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Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic

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NOTES ON THE USE OF DATA IN THIS REPORT

This report presents findings from the Survey of National Education Responses to COVID- 19, jointly conducted by UNESCO, UNICEF, the World Bank and OECD, and administered by the UNESCO Institute of Statistics and OECD. Three rounds of questionnaires have thus far been administered.[1] This report focuses on responses to the survey's more recent third round.[2]

All numbers presented and discussed in this report refer to the share of countries that responded to each relevant question in the survey. The number of countries that provided valid responses to the question are noted in each figure. Where relevant, countries that responded with 'Don't know' or 'Not applicable', or countries with no response to any of the options or for a level of education, are excluded from the analysis.

Caution is advised in generalizing the results represented in some figures as the countries that responded to this question cover less than 50 per cent of the total four- to 17-year-old population. These instances are noted under the respective figures. Detailed information on the country and student coverage of each figure, including by income group, is available in Annexes 1-3.

In each country, the survey questionnaire was completed by the Ministry of Education officials responsible for education planning at the central or decentralized levels. The survey instrument was designed to capture *de jure* policy responses and perceptions from government officials on their effectiveness, providing a systematic understanding of deployed policies, practices and intentions to date.

1 The survey data and questionnaire are available at: http://tcg.uis.unesco.org/survey-education-covid-school-closures/

2 The third round of the survey captured responses from 143 countries between February and June 2021. In some instances where common questions were asked across several rounds of the survey, the analysis also included responses to the second round of the survey. These instances are noted in the relevant figure's notes.

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EXECUTIVE SUMMARY

United Nations Educational, Scientific and Cultural Organization (UNESCO), the United Nations Children's Fund (UNICEF), the World Bank and the Organisation for Economic Co-operation and Development (OECD) have collaborated in the third round of the Survey on National Education Responses to COVID-19 School Closures, administered by the UNESCO Institute for Statistics (UIS) and OECD to Ministry of Education officials. The questions covered four levels of education: pre-primary, primary, lower secondary and upper secondary. While the first two rounds of the survey were implemented during the periods May–June and July–October 2020, respectively, the third round was implemented during the period February–June 2021. In total, 143 countries responded to the questionnaire. Thirty-one countries submitted responses to the OECD ("OECD survey") and 112 countries responded to the UIS ("UIS survey"). Seven countries responded to both surveys. In these instances, the more complete set responses were used in analysis.

MONITORING AND MITIGATING LEARNING LOSSES FROM SCHOOL CLOSURES

The intensity of school closures has evolved over time but has also differed considerably between countries. Key highlights on school closures and responses with respect to understanding and mitigating the impact and these losses include the following:

1. **School closures and calendars:** In 2020, schools around the world were fully closed across all four education levels for 79 instruction days on average, ranging from 53 days in high-income countries to 115 days in lower-middle-income countries. As of 1 February 2021, 21 per cent of respondent countries reported that schools were fully closed due to COVID-19, none of which were low-income countries. Countries have responded to school closures with a variety of learning modalities, including fully remote learning or hybrid learning, as well as other measures to mitigate potential learning losses. For example, 41 per cent of countries reported extending the

academic year and 42 per cent reported prioritizing certain curriculum areas or skills. However, more than half of the countries reported that no adjustments have been or will be made at all education levels.

2. **Learning assessments:** Preliminary evidence suggests that students affected by school closures are experiencing an absolute reduction in learning levels or slower progress than expected in a typical year. Such impact can disproportionately affect disadvantaged children, given the unequal distribution of opportunities to access remote learning. The survey results reveal that the extent of learning loss is often not measured: only a little over one-third of countries reported having taken steps to measure learning levels in primary or lower secondary education through standardized assessment in 2020 while 58 per cent of countries reported having conducted formative assessments at the classroom level. Measuring learning loss is a critical first step towards mitigating its consequences. It is vital that countries invest in assessing the magnitude of such losses to implement the appropriate remedial measures.

3. **Examinations:** Globally, the COVID-19 pandemic affected examinations at all levels significantly. Among low- and lower-middle-income countries, two in three at primary and three in four at lower secondary education rescheduled or postponed examinations, compared to four in ten upper-middle- and high-income countries. Globally, 28 per cent of countries in lower secondary and 18 per cent of countries in upper secondary education cancelled examinations. No low-income country cancelled examinations at either level. Seven in ten countries focused on improving health and safety standards at examination centres at the upper secondary level. One in four countries at the primary and lower secondary levels, and one in three at the upper secondary level adjusted the examination content, changing the number of subjects examined or questions asked. Among high-income countries, 35 per cent adjusted the mode of administration at lower and upper secondary education – but no low-income country did. Finally, graduation criteria were adjusted at 34 per cent of countries at the primary and 47 per cent of countries at the upper secondary level.

4. **Remediation:** As a result of lower levels of learning during school closures, many children are at risk of returning to school without having properly assimilated the course content required of their grade. In these cases, remedial instruction will be required to get children back on track. Globally, over two-thirds of countries reported that remedial measures to address learning gaps were widely implemented for primary and secondary school students when schools reopened. This represents an increase from the previous round of the survey: Nearly two-thirds of countries that were not implementing a remedial programme previously, reported one in the current round. Most were high- or upper-middle-income countries, which earlier in the pandemic were less likely to report implementing remediation measures. Across all income levels, remedial measures were considerably less likely to be implemented at the pre-primary level. The use of pre-primary remediation was lowest among upper-middle-income countries (only one in three reported this). Most countries implementing remediation reported broad-based programmes for all children who need them, as well as for targeted groups. At the primary and lower secondary levels, targeted programmes were frequently focused on students who were unable to access distance learning, while at the upper secondary level they were most often focused on students facing national examinations.

Governments faced numerous challenges as they transitioned to distance learning, such as limited institutional capacity to support teachers, poor access for vulnerable populations, and lack of coherent policies and funds to support remote learning.

DEPLOYING EFFECTIVE AND EQUITABLE DISTANCE LEARNING STRATEGIES

Governments faced numerous challenges as they transitioned to distance learning, such as limited institutional capacity to support teachers, poor access for vulnerable populations, and lack of coherent policies and funds to support remote learning. Key highlights on the deployment of distance learning and related support include the following:

1. **Remote learning modes and effectiveness:** Responses to the COVID-19 school closures included remote learning solutions ranging from paper-based take home materials to broadcast media (such as TV and radio)

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and digital platforms. Broadcast media such as radio were more popular among low-income countries (92 per cent) than high-income countries (25 per cent). By contrast, 96 per cent of high-income countries provided remote learning through online platforms for at least one education level compared to only 58 per cent of low-income countries. Across income groups, most countries used multiple modalities to provide remote learning, with over half providing more than five modalities of remote learning. However, provision of remote learning solutions did not necessarily ensure uptake: less than half of countries reported that more than three in four students followed remote education during school closures at pre-primary level. Similarly, over a third of low- and lower-middle-income countries that provided lessons through TV or radio reported that less than half of primary school students were reached. Ensuring take-up and engagement would require remote learning strategies suited to the context, along with parental engagement and support from and to teachers. Furthermore, the effectiveness of remote learning is not always assessed: 73 per cent of countries reported having assessed the effectiveness of at least one distance learning strategy. There is a critical need to produce more and better evidence on remote learning effectiveness, particularly in the most difficult contexts.

2. **Access to online learning:** To ensure equitable access to remote learning for marginalised communities of students and teachers, it is important for countries to outline coherent policies and provide supporting resources. While 70 per cent of countries responding to the UIS survey had a plan to offer either internet access or devices at subsidized or zero cost in 2021, only 25 per cent of low-income countries did. Similarly, only 27 per cent of low- and lower-middle-income countries responding to the survey had a fully operationalised policy on digital learning accompanied with explicit guidance, compared to half of high-income countries.

3. **Teacher management or recruitment:** Following school closures in 2020, most countries required at least three-quarters of their teachers to teach remotely/online, although this varied considerably by income level: 69 per cent of high-income but only 25 per cent of low-income countries called on all their teachers to engage in remote/online teaching. Of those countries, half required teachers to do so from the school premises. Globally, about 7 in 10 countries encouraged teachers to use phone and video conferencing, while only 1 in 4 countries encouraged home visits. On average, 3 in 10 countries in 2020 and 4 in 10 in 2021 recruited additional teachers to support teaching after reopening. Only 13 per cent of low-income countries recruited non-teaching staff (including cleaners, health workers, counsellors, security officers or ICT staff) compared to 43 per cent of upper-middle-income countries and 53 per cent of high-income countries that responded to the UIS survey.

4. **Teacher support:** Transitioning to remote learning can be a frustrating experience due to poor connectivity, lack of digital skills, or the need to adapt pedagogies to remote learning. The majority of countries issued

instructions to teachers on remote learning (89 per cent) and provided professional psychosocial and emotional support (78 per cent). Apart from low-income countries, most countries also provided teachers with teaching content adapted to remote teaching; ICT tools and free connectivity; and professional development activities on pedagogy and effective use of technologies with various pedagogies. Most countries reported that teachers were or would be a priority target for vaccination against COVID-19, either through a national immunization measure (59 per cent) or through the COVAX initiative (7 per cent). Governments should continue to prioritize teachers for vaccination to deliver on their commitment of safely reopening schools for in-person learning.

5. **Decision-making:** Governments have had to make multiple decisions on school closures, remote learning and reopening. Countries were asked to report at which administrative level they had made decisions on eight strategic policy measures during the pandemic: school closures and reopening; adjustments to the school calendar; resources to continue learning during school closures; additional support programs for students after school reopening; working requirements for teachers; compensation for teachers; hygiene measures for school reopening; and changes in funding to schools. Across all eight measures, decisions were mostly made centrally or by involving the central government together with some of the sub-national entities. This trend is especially true in lower income countries, while in higher income countries some of the decisions were more devolved. By and large, most countries made decisions either exclusively at the central level or through coordination across different layers of administration. This is especially true for school closure/reopening decisions, which were made exclusively at the central level in 68 per cent of countries and at multiple, including central, levels in an additional 21 per cent of countries. Decisions were also generally made centrally for school calendar adjustments (69 per cent), school funding changes (53 per cent) and school reopening hygiene measures (48 per cent). Decisions involving various levels were more common on teacher compensation (58 per cent) than on other policy measures. Finally, decisions on additional support programmes for students and on teacher working requirements were more likely to be taken exclusively at the school level, in particular in OECD countries.

REOPENING SCHOOLS SAFELY FOR ALL

Reopening schools presents myriad challenges including health, financing and the development of initiatives to ensure all students return. Key highlights on how education systems around the world tackled these include the following:

6. **Health protocols:** Minimizing disease transmission in schools requires a range of measures. Schools can implement some of these with existing means, others require a limited additional investment, and still others entail more investment and coordination, including with other sectors. Countries that responded to the UIS survey largely promoted practices related to physical distancing, and hand and respiratory hygiene. There was an increase in the use of health and hygiene measures, notably self-isolation and the tracking of staff or students who had been exposed to or infected with COVID-19. Activities that require additional investment or coordination, such as contact tracing and testing in schools, exhibit lower rates of adoption. Low-income countries are lagging behind in the implementation of even the most basic measures: for instance, less than 10 per cent reported having sufficient soap, clean water, sanitation and hygiene facilities, and masks to ensure the safety of all learners and staff, compared to 96 per cent of high-income countries. A lack of commitment or culture of safety among the public was also a concern in the majority of low- and middle-income countries.

