure 7). The greatest increases in virtual learning were seen in Dominica, Belize, and El Salvador (94.2, 30.8, and 15.5 percentage points, respectively). On the other hand, the Dominican Republic, Argentina, and Uruguay showed the greatest decrease in virtual engagement, at 85.7, 68.8, and 67.8 percent, respectively.

Figure 7. Virtual engagement rate by country, 2021



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

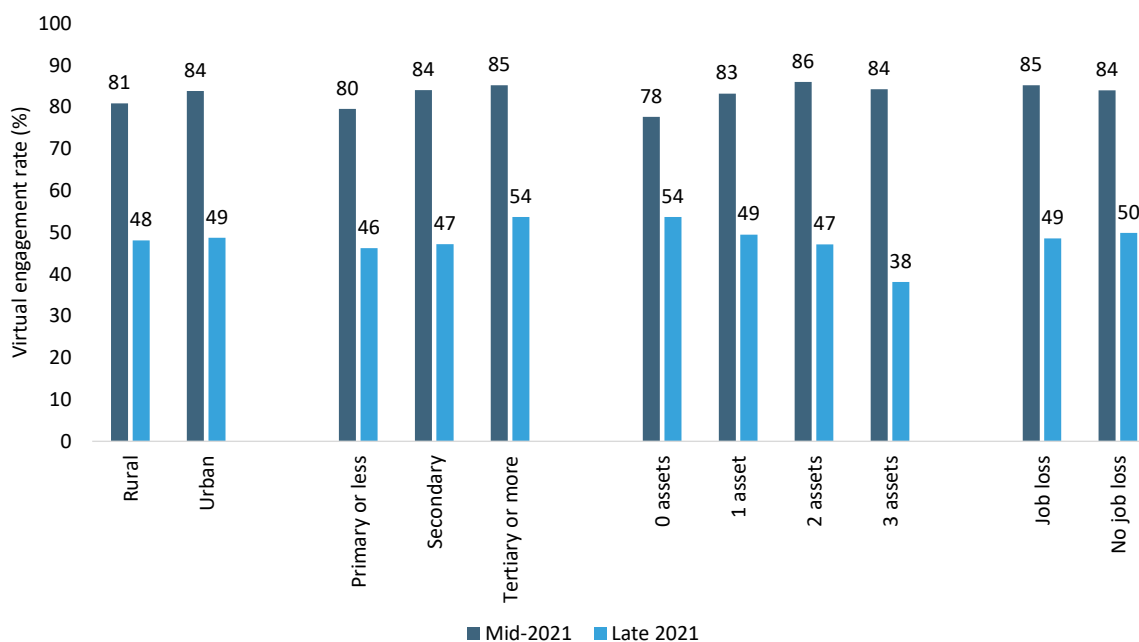
**Children in urban households with greater asset ownership, no exposure to job losses, and in which the head of the household had achieved a higher level of educational attainment all displayed higher rates of virtual attendance by mid-2021. However, this pattern was less evident towards the end of the year.** In mid-2021, the likelihood of engagement in virtual learning during one of the critical moments of the pandemic was closely linked to household asset ownership (Figure 8). In this respect, the proportion of children in households with three reported assets engaging in virtual learning (84.3 percent) was relatively higher than that of children in households without reported assets (77.7 percent). This disparity juxtaposes the general decrease in virtual engagement across all types of households, as recorded towards the end of the year when differences based on asset ownership were salient. Specifically, by the end of 2021, the proportion of children in households with three reported assets and who were engaged in virtual learning (38.2 percent) was lower than that of children in households without any reported assets (53.7 percent).

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Virtual engagement remained higher among children in households headed by individuals with a more advanced level of educational attainment. 53.7 percent of children in households where the head had completed tertiary or an even higher level of education engaged in virtual activities, as opposed to 46.2 percent of children in households where the head had a primary level of education or less.

**Figure 8. Virtual engagement rate in LAC by household characteristics, 2021**



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021.

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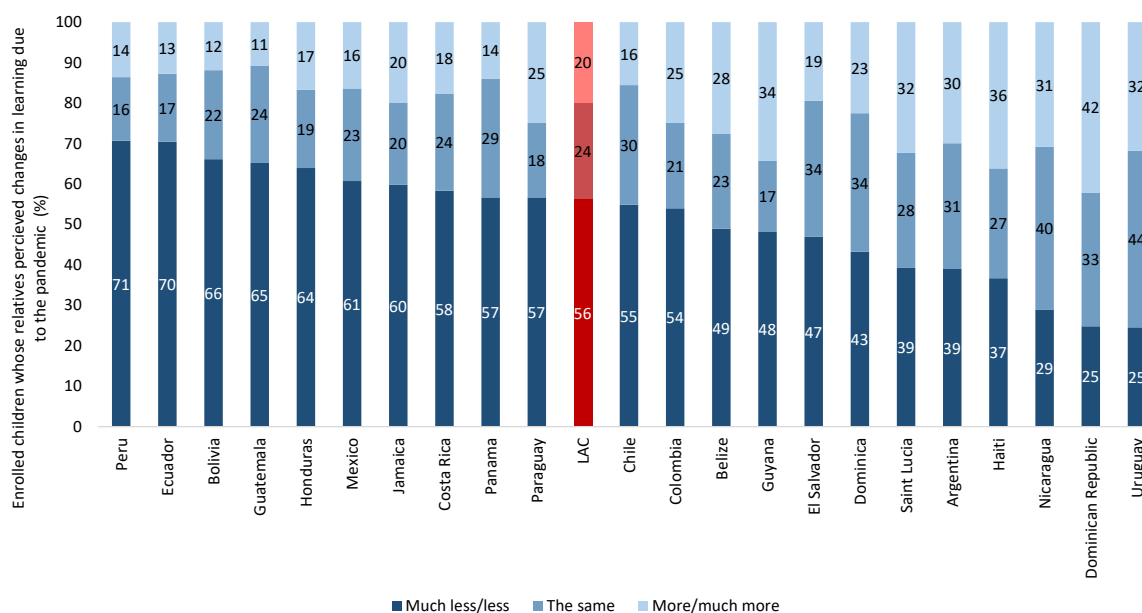
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**A lack of resources, the main reason for not engaging in virtual learning activities in mid-2021, continued to be a major factor by the end of the year.** In late 2021, the main reason reported for not engaging in virtual learning activities was the return to in-person classes. The number of children who had no contact with their teachers remained concerningly high throughout 2021. In addition, the proportion of children not engaging in virtual learning activities due to a lack of time or interest increased during the last semester of the year.

## Disruptions to learning during the pandemic

**A general perception exists across the region that learning deteriorated during the pandemic.** By the end of 2021, the relatives of 56.4 percent of enrolled children believed that children had learned less or much less compared to before the pandemic (Figure 9). This perceived deterioration was more prevalent in Peru, Ecuador, and Bolivia, where the relatives of 70.7 percent, 70.4 percent, and 66.1 percent of enrolled children expressed this opinion, respectively. On the other hand, Uruguay, the Dominican Republic, and Nicaragua reported the lowest rates of perceived learning deterioration during the pandemic (24.6 percent, 24.8 percent, and 28.9 percent, respectively).

Figure 9. Perceptions towards changes in children’s learning by country (late 2021)



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Waves 1 and 2), 2021

Note: Learning perception is measured by asking adult respondents with enrolled school-age children about their view on the quality of their children’s learning during the pandemic compared to before. These perceptions are classified among the following options: learning much less, less, the same, more, and much more.