7. **Financing:** COVID-19 challenges the financing of education. Demand for funds is rising, in competition with other sectors, while governments' revenues are falling. Nevertheless, 49 per cent of countries increased their education budget in 2020 relative to 2019, while 43 per cent maintained their existing budget. Funding is set to increase in 2021, as about 60 per cent of countries plan to increase their education budget compared to 2020 (see Figure 6-1). Additional investment is critical to ensure blended learning, support vulnerable students, train teachers in digital learning and ensure safe school reopening. Low- and lower-middle-income countries were more likely to provide financial support to students, while high-income countries were more likely to increase teacher compensation. Likewise, only 25 per cent of low-income countries compared to 96 per cent of high-income countries reported regular or extra (on top of regular) expenditures

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on digital learning. An additional allocation from government was the most commonly cited source of additional funding across countries, particularly among high-income countries, as 86 per cent of them reported. In contrast, 67 per cent of low-income countries reported receiving development assistance to support the education response to COVID-19. The majority of countries reported considering the number of students or classes when allocating additional funds for education.

8. **Early school leaving prevention:** Reopening school doors alone is not enough. Even after schools reopen, some students, especially the most vulnerable, may not return to school. Over 85 per cent of countries could provide an estimate of primary and lower secondary school in-person attendance after reopening, though one in four could not do so for the pre-primary level. Less than a third of low- and middle-income countries reported that all students had returned to in-person schooling. Most low- and middle-income countries reported using at least one form of outreach measure to encourage all students to return to school, most commonly modifications to water, sanitation and hygiene facilities or community engagement. Meanwhile, only one in four countries globally provided incentives (cash, food or transport) and fee waivers. Reviewing or revising access policies were also uncommon, especially for girls. This is a cause for concern, as adolescent girls are at highest risk of not returning to school in low- and lower-middle-income countries.

PLANNING AHEAD AFTER SCHOOLS REOPEN

Reopening school doors should be a priority in all countries, but doing so alone is not enough. As schools reopen and begin a shift into the "new normal", education cannot go back to "business as usual." Following large periods of closure, students will return with uneven levels of knowledge and skills. Some may not return at all. This holds particularly true for children from more disadvantaged backgrounds. Mental health issues, gender-based violence and other setbacks may have also arisen or escalated closures due to the disruption in school-based services. Students will need tailored and sustained support as they readjust and catch up.

As education systems forge ahead, measuring learning levels will prove more important than ever. System leaders need to understand the extent of learning losses and ensure that students, including the youngest learners, receive adequate and targeted support. Building on the investments made in remote learning systems will create resilient systems that can withstand the impact of future crises. Low-income countries, in particular, should receive the support they need to do the same.

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INTRODUCTION

BACKGROUND

The COVID-19 pandemic brought the loss of many lives and placed severe pressures on health systems. Since March 2020, most governments worldwide have implemented policies to contain the disease's spread. At the peak of national school closures in early April, over 1.6 billion learners and 100 million teachers and school personnel in more than 190 countries were affected. School closures and subsequent transition to other learning methods risk hindering effective learning during the pandemic and endangering the progress towards achievement of Sustainable Development Goal 4 (SDG 4), which was already lagging before COVID-19.

While the COVID-19 pandemic caused a global learning disruption of unprecedented scale and severity, it also revealed the enormous potential for innovation in education and reform of education systems. After more than a year of being affected by COVID-19 education disruption, countries need data more urgently than ever to plan and monitor emergency response efforts and prepare for medium- and long-term mitigation and recovery strategies.

THE SURVEY

As part of the coordinated global education response to the COVID-19 pandemic, the UNESCO Institute for Statistics (UIS), the United Nations Children's Fund (UNICEF) and the World Bank have conducted a Survey on National Education Responses to COVID-19 School Closures. The survey instrument is designed for government officials responsible for education to capture de jure policy responses and perceptions from government officials on their effectiveness, providing a systematic understanding of deployed policies, practices, and intentions to date.

118 countries completed the first round of the survey between May and June 2020 and 149 countries completed

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the second round between July and October 2020. UNESCO, UNICEF, and the World Bank produced a joint report – "What have we learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19"[3] based on the first two rounds of data collection.

The Organization for Economic Co-operation and Development (OECD) joined the consortium in the third round of the survey, which was answered by a total of 143 countries[4] between February and May 2021. The respondent countries in this round cover 58% of the school-age population (SAP) and 53% of the enrollment in the world.

The survey results will help to better inform local and national responses and support the decisions and actions of partners in support of governments.

ORGANIZATION OF THE REPORT

This report presents key findings from the 3rd round of the UNESCO-UNICEF-World Bank-OECD survey, although in some cases, data from the previous two rounds and some other sources were also used. The report has eight sections. Section 1 addresses the potential learning losses implied by school closures and policies related to school calendars and curricula. Section 2 investigates various policy adjustments on learning assessment and examinations. Section 3 addresses distance learning modalities deployed and the policies and strategies implemented to ensure equity and boost access to and effectiveness of online learning. Section 4 addresses policy implementations to support teachers and education personnel. Section 5 addresses school reopening management and health protocols for all students. Section 6 addresses system-level responses in education financing. Section 7 investigates the locus of decision-making of public institutions during the pandemic. Finally, section 8 provides an overall conclusion.

> **After more than a year of being affected by COVID-19 education disruption, countries need data more urgently than ever to plan and monitor emergency response efforts and prepare for medium- and long-term mitigation and recovery strategies.**

3 https://data.unicef.org/resources/national-education-responses-to-covid19/

4 31 countries submitted responses to the OECD and 112 countries responded to the UIS. Seven countries responded to both surveys; the more complete set of their responses were used in analysis.

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PART 1

LEARNING LOSS AND SCHOOL CLOSURES

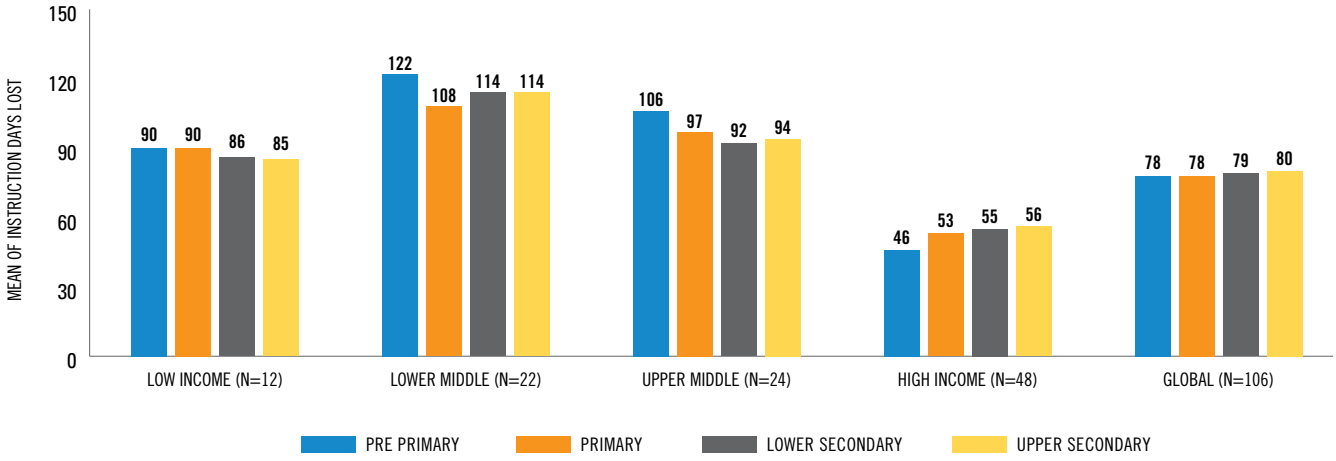
INTRODUCTION

More than a year ago, COVID-19 abruptly shut down schools across the world and caused disruptions in students' schooling. Even though many governments deployed distance education programs to ensure continuity in learning (UNESCO, UNICEF, and World Bank, 2020), the reduction in in-person instruction time has signaled potential learning losses (World Bank, 2020). This chapter looks at the extent of school closures and reduction in in-school instruction time one year into the pandemic, and explores education ministries' responses to school closures, including measurement of student learning outcomes and policies introduced to mitigate learning loss.

SCHOOL CLOSURES HAVE LED TO A SIGNIFICANT REDUCTION IN IN-PERSON INSTRUCTION TIME

In 2020, on average, schools were fully closed for 79 instruction days (across pre-primary, primary, lower secondary, and upper secondary). This represents roughly 40% of total instructional days averaged across OECD and G20 countries (OECD 2014 and OECD, 2020). However, there is variation in the number of in-person instruction time lost across income levels. Schools were fully closed for 88 instruction days on average in low-income countries, 115 days in lower-middle income countries, and 53 days in high-income countries. The reason school closures were protracted among lower-middle- and low-income countries is likely to be associated with lack of infrastructure to ensure a safe return to school.

FIGURE 1-1: Mean of instruction days lost by level of education and income group in 2020

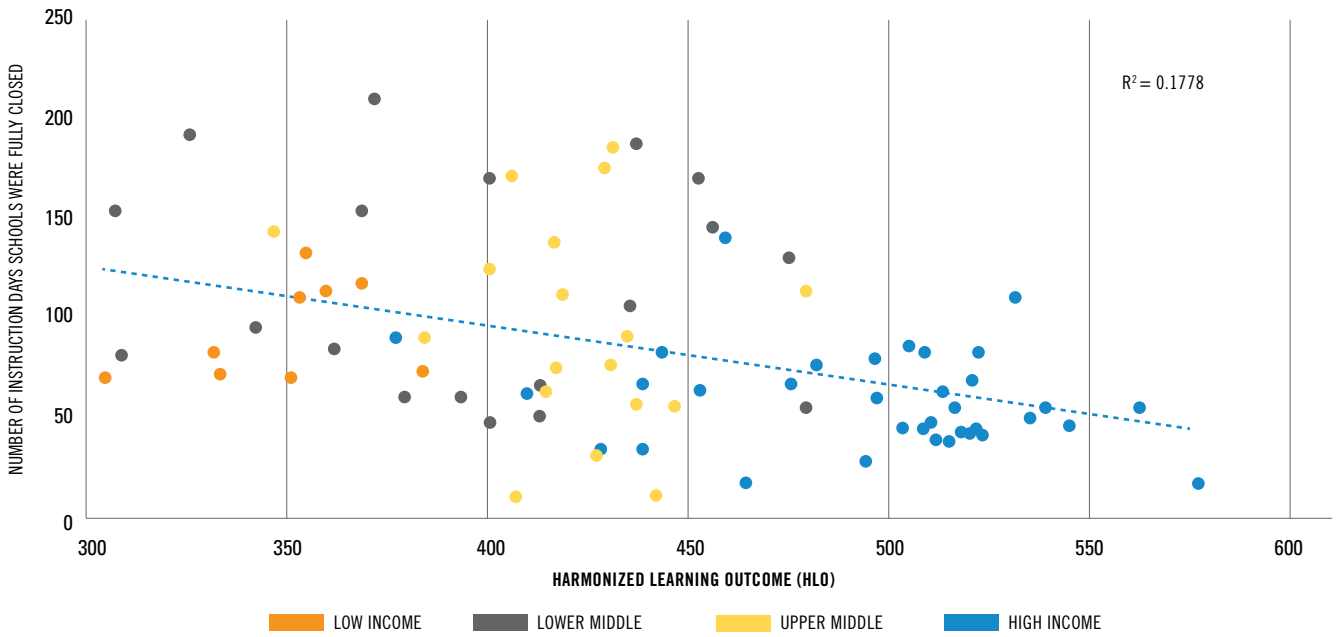


Note: *Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

Across levels of education, policies around closures are somewhat consistent. At the pre-primary and primary levels, countries reported that 78 in-school instruction days respectively were lost on average, compared to 79 and 80 days for lower secondary and upper secondary respectively. Averages, however, may mask large differences across income groups. For instance, among high-income countries, pre-primary schools were fully closed for an average of 46 days in 2020 compared with 90 days in low-income countries (figure 1-1). The high incidence of school closures at pre-primary levels in low-income countries was seen despite emerging evidence that showed younger children were not likely to contract or transmit the disease. This difference in the expediency of returning the youngest learners to school may be an indication that research-backed health recommendations for in-person education (for example, physical distancing) were more feasible to implement among high-income countries but significantly more challenging in lower-income settings.