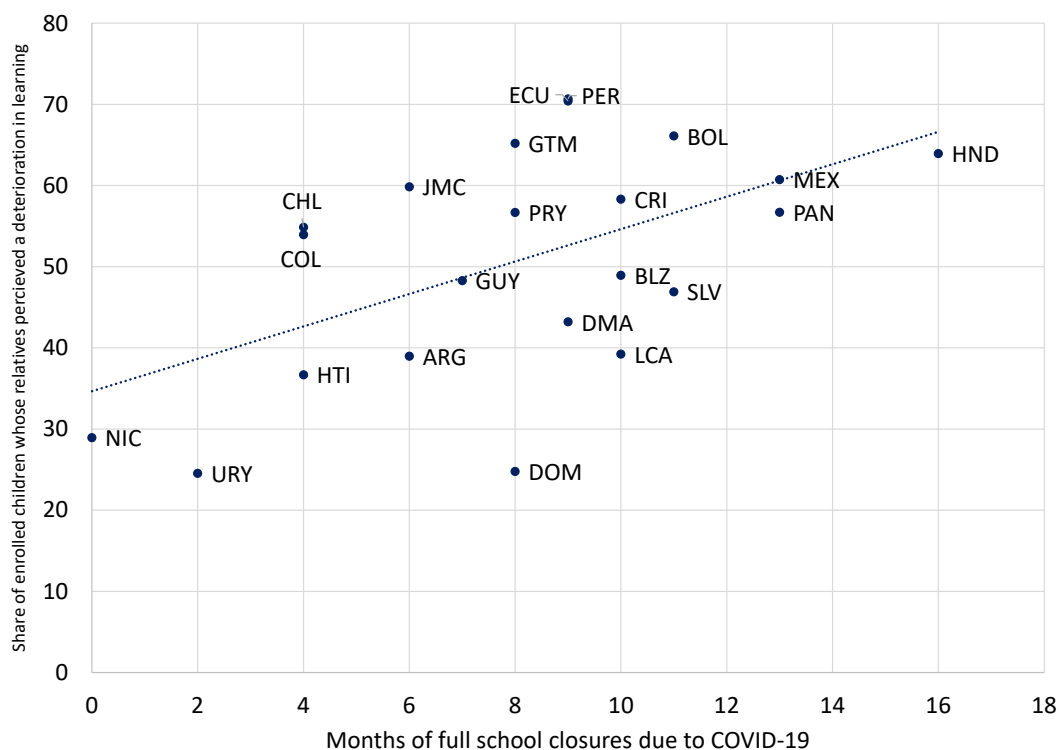
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Certain exploratory correlations have been studied to assess the extent of this perceived deterioration in learning. For example, there is a correlation between the perceived decrease in learning and the duration of nationwide school closures, the rate of virtual engagement, and the proportion of households with children who had to look for a job to cope with the financial hardship experienced during the pandemic.

**The perception of deteriorated learning during the pandemic is positively correlated with the extent of school closures due to COVID-19.** As shown in Figure 3, the duration of school closures during the pandemic varied between countries. Using this information alongside the perception of diminished learning during the pandemic (Figure 10), a positive relationship becomes evident. Honduras, Mexico, and Panama experienced the most prolonged school closures and a perceived deterioration in learning from a comparatively high proportion of respondents. In contrast, the shortest closures coincide with lower rates of perceived diminished learning, as shown for Nicaragua and Uruguay.

**Figure 10.** Differences between countries in the perception of diminished learning and the length of school closures



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Wave 2), 2021; authors' calculations based on data from UNESCO Global Monitoring of School Closures.

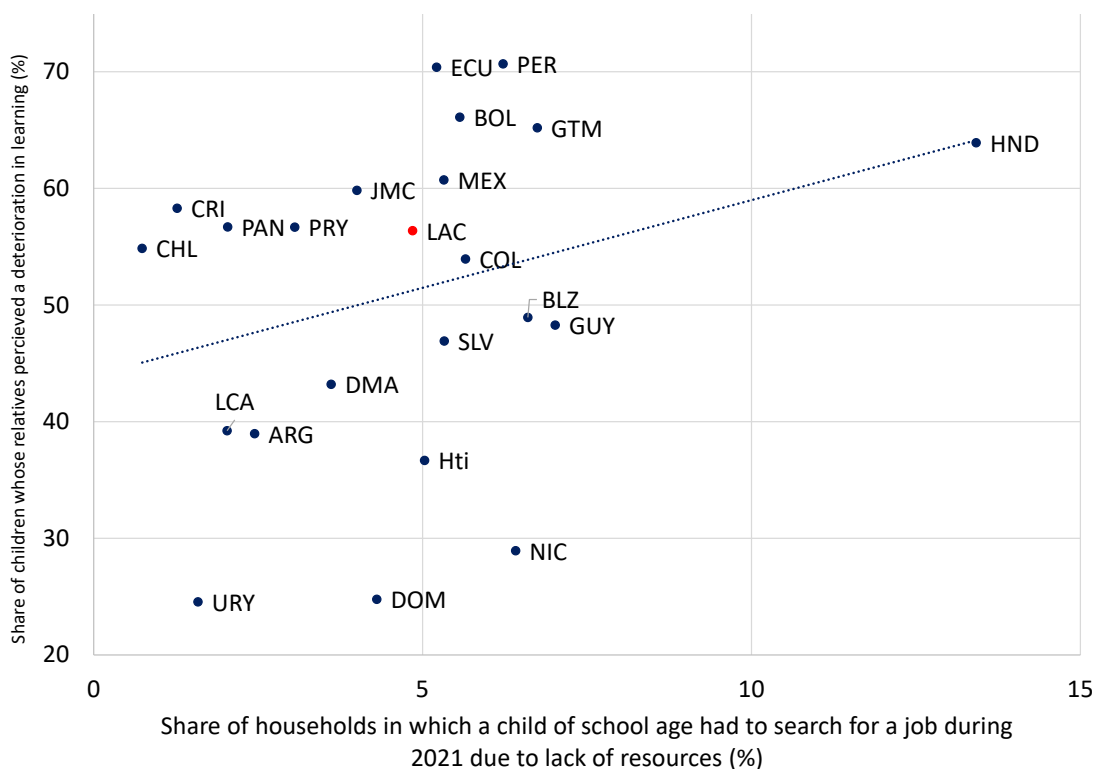
Note: Data presented in this figure corresponds to the perception of learning deterioration among the relatives of enrolled children and the length of school closures up until March 2022.

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**In LAC, the frequency with which children had to look for work to help the household cope with the financial stress caused by the pandemic is positively correlated with the perception of a decrease in learning.** Lockdowns lead to school closures, potentially affecting learning and discouraging overall educational engagement, ultimately causing dropout and average enrollment rates to rise. This, coupled with pandemic-related financial distress experienced at the household level, may have pushed school-age children prematurely into the labor market, as shown in Figure 11.

**Figure 11.** Share of households in which a child of school age had to search for work during the pandemic and proportion of enrolled children whose relatives perceived a deterioration in learning



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Wave 2), 2021.

Note: Data presented in this figure corresponds to the perception of learning deterioration among the relatives of enrolled children and the proportion of households in which a child of school age had to search for a job towards the end of 2021 due to a lack of resources.