Countries with relatively lower learning outcomes (as proxied by the World Bank's Harmonized Learning

FIGURE 1-2: Total instruction days lost and compared with harmonized learning outcomes, by income group



Note*: Harmonized Learning Outcomes for the year 2020 are based on World Bank data. More information on the coverage of each income group can be found in Annex 1.*

Outcomes (HLO) (Patrinos, Angrist, 2018) indicator) were more likely to experience a reduction in face-to-face instruction days (figure 1-2). The negative relationship between HLO and loss of in-person instruction time is relatively stronger for high-income countries, as highlighted in the recent OECD report comparing lost in-person instruction days in upper secondary to PISA scores (OECD, 2021). However, the relationship is less clear for low-, lower middle- and upper-middle-income countries.

THE SCALE OF SCHOOL CLOSURES AS OF FEBRUARY 2021 VARIED BY COUNTRY INCOME STATUS AND EDUCATION LEVEL

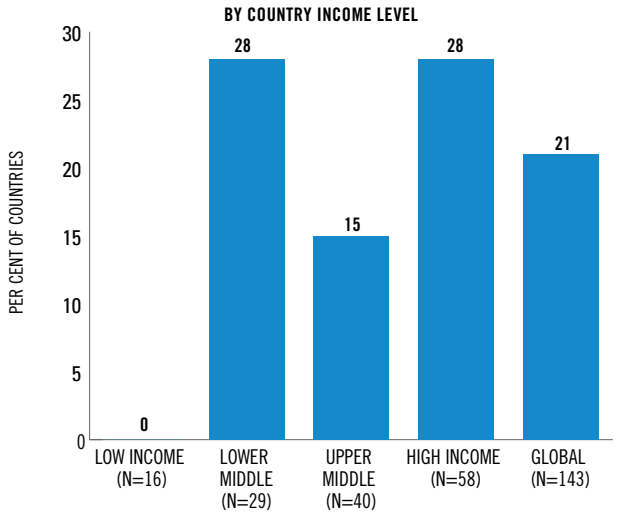
Since the initial school closures in March/April 2020, many school systems have reopened and reclosed as the pandemic re-emerged in multiple waves. In February 2021, 21 per cent of respondent countries reported continued COVID-19 school closures at primary, lower secondary and upper secondary levels. But patterns across income groups varied. 28 per cent of lower-middle income countries, 15 per cent of upper-middle income countries, and 28 per cent of high-income countries reported schools were fully closed across all education levels due to COVID-19, while low-income countries did not report any full school closures at that time (figure 1-3a/b).

Among low-income countries that responded to the survey, only one indicated that schools were closed either at the pre-primary, primary, and lower secondary levels. The relatively small response sample (16 countries) does not allow for further analysis of this pattern. However, these low numbers are not surprising, as other sources (for example, the UNESCO School Closures Tracker and Global Education Recovery Tracker) paint a similar picture of school closures in low-income countries. While some low-income countries focused on health risks and continued to keep schools closed, others reopened schools, prioritizing resumption of in-person learning. Looking back at 2020, ministries of education in low-income countries faced multiple pressures to reopen. Some low-income countries prioritized opening the graduating grades. With longer school closures and lack of effective remote learning provision, there may have been significant political pressures in such countries to reopen schools.

TO UNDERSTAND THE FULL IMPACT OF THE PANDEMIC ON HUMAN CAPITAL OUTCOMES, COUNTRIES NEED TO MEASURE LEARNING LOSSES, WHICH ARE LIKELY TO BE EXACERBATED BY SCHOOL CLOSURES

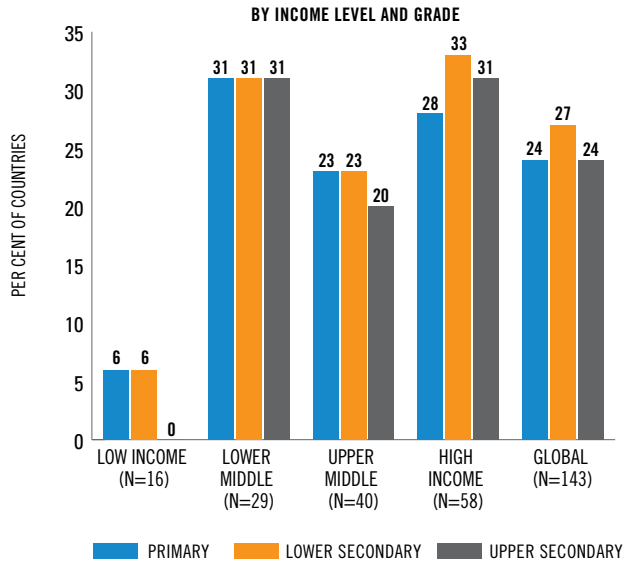
Over the past year, countries have responded with a variety of learning modalities, including fully remote, hybrid and face-to-face learning. The limited evidence available so far suggests that despite provision of remote learning modalities, students are experiencing learning losses due to school closures and a reduction in in-school instruction time. Learning losses can refer to both an absolute reduction in learning levels and less

FIGURE 1-3a: Share of countries reporting full school closures as of February 2021, by income group



Note: *The y axis shows per cent of countries with fully-closed schools across primary, lower secondary, and upper secondary. While the results represented in this Figure covers more than 50 per cent of the global student-aged population, this may not apply to specific income groups. More information on the population coverage of each income group can be found in Annex 1.*

FIGURE 1-3b: Share of countries reporting full school closures as of February 2021, by income group and education level.



Note: *The y axis shows per cent of countries with fully-closed schools across primary, lower secondary, and upper secondary. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

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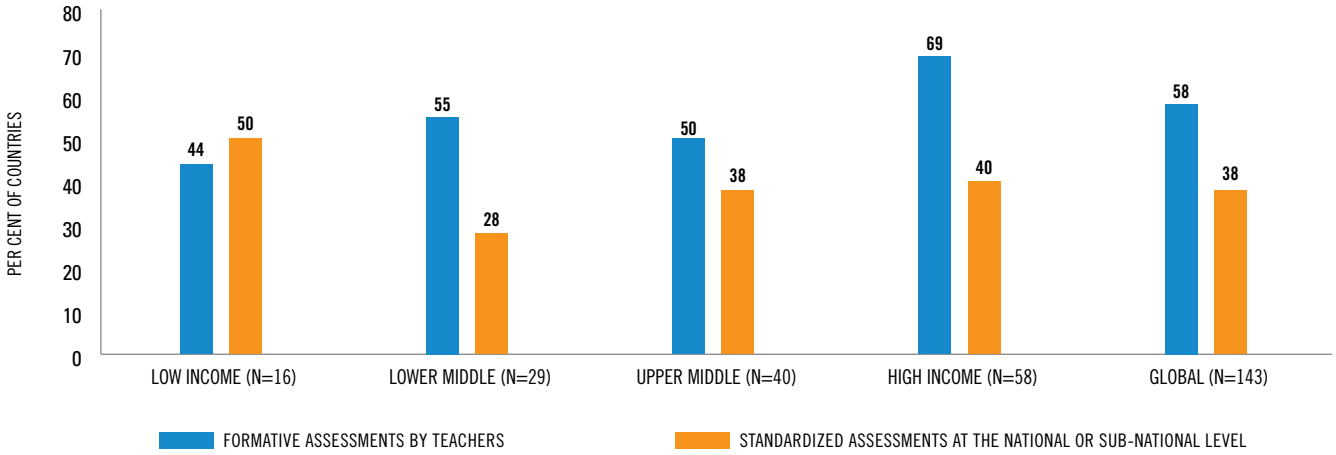
progress than what would be expected in a typical year. These losses are likely to vary across countries and sub-groups. For example, a systematic review by Donnelly and Patrinos (2021) focusing on studies from high-income countries shows a pattern of learning losses among certain students as well as increased inequality in learning among certain demographics. While there is a dearth of evidence on learning losses in low-income settings, some emerging evidence suggests that children in rural Kenya lost, on average, in excess of 3.5 months of learning (Whizz Education, 2021), and children in Ethiopia only learnt 30-40 per cent as much as they would in a normal year (Kim et al., 2021).

Standardized student assessments can help measure, track and compare learning losses. However, only a little over one-third of countries report having taken steps to assess students in a standardized way to measure learning losses at the national or sub-national level at either primary or lower secondary in 2020. The figure for formative assessments is higher, with more than half (58 per cent) of countries reporting conducting formative assessments at the classroom level at either primary or lower secondary in 2020. Forty-four per cent of low-income countries and 55 per cent of lower middle-income countries reported conducting formative assessments at the classroom level.

FIGURE 1-4: Share of countries that conducted assessments to track impact of school closures, by income group



Note: *The chart shows the per cent of countries in a specific income group that responded with the answer for at least one education level among primary and lower secondary, which are the only education levels available for this question. While the results represented in this Figure covers more than 50 per cent of the global student-aged population, this may not apply to specific income groups. More information on the population coverage of each income group can be found in Annex 1.*

However, 40 per cent of countries reported no plan to assess student learning in a standardized way at both primary and lower secondary levels, most (53 per cent) of which are low-income countries. The first step towards mitigating potential learning losses is to measure them (Luna-Bazaldua, Levin, and Liberman, 2020) and it is vital that countries invest in assessing the magnitude of such losses through standardized or formative assessments (Luna-Bazaldua, Levin, and Liberman, 2021).

COUNTRIES ARE RESPONDING TO SCHOOL CLOSURES AND POTENTIAL LEARNING LOSSES WITH A VARIETY OF MECHANISMS

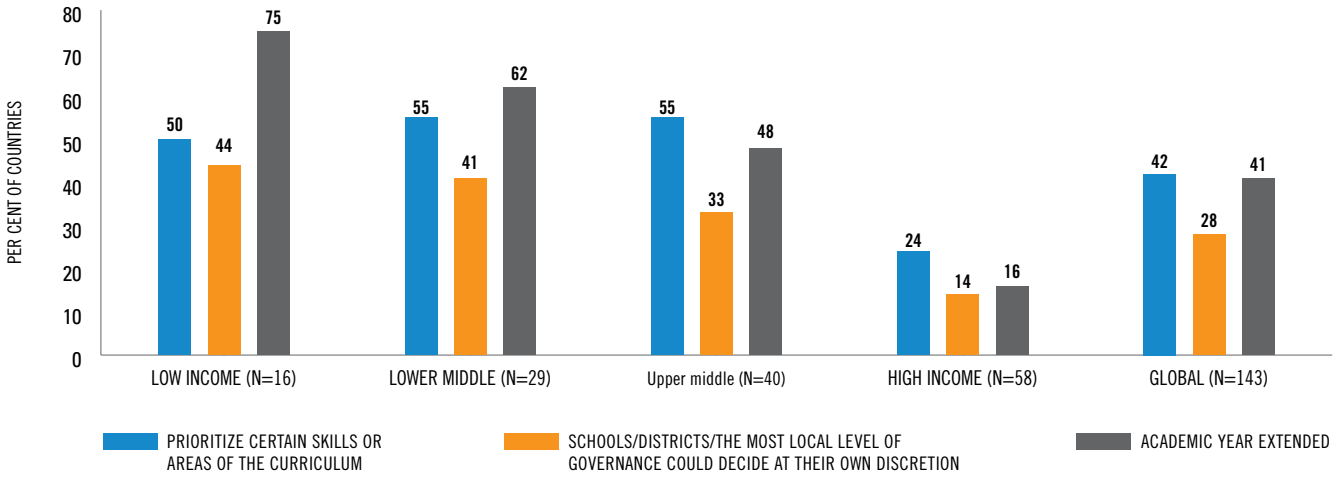
Extensive school closures have required that governments take drastic actions to mitigate potential learning losses, such as prioritization of certain areas of the curriculum or adjustments to the school calendar. While 41 per cent of countries report extending the academic year, 42 per cent report prioritization of certain areas of the curriculum or certain skills, and 28 per cent report that schools/districts could decide and implement adjustments at their own discretion, for at least one education level. However, more than half (54 per cent) of the countries report no adjustments have been or will be made at all education levels. Analysis from the OECD suggests that when countries prioritized certain curriculum areas or skills when schools reopened, they were most likely to choose reading, writing and literature as the priority subjects and, to a lesser extent, mathematics (OECD, 2021). Furthermore, only one-third of countries report plans to revise regulation (at the national level) on the duration of instruction time and content of curriculum after the school year 2020/2021, with the remaining reporting no such plans or responding "don't know".

While the majority of low-income countries focused on extending the academic year, a relatively lower proportion of low-income countries opted to prioritize specific areas of the curriculum. Curriculum prioritization to remediate learning losses is critical to help students catch up once they return to school, and to tackle the learning crisis that preceded COVID-19 school closures. Assessment of learning losses, along with targeted support aligned with the child's learning level, can aid the recovery of lost learning and help transform education systems for the better.

CONCLUSION

Survey responses, in conjunction with emerging evidence, point to increased learning losses as a result of the reduction in in-person instruction time for millions of children around the world. They also highlight the various approaches and policies applied by governments to curb the losses, the extent of which can only be accurately determined through student assessments. Government responses include mechanisms such as modifying the calendar and curriculum, introducing targeted remedial catch up, adjusting teacher professional support, modifying examination schedules and other measures. The effectiveness of the mitigation tools applied often depends on the local context and baseline learning levels (i.e., the level of learning poverty prior to COVID-19 disruptions). It is increasingly apparent that recovery will be challenging and opportunities are fleeting.

FIGURE 1-5: Share of countries reporting adjustments to the school calendar dates and curriculum due to COVID-19, by income group



Note: *The chart shows the per cent of countries in a specific income group that responded with the answer for at least one education level among pre-primary, primary, lower secondary and upper secondary. More information on the coverage of each income group can be found in Annex 1.*

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PART 2

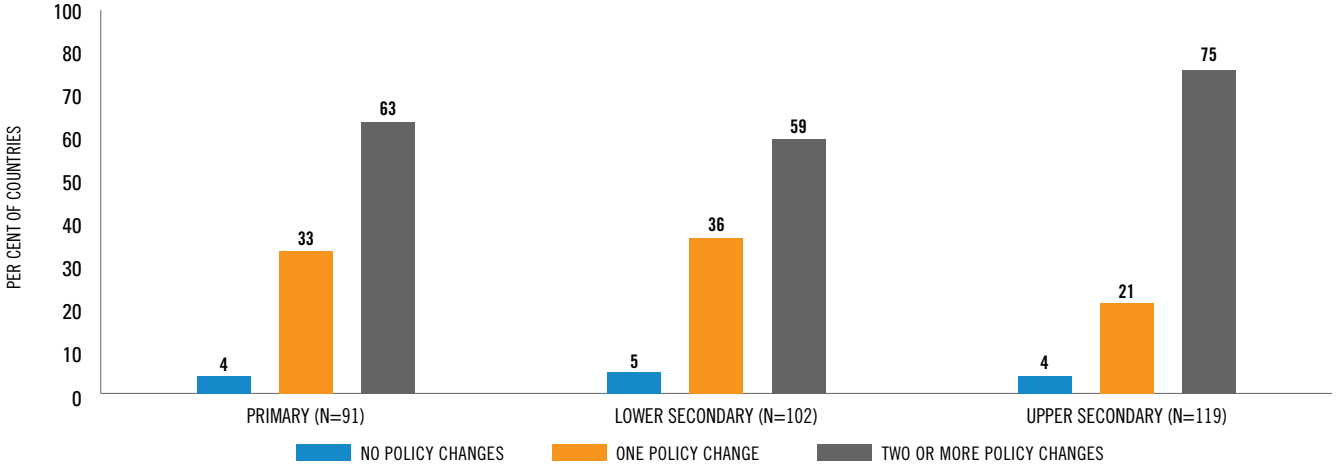
LEARNING ASSESSMENT AND EXAMINATIONS

Learning assessments and examinations serve different but critical functions. Learning assessments aim to gather information on what students know, understand, and can do, whereas examinations are used to certify or select learners in a given grade or age for further schooling, training or work. In particular, national examinations can determine students' ability to progress further in their education and inform decisions on tracking students. Data from previous rounds of the joint survey provided some critical insights on how countries adapted their learning assessment and examination practices in response to school closures. For example, data from the first round of the joint survey highlighted that, as of May 2020, more than half of respondent countries postponed or rescheduled high-stakes examinations (Nugroho et. Al., 2020). Similarly, data from the second joint survey highlighted that, as of October 2020, few respondent countries were planning to assess their students once schools re-opened (UNESCO, UNICEF and World Bank, 2020).

Given that a year has passed since schools first closed, it is important to monitor and understand how countries assessed, evaluated, and certified their students. The third round of the joint survey asked questions about: i) changes to national examinations due to the pandemic during the school year 2019/2020 (or end of 2020); ii) steps taken to assess whether there have been learning losses as a result of COVID-19-related school closures in 2020; iii) share of students being evaluated to assess learning loss[5] and iv) adjustment to graduation criteria at the end of school year 2019/2020 (or end of 2020).

5 This question is part of UNESCO's module. Therefore, countries that responded to the OECD surveys did not respond to this question. The question is part of Questionnaire section 'planning 2021'.

FIGURE 2-1: Share of respondent countries that implemented new policies to national examinations due to the pandemic during the school year 2019/2020, by income group



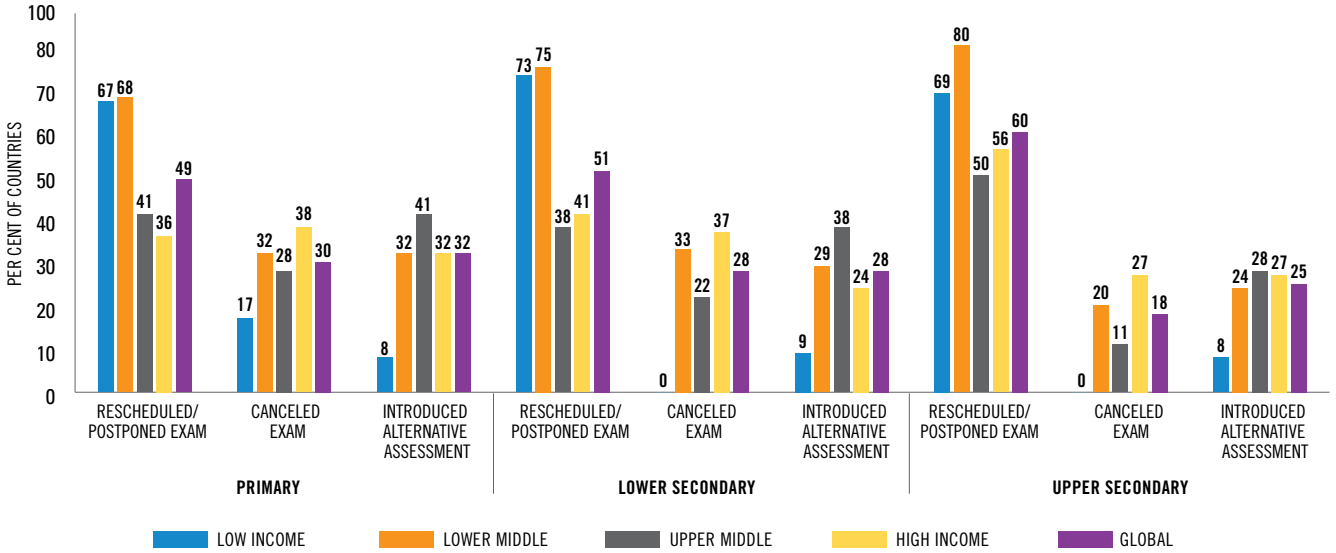
Note: *The chart shows the per cent of countries with valid responses. For each level of education, only countries with valid responses are included. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

ALMOST ALL COUNTRIES INTRODUCED CHANGES TO NATIONAL EXAMINATION DUE TO COVID-19

Ministries of Education around the world tackled challenges to national examinations using a diverse array of policy responses. The joint survey asked if they had implemented any policy changes to national examinations during the school year 2019/20 due to COVID-19. These policy changes include (a) Postponed/rescheduled examinations; (b) Adjusted the content of the Examinations (e.g., subjects covered or number of questions); (c) Adjusted the mode of administration (e.g., computer-based or online-based); (d) Introduced additional health and safety measures (e.g., extra space between desks for distancing students); (e) Introduced alternative assessment/validation of learning (e.g., appraisal of student learning portfolios); (f) Canceled the examinations and used an alternative approach for high-stakes decision making (e.g., calculated grades); and (g) Other (please specify).