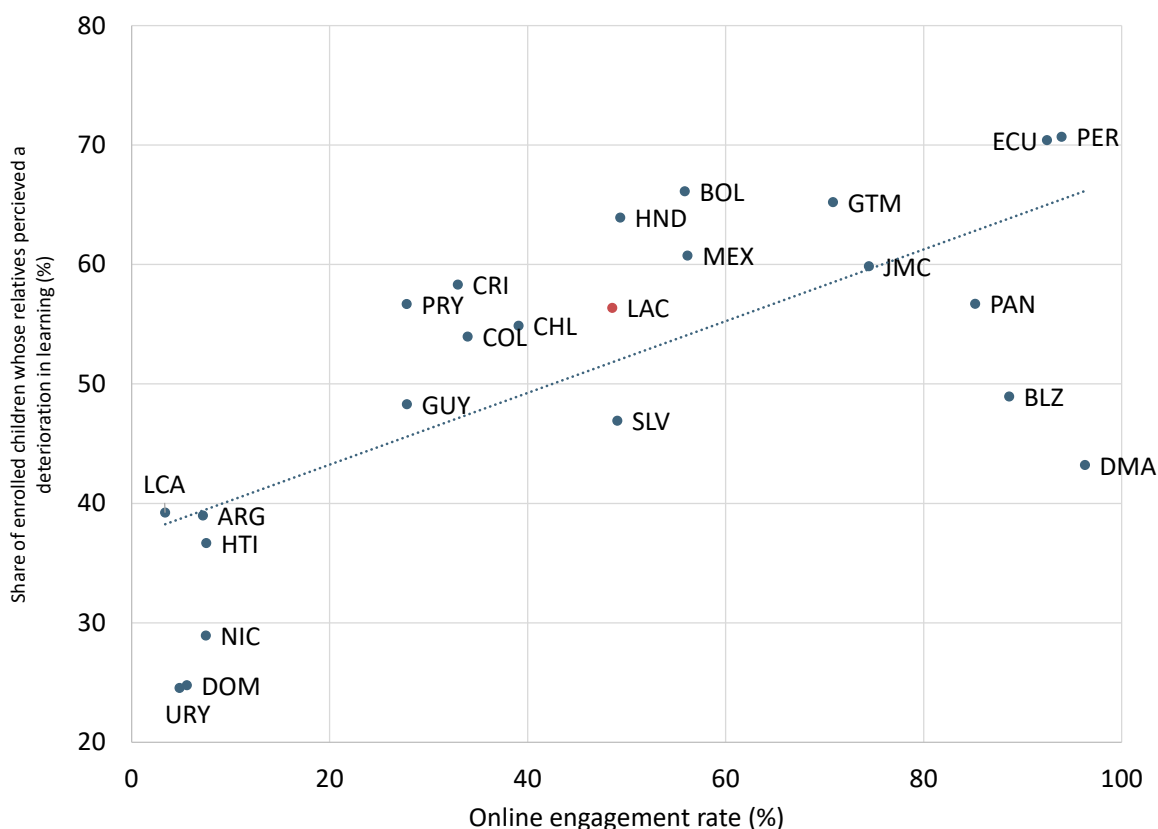
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**Throughout the region, the perception of diminished learning during the pandemic among relatives of enrolled children was more prevalent in countries with higher rates of virtual engagement in late 2021.**

There is a positive relationship between the proportion of school-age children engaged in virtual learning by late 2021 and the proportion of respondents who perceived a decrease in the learning of enrolled children (Figure 12). This could potentially relate to the duration of school closures. However, a better understanding of the role of in-person classes for quality learning is necessary for further analysis.

**Figure 12.** Differences between countries in the perception of diminished learning and virtual engagement rate, late 2021



Source: The World Bank and UNDP LAC High-Frequency Phone Surveys II (Wave 2), 2021.

Note: Data presented in this figure corresponds to the perception of learning deterioration among the relatives of enrolled children and the proportion of attendees engaged exclusively in online learning towards the end of 2021.



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## *Final remarks*

**COVID-19 resulted in a decline in educational outcomes in LAC, affecting both attendance rates and learning perceptions.** Even though recovery was seen by the end of 2021, the perception of limited learning during the pandemic and the incomplete catch-up in attendance rates is challenging policymakers in the region to pay extra attention to the affected cohort within the school-age population.

**Children from the poorest households in rural areas and households with less-educated heads experienced greater difficulties in accessing high-quality learning throughout 2021 and may face significant challenges well into the future.** Public policies in LAC aimed at attenuating the effects of COVID-19 on educational outcomes for the affected cohort must consider household characteristics and children's degree of vulnerability. This is particularly pressing in a post-pandemic scenario where certain households still lack adequate access to the Internet and electronic devices, which have become an essential part of the learning process.

**School closures, quality of learning, and premature entry into the labor force all seem to be tightly intertwined.** In this sense, quality matters when considering educational outcomes. Beyond the recovery process in terms of access, the widespread perception that children learned less than during the pre-pandemic period and the effort to improve the quality of education must be at the center of the policy debate in the region.