Almost all respondents (approximately 95 per cent) reported implementing changes to national examinations

FIGURE 2-2: Share of respondent countries who reported changes related to scheduling of exam due to the pandemic during the school year 2019/2020, by income group and level of education



Note: *The chart shows the per cent of countries with valid responses. For each level of education, only countries with valid responses are included. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question may not exceed 50 per cent of the total 4-17 year old population (depending on the education level). More information on the coverage of each income group can be found in Annex 1.*

(figure 2-1). Most countries that implemented changes to national examinations (63 per cent respondent countries in primary, 59 per cent in lower secondary and 75 per cent in upper secondary) reported introducing a combination of policy changes.

Among countries that implemented only one policy change for any education level, no country selected introducing 'adjusting the content' as a standalone policy. This indicates that the policy change of 'adjusting the content' was implemented in conjunction with other policy changes.

Figure 2-2 suggests that the COVID-19 pandemic impacted the scheduling of national examinations, with many countries reporting adjustments. Some respondent countries reported canceling examinations, others reported rescheduling examinations or introducing alternative assessment to substitute for national examinations. It is important to note that as countries were asked to report on changes to national examinations in the school year, and they could choose multiple options, it could be that some countries first postponed the exam and later canceled it due to the pandemic. This is based on the fact that some countries responded in the affirmative to both postponing examinations and canceling them.

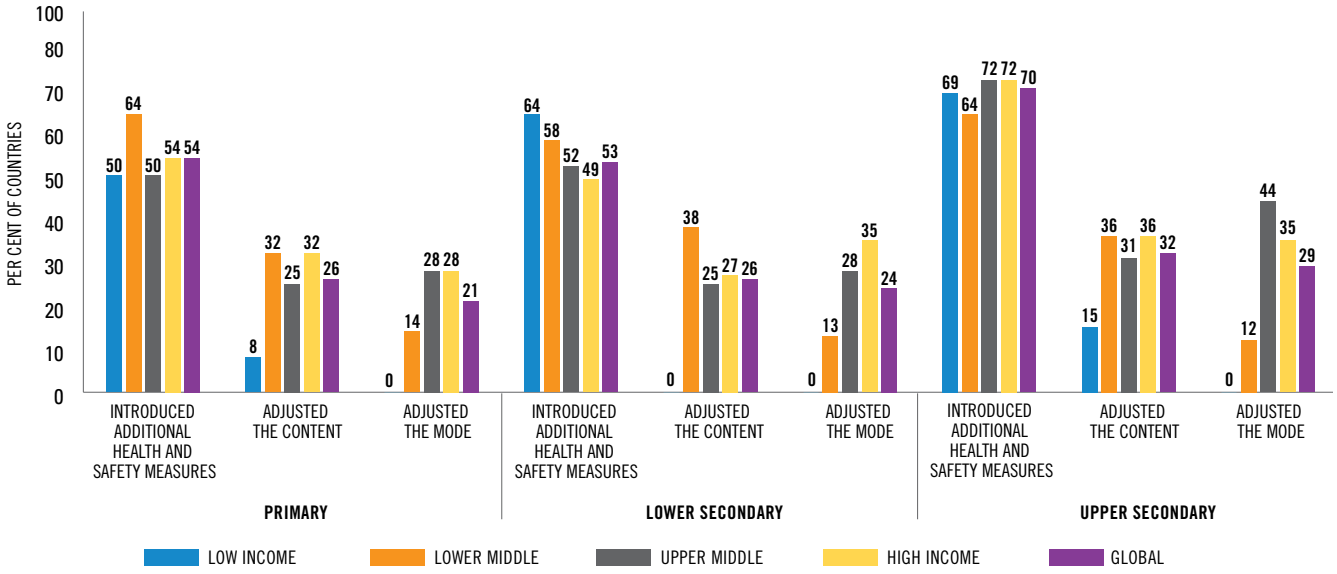
Rescheduling/postponing examinations was the preferred approach among all income groups, although it is more common among low- and lower-middle income countries. No low-income country reported canceling examinations in lower and upper secondary levels, but respondent countries from other income groups did report canceling national examinations for those levels. Compared with other income groups, a smaller share of low-income countries reported introducing alternative assessments. [6]

Globally, 30 per cent of countries canceled examinations at the primary level compared to 18 per cent at the upper secondary level (figure 2-2). Moreover, compared with other levels of education at the upper secondary level, fewer countries reported canceling examinations across all income groups. National examinations at the upper secondary level tend to be important in most countries, as they typically certify the completion of upper secondary level and can be used to progress to tertiary education.

To a varying extent, countries also introduced policies to facilitate the implementation of examinations through measures that included improving health and safety standards at the examination center, changing the examination contents or switching to an online model of testing (figure 2-3). Among these options, the common

6 For the sake of the analysis, the responses to this question have been grouped as those related to **scheduling national examinations** and those related to **implementing the national examination. Scheduling national examinations** include responses to: Postponed/rescheduled the Examinations; Introduced alternative assessment/validation of learning (e.g. appraisal of student learning portfolio); Canceled the Examinations and used an alternative approach for high-stakes decision making (e.g., calculated grades). **Implementing the national exam** include responses to: Adjusted the content of the Examinations (e.g., subjects covered or number of questions); Adjusted the mode of administration (e.g., computer-based or online-based); Introduced additional health and safety measures (e.g., extra space between desks for distancing students); Other (please specify).

FIGURE 2-3: Share of respondent countries who reported changes related to implementing national examinations due to the pandemic during the school year 2019/2020, by income group and level of education



Note: *The chart shows the per cent of countries with valid responses. For each level of education, only countries with valid responses are included. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question may not exceed 50 per cent of the total 4-17 year old population (depending on the education level). More information on the coverage of each income group can be found in Annex 1.*

approach across all respondent countries is the introduction of health and safety measures. This is also the preferred approach at the upper secondary level, where administration of national examinations is critical.

Adjusting the examination contents was a less common choice in low- and lower-middle-income countries compared with their higher income counterparts. Another option popular among high-income countries but not among low-income countries is adjusting the mode of examination. These decisions reflect the resource availability, different realities and constraints that countries face when making choices about assessment and examination plans.

WHILE ALL THE COUNTRIES TRIED TO ADJUST EXAM DUE TO COVID-19 PANDEMIC, COUNTRIES ALSO INTRODUCED CHANGES TO GRADUATION CRITERIA

In addition to changes to national examinations, countries also included adjustment to graduation criteria as part of their school re-opening plan. Globally, 34 per cent of respondent countries reported including plans to adjust graduation criteria for the school year 2019/2020 (end of 2020) for the primary level (figure 2-4). This share increases gradually with each level of education, with 47 per cent of respondent countries doing so for upper secondary level. Across all levels of education, this approach was most common among lower-middle income countries.

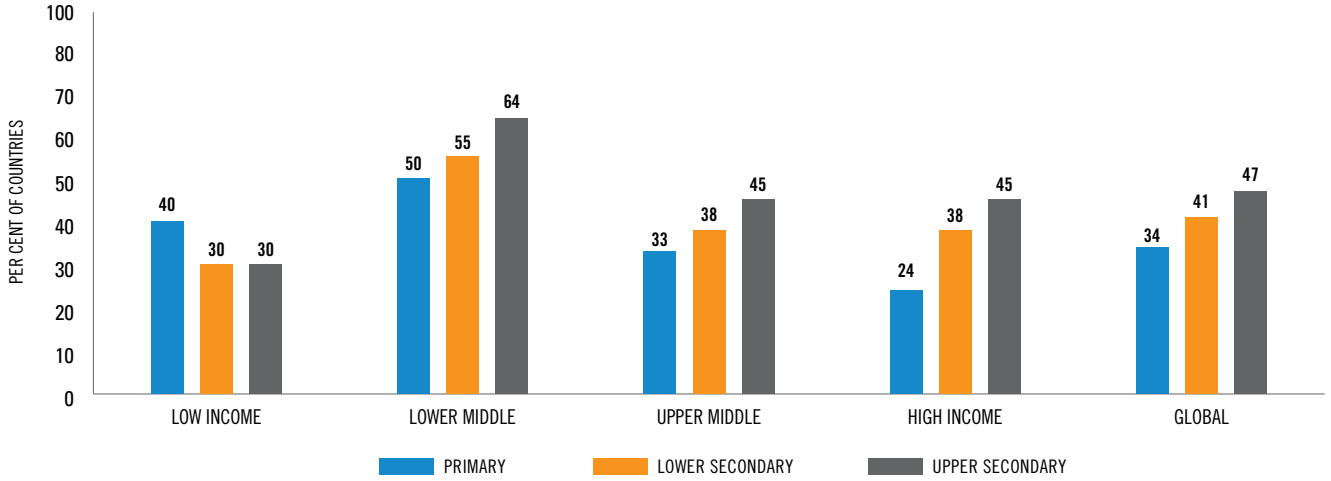
CONCLUSION

School closures placed students in unique situations as homes were transformed into classrooms and students continued to access education using different remote learning modalities (UNESCO, UNICEF and World Bank, 2020). Similarly, course content and teaching had to be adapted to suit remote learning modalities (ibid).

In practical terms, this shift is expected to widen educational inequality (World Bank,2020; UNICEF, 2020). Some students continued learning and kept up with the curriculum, whereas others couldn't. These changes due to the COVID-19 pandemic also have implications for mechanisms that seek to assess and certify student learning, as well as those mechanisms that allow for key decisions on students' progression.

As schools re-open for in-person instruction, it will be important to understand the differences in the levels of knowledge and skills their students have, against expected learning levels. To this end, measuring learning loss is a critical component of the provision of adequate education, especially for those students who fell behind during school closures. It is also important that education systems consider how best to adjust learning assessment and examination systems in the context of learning loss. Many education systems rely on national examinations to decide which students progress to the next level. As students reel from a difficult year, with the most serious negative impacts on children from more disadvantaged backgrounds, it will be important for education systems to rethink how best to assess and certify their students, while ensuring that the most disadvantaged students do not bear the brunt of a lost year of learning.

FIGURE 2-4: Share of respondent countries that introduced adjustment to graduation criteria in school re-opening plans at the national/sub-national level (end of school year 2019/2020), by level of education and income group



Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question may not exceed 50 per cent of the total 4-17 year old population (depending on the education level). More information on the coverage of each income group can be found in Annex 1.*

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PART 3

REMOTE LEARNING DELIVERY SYSTEMS

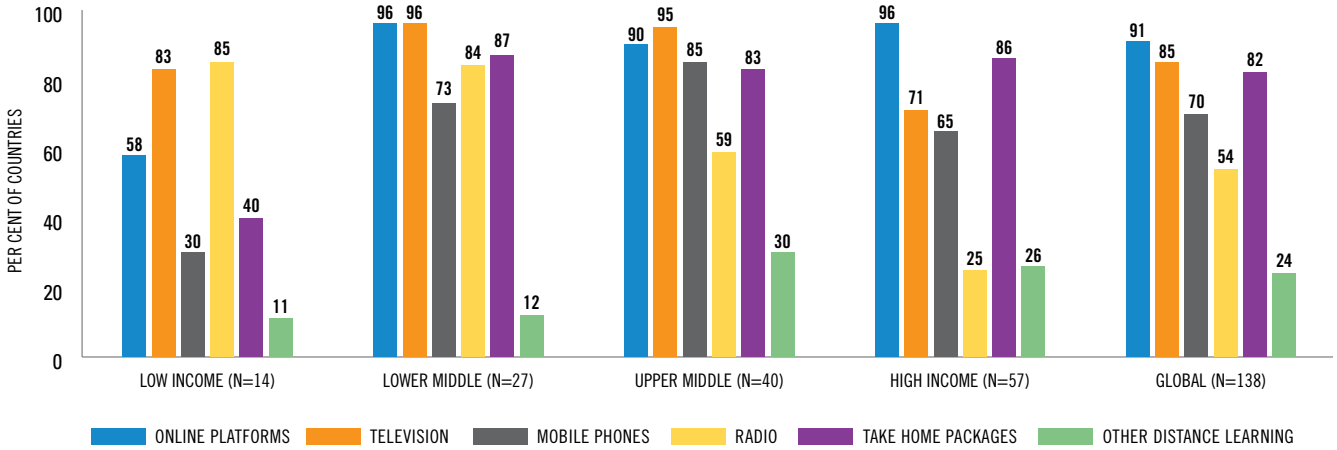
COVID-19-related school closures have prompted governments around the world to mobilize remote learning solutions to ensure educational continuity. Many governments were swift in their response and provided multiple modalities of remote learning to reach children and young people while schools were closed. These remote learning modalities ranged from paper-based take home materials, to broadcast media such as TV and radio, to digital online platforms. This chapter explores the education ministries' perspectives on how governments supplied remote learning during COVID-19-related school closures, the take-up and effectiveness of remote learning, and the challenges facing students, especially vulnerable populations, in using remote learning. These perspectives can help inform effective mitigation of the impacts of the current crisis and build resilience in education systems against future crises.

AMONG LOW-INCOME COUNTRIES, TELEVISION AND RADIO WERE THE MOST POPULAR REMOTE LEARNING MODALITIES, WHEREAS AMONG HIGH-INCOME COUNTRIES, ONLINE PLATFORMS WERE THE MOST POPULAR CHOICE

Across income groups, countries deployed various high-tech and low-tech modalities to facilitate remote learning throughout 2020 and 2021, including online, television, radio, mobile and take-home learning packages. Overall, 99 per cent of countries in our sample report provided at least one remote learning modality for one or more education level (pre-primary, primary, lower-secondary and upper-secondary).

Around 9 out of 10 high-income countries report providing remote learning through online channels compared to 64 per cent of low-income countries (figure 3-1). Online platforms were also among the most popular choices

FIGURE 3-1: Share of respondent countries offering a remote learning modality across at least one education level, by income group



Note: *The chart shows the per cent of countries with valid responses. The y axis shows the per cent of countries in a particular income group that responded as using a particular modality for at least one of the education levels (pre-primary, primary, lower secondary, and upper secondary). While the results represented in this Figure covers more than 50 per cent of the global student-aged population, this may not apply to specific income groups. More information on the population coverage of each income group can be found in Annex 1.*

in lower-middle and upper-middle income countries. In addition to online platforms, paper-based take-home packages were a popular remote learning modality among lower-middle-, upper-middle- and high-income countries. A majority of low-income countries report using broadcast media such as TV (82 per cent) and radio (92 per cent).

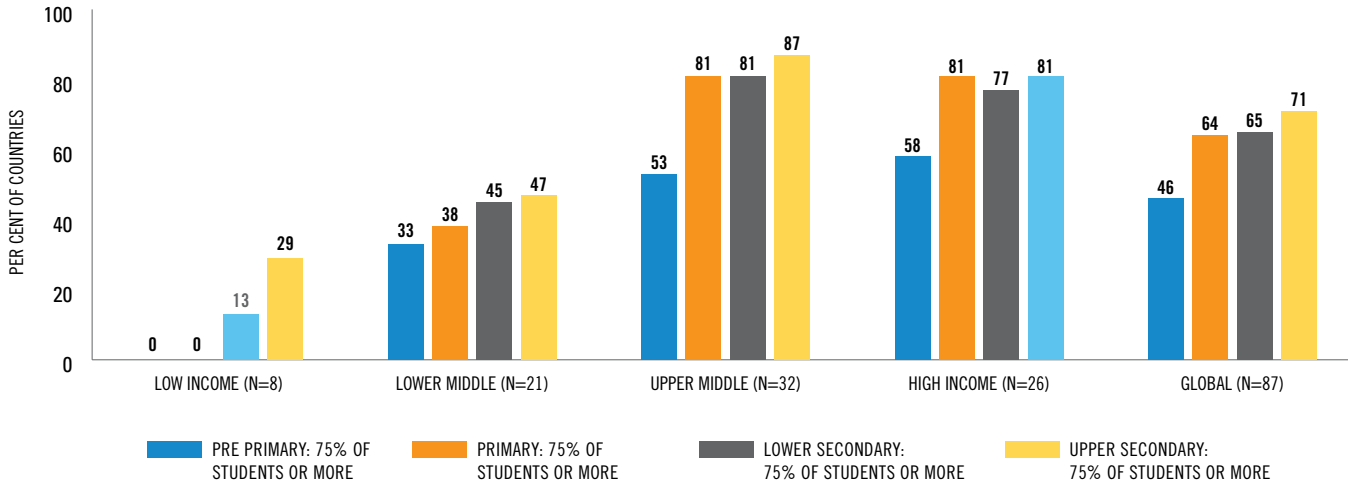
ACROSS INCOME GROUPS, A MAJORITY OF COUNTRIES USED MULTIPLE MODALITIES TO FACILITATE REMOTE LEARNING

The vast majority (94 per cent) of countries report using multiple modalities to provide remote learning. In fact, more than half of the countries reported used five or more remote learning modalities. Combining one-way technologies, such as radio or television, with interactive mobile-based modalities using SMS or phone calls, can allow tailored feedback from teachers to students and potentially improve the effectiveness of remote instruction (UNICEF, 2020). Furthermore, the use of multiple modalities can help increase access for children from marginalized, rural or low-income households who lack the regular technological access needed to access remote learning (UNICEF, 2020 and Dreesen et al., 2020).

PROVISION OF REMOTE LEARNING DOES NOT AUTOMATICALLY ENSURE TAKE-UP

While most governments around the world provided a remote learning modality for at least one education level, the provision of remote learning solutions by governments

FIGURE 3-2: Share of respondent of countries with over 75 percent of students following remote education, by income group and level of education



Note: *The chart shows the per cent of countries with valid responses. The y axis shows the per cent of countries in a particular income that responded about the percent of children accessing remote learning at each education level. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

does not in itself automatically ensure usage by learners. Overall, less than half (46 per cent) of countries report that more than three in four students followed remote education during school closures in 2020 at the pre-primary level (figure 3-2). Investments in early childhood education have been shown to have large returns not just for a child's future education outcomes but for society as a whole (Muroga et al, 2020). Therefore, it is critical not to overlook the youngest children in remote learning responses and to engage caregivers in facilitating children's learning at home, especially for younger students at the pre-primary level (Nugroho et al., 2020).

Over a third of low- and lower-middle-income countries whose national distance education strategy included broadcasting lessons on television or radio reported that less than half of primary school students were actually reached by TV and radio.[7] It is important that countries avoid a "remote learning paradox" where despite provision of technology to facilitate remote learning solutions the take-up by students is low. Several factors can increase take-up and sustained use of remote learning, including ensuring that technology is suited to the context, teachers are well-supported and content is engaging (Aedo, Nahata and Sabarwal, 2020).

BETTER EVIDENCE GENERATION ON THE EFFECTIVENESS OF REMOTE LEARNING IS CRITICAL

The use of a particular remote learning technology does not necessarily translate to learner engagement, and ultimately learning. To benefit from remote instruction, the learner requires a supportive environment that includes regular teacher-student interaction, monitoring and feedback, remote assistance, and parental guidance, among other factors (Ali, Uppal and Gulliver, 2017).

The existing research on learning losses during school closures, although still limited and mostly restricted to high-income settings, suggests that students are experiencing learning losses as well as increased learning inequality among certain demographics (Donnelly and Patrinos, 2020). In our survey, 73 per cent of the countries report carrying out an assessment in 2020 to study the effectiveness of at least one remote learning strategy, less than one-third of which are low or lower-middle income countries. There is a need to produce more and better evidence on remote learning effectiveness in low-income countries so that countries can understand the magnitude of the learning loss and try to mitigate it.

GOVERNMENTS ARE RESPONDING TO THE KEY CHALLENGES FACING EFFECTIVE REMOTE LEARNING

Governments face numerous challenges as they strive to design and implement effective remote learning solutions. Some key challenges arise from limited institutional capacity to support teachers in the transition to remote learning, poor access for remote learning for vulnerable populations (including girls), and the lack of coherent policies and funds supporting remote learning.

TEACHERS NEED TO BE SUPPORTED IN THE TRANSITION TO REMOTE LEARNING

For some teachers, the transition to remote learning can be a frustrating experience for a variety of reasons that include poor connectivity, lack of digital skills or the need to adapt pedagogies from an in-person context. Around one-tenth of low- and lower-middle-income countries offered no support at all at the national level to help teachers transition to remote learning in 2020, highlighting the need to embed better teacher support in remote learning interventions.[8] Teachers are a critical pillar of effective education systems and need to be supported in transitioning to and using remote learning modalities. See Section 4 for more details on how teachers were supported during the pandemic.

FACILITATE ACCESS AND TAKE-UP OF REMOTE LEARNING FOR THE MOST MARGINALIZED STUDENTS

It is important for countries to provide supportive resources to facilitate remote learning so that marginalized communities of students and teachers are not left out. For example, 70 per cent of countries responding to the UIS survey (57 out of 82 countries in our sample) have plans to offer either access to the internet or devices at subsidized or zero cost in 2021 and beyond to ensure last-mile connectivity and access for students to online remote learning (figure 3-3). However, significant gaps exist. Among the low- and lower-middle-income countries who responded to the UIS survey that are offering remote online learning at one or more education levels, one-third have no planned

7 The analysis uses survey question: "S10 Q1. If the country's national distance strategy included broadcasting lessons on television or radio, what proportion of the population is reached by television and radio?"
Countries that responded only to the OECD survey are not included in the sample due to differences in survey design in the OCED questionnaire.

8 The analysis uses survey questions: "S5 Q4. How and at what scale were teachers (in pre-primary to upper secondary levels combined) supported in the transition to remote learning in 2020? [Select all that apply]"

measures at the national level to facilitate connectivity for those students who have barriers to accessing it. This has serious implications for worsening in-country and global inequities in access to and use of online remote education.

Furthermore, it is critical that policymakers prioritize closing the gender digital divide and ensure that girls are not left out of remote learning opportunities (Amaro et al. 2020). In our survey, less than half of countries (54 out of 116) report taking one or more measures to specifically support the education of girls during the pandemic, such as financial support, improved access to infrastructure, provision of subsidized devices, tailored learning materials and flexible and self-paced platforms, among others.[9] Forty-one per cent of countries (32 out of 78) reportedly deployed no special measures at all to support girls' education.

ENSURE COHERENT POLICIES AND FUNDS SUPPORTING DIGITAL REMOTE LEARNING.

Investment in digital remote learning requires a multi-dimensional consideration of factors that affect access to quality digital remote learning. For example, while governments need a sound policy and strategy for digital remote learning, they also need adequate funding. Only 27 per cent of low- and lower-middle-income countries (from a sample of 39 countries) compared to half of high-income countries (from a total sample of 27 countries) have an explicit policy on digital remote learning that is fully operationalized.[10] In addition, only a quarter (25 per cent) of low-income countries compared to a large majority (96 per cent) of high-income countries that responded to the UIS survey report regular or extra (on top of regular) expenditure on digital remote learning, a trend that risks to further entrench the digital divide.

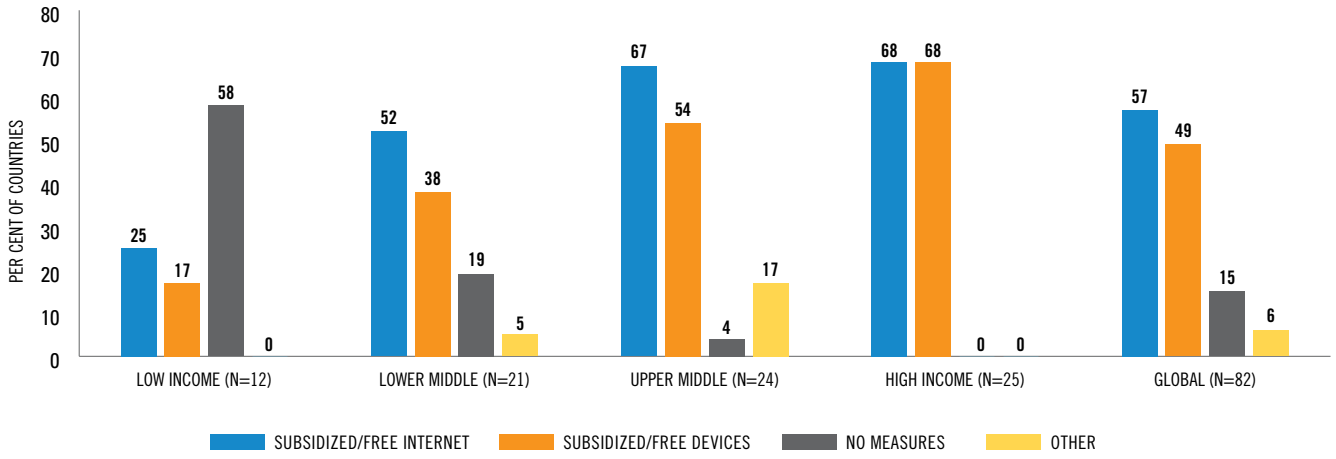
CONCLUSION

Governments around the world mobilized a variety of high-tech and low-tech modalities to facilitate distance learning during school closures. Most countries deployed multiple modalities, ranging from online, television, radio and mobile, to take-home learning packages. While the evidence on the effectiveness of remote learning is still nascent, key lessons from efforts already implemented by countries can help guide more effective remote learning in the future. One, it is evident that the mere supply of remote learning is not sufficient to induce take-up and engagement. Two, effective remote learning requires design and implementation of high- and low-tech strategies that are relevant to the context, along with a supportive environment (for example, subsidized access to technology for students and support to teachers) to mitigate the risks of learning loss, disengagement, and exclusion. Governments also need to develop clearly outlined and operationalized policy on integration of digital learning in education, along with sufficient and regular funding. Building on lessons from provision of remote learning is not only important to mitigate the educational impacts of the current pandemic but also to build resilience against future crises.

9 The analysis used survey questions: "S9 Q3. Which of the following measures have been taken to support the education (ISCED 0 to ISCED 3) of vulnerable groups during the pandemic?"

10 The analysis uses survey question: "S10 Q2A-D. For each of the below categories please select from 1-4 which statement best reflects the state of digital learning and ICT in your country." Countries that responded to OECD are not included in the sample due to differences in survey design in OCED questionnaire.

FIGURE 3-3: Share of respondent countries instituting supporting measures to facilitate online remote learning, by income group



Note: *The chart shows the per cent of countries with valid responses. Countries that responded to OECD are not included in the sample due to differences in survey design in OECD questionnaire. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

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PART 4

TEACHERS AND EDUCATIONAL PERSONNEL

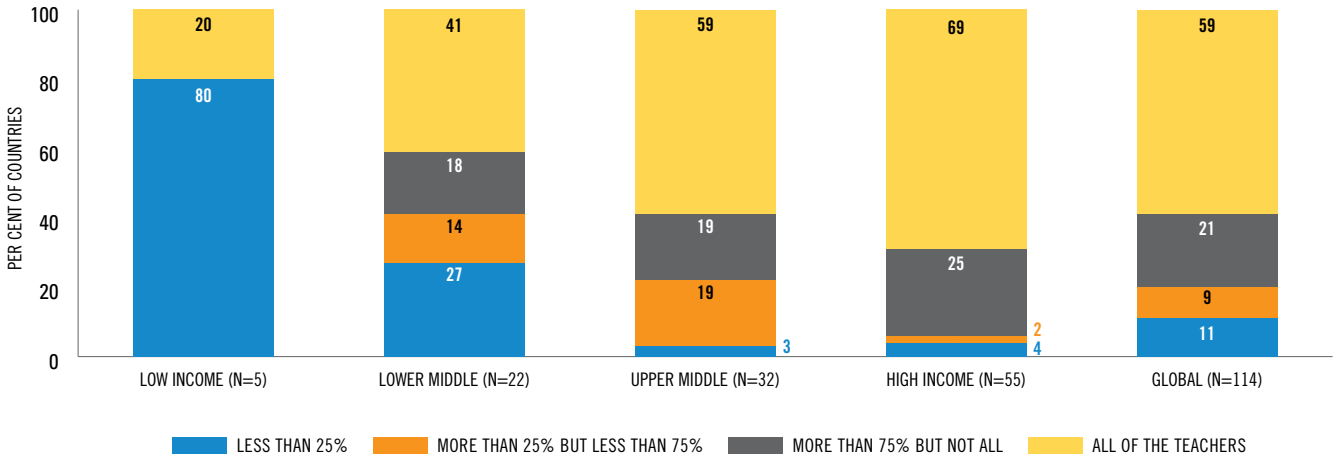
As the COVID-19 pandemic disrupted economies and people's way of life, including causing worldwide school closures, teachers continued to play an integral role in keeping millions of students globally learning. Their adaptability has been a key component of the resilience that educational systems have shown in response to the disruption. Through their innovation and resourcefulness, and with support from governments and parents, teachers are stepping up to the challenge.

MOST COUNTRIES REQUIRED ALL TEACHERS TO CONTINUE TEACHING DURING SCHOOL CLOSURES, THOUGH THIS VARIED BY INCOME LEVEL

As countries transitioned to distance learning following the school closures in 2020, most teachers were called on to shift to teaching remotely/online. About 80 per cent of countries report either all, or not less than three-quarters, of their teachers were required to teach remotely/online (Figure 4-1). The proportion of countries reporting to have engaged in remote/online teaching varied significantly across income groups, with wealthier countries more likely to have called on all or most of their teachers to provide remote/online teaching during the closures. Over 60 per cent of high- and upper-middle-income countries report requiring all their teachers to teach remotely, compared to 41 per cent of lower-middle-income countries and 20 per cent of low-income countries.

In half of countries that called on all teachers to continue teaching, they were able to do so from the school premises. This was more frequently the case among high-income countries (57 per cent), while in most low-and-middle-income countries teachers who were required to teach were not able to do so from school premises.

FIGURE 4-1: Work requirement, by income group

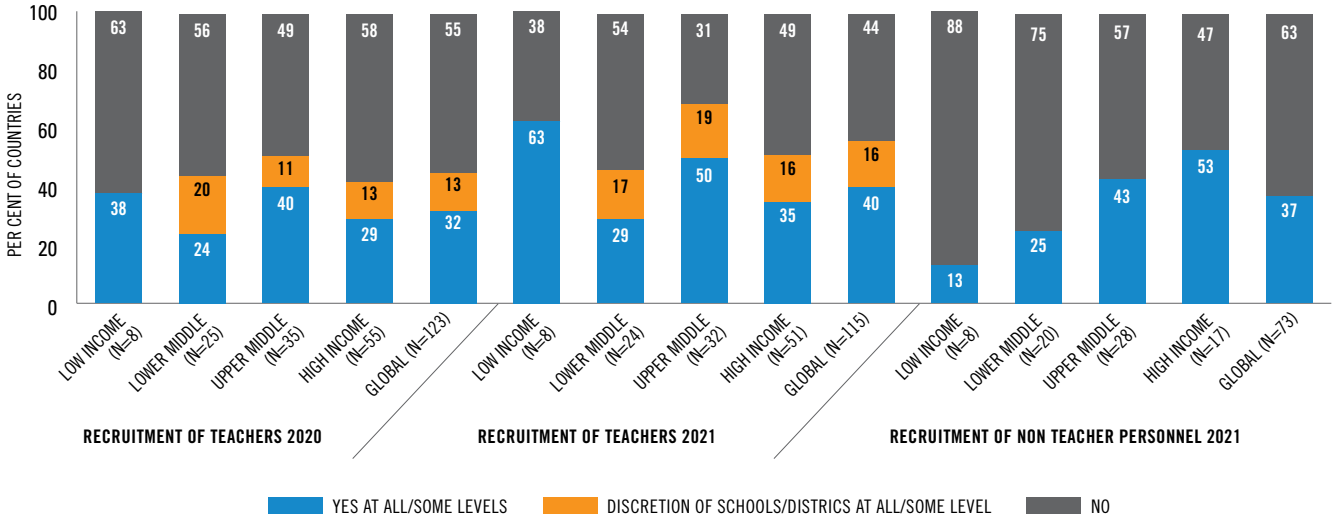


Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

On average, across all income groups, 3 in 10 countries recruited additional teachers to support teaching after reopening in the 2019/20 school year, and the proportion increased to 4 in 10 in 2020/2021 (Figure 4-2). Notably, low-income countries (38 per cent) in 2019/20 were more likely to have recruited additional teachers than any other income group, and the proportion almost doubled (63 per cent) in 2020/21. In both years, about 2 in 10 countries in each income group, except for low-income countries that had none, report the decision to recruit additional teachers was left to the discretion of schools or districts.

Countries also report recruiting non-teaching staff for school reopening. For example, 4 in 10 respondents to the UIS survey report having recruited non-teaching staff for the reopening of schools for the 2020/21 school year. The non-teaching staff recruited included cleaners, health workers, counselors, security officers and ICT staff, to mention but a few. Most countries report the closure of schools in 2019/20 did not affect their teachers' pay and benefits. Only 10 per cent of responding countries report changes (three per cent report a decrease and seven per cent an increase). A few other cases (five per cent) report the decision was left to the discretion of schools or districts.

FIGURE 4-2: Recruitment of teachers and other educational personnel, by income group



Note: *The chart shows the per cent of countries with valid responses. Countries that responded to OECD are not included in the sample for recruitment of non teacher personnel due to differences in survey design in OECD questionnaire.The response options for the question on non teacher personnel only included "Yes" and "No". The option "Done at discretion of schools/districts" was not included. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

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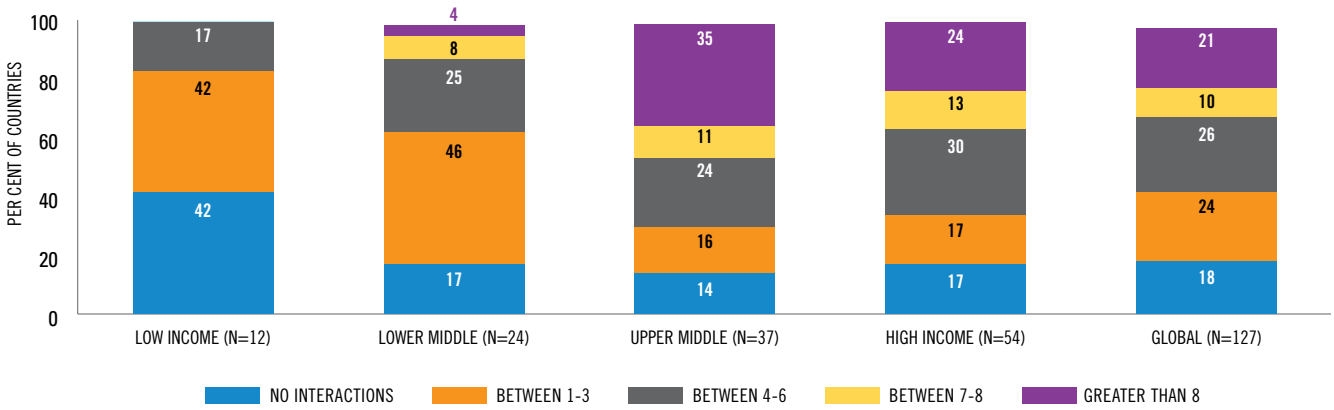
WEALTHIER COUNTRIES UTILIZED A BROADER RANGE OF INTERACTION METHODS BETWEEN TEACHERS, PARENTS AND/OR STUDENTS DURING SCHOOL CLOSURES

On average, across all income groups, governments encouraged more than four different types of interaction methods between teachers and parents and/or students during school closures (Figure 4-3). However, this average disguises large differences between countries, ranging from 1.5 among low-income countries to 5 among upper-middle- and high-income countries. Overall, 18 per cent of countries reported that they didn't encourage any specific interactions between teachers and parents/students, or left it at the discretion of schools or districts. On the other end, 30 per cent of countries encouraged seven or more different methods of interactions between teachers and/or parents.

Phone calls, messaging apps and email were the most common means that teachers were encouraged to use to maintain communication with students and their parents/guardians. Globally, three in every four countries encouraged teachers to use phone calls or video conference, while only one in four countries encouraged home visits. Upper-middle- and high-income countries encouraged a mix of methods such as phone calls and videoconferences (75 per cent), text or messaging apps (73 per cent) and dedicated e-school platforms made available for teachers, students and parents (72 per

FIGURE 4-3: Number of interactions encouraged between teachers and parents and/or students during school closures, by income group



Note: *The chart shows the per cent of countries with valid responses. The total number of interactions is based on countries that responded "Yes" to an interaction method. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

cent). However, only half of low-income countries report encouraging the use of phone calls or messaging apps, and dedicated e-school platforms and email (both 22 per cent) are even less common. Given the need to ensure safety during the pandemic, home visits were unsurprisingly less common across all income groups.

IN CONTRAST TO OTHER INCOME GROUPS, FEW LOW-INCOME COUNTRIES PROVIDED SUPPORT TO TEACHERS

Most countries across all income groups report providing teachers with various support to facilitate remote/online learning and promote teachers' wellbeing. Overall, instructions to teachers on how to deliver their lessons through remote learning (89 per cent) and professional psychosocial and emotional support (78 per cent) were the most common support provided nationwide (figure 4-4). A majority of countries in all but the low-income category also report supporting teachers with teaching content adapted to remote teaching, professional development activities on pedagogy and effective use of technologies with various pedagogies, and ICT tools and free connectivity.

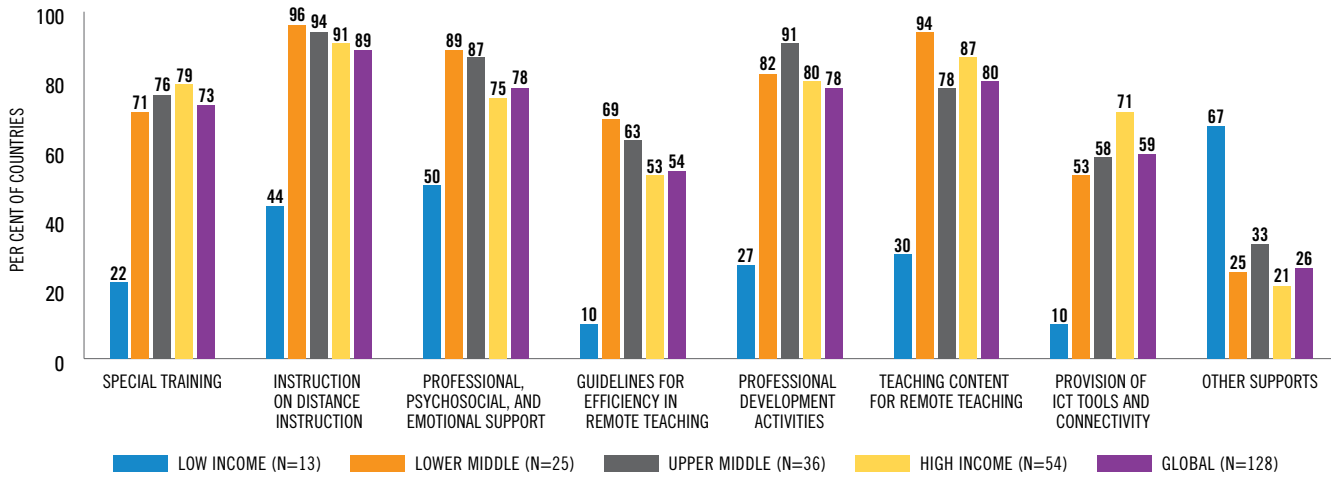
Similarly, in all income groups except for low-income countries, there seem to be no significant variations on the proportions of countries that report support for teachers across different levels of administration (national, sub-national and school). Generally, a similar proportion of wealthy countries report to have supported teachers at the national, sub-national and school-by-school basis. However, there is some variation in support for teachers at different administration levels among low-income countries. For example, while about half of low-income countries report teachers were provided with instruction on distance learning at national and subnational levels, only one in five report the same support was offered on a school-by-school basis. Notably, no low-income country reported providing ICT support (tools and free connectivity) or guidelines on preparing a virtual classroom at the school level, a stark reflection of the digital divide between high- and low-income countries.

As of February 2021, about two-thirds of the responding countries reported that teachers were or would be a priority target for vaccination against COVID-19, either through a national immunization measure (59 per cent) or the COVAX initiative (seven per cent). Unsurprisingly, only low- and middle-income countries responded as prioritizing teacher vaccination under the COVAX initiative.

CONCLUSION

Teachers in most countries had to shift to remote/online teaching and to interact with students and families using a variety of methods to ensure learning continued safely during school closures in 2019/20. As they continued to play a frontline role in the pandemic, teachers received various support as part of government efforts to facilitate remote/online learning. As COVID-19 vaccine programs expand, many countries are prioritizing teachers in national COVID-19 vaccine rollout plans, a necessary move to making school reopening possible and safe. Governments should continue to prioritize teachers for vaccination to deliver on their commitment of reopening schools for in-person learning safely.

FIGURE 4-4: Support provided to teachers nationwide, by type of support and income group



Note: *The chart shows the per cent of countries with valid responses.While the results represented in this Figure covers more than 50 per cent of the global student-aged population, this may not apply to specific income groups. More information on the population coverage of each income group can be found in Annex 1.*

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PART 5

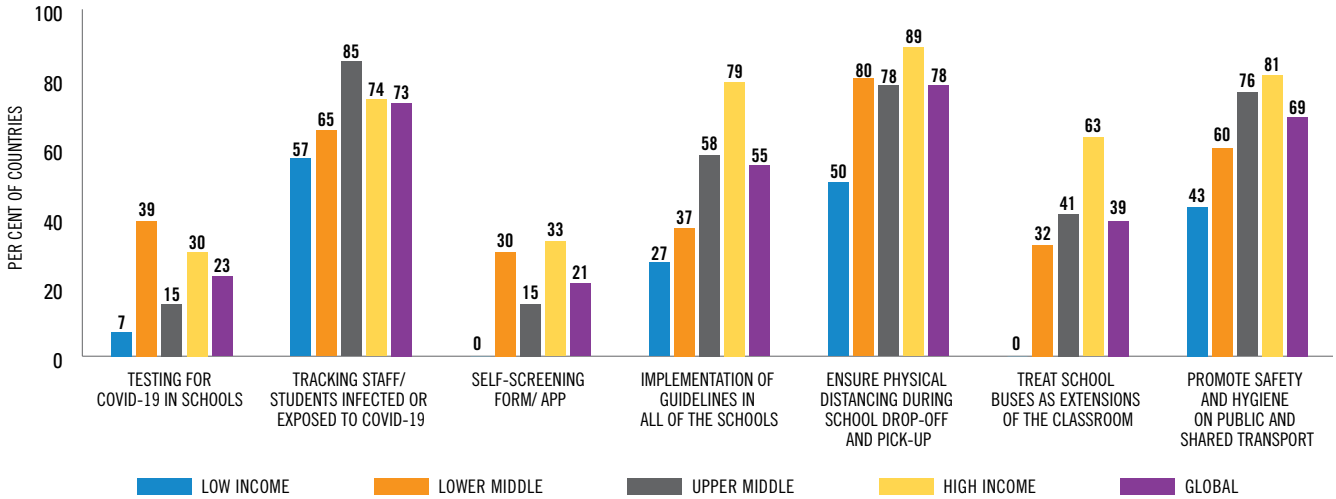
SCHOOL REOPENING

Recognizing the adverse impact of school closures on children's learning and wellbeing, international organizations have called on countries to prioritize schools in their reopening plans (UNESCO, UNICEF, the World Bank, WFP & UNHCR, 2021). This section presents findings on the measures that countries put in place to ensure the safe reopening of schools, and to monitor and support children's return to school. Reopening school doors alone is not enough. Students, particularly the disadvantaged, will need tailored and sustained support to help them readjust and catch-up on lost learning (Giannini, Jenkins & Saavedra, 2021). They may also require support to address mental health, gender-based violence and other issues that may arise or escalate during school closures. It also describes the use of recovery measures following school reopening, particularly remediation, to address lost learning opportunities.

REOPENING SCHOOLS SAFELY REQUIRES COORDINATION WITH OTHER SECTORS.

Minimizing disease transmission in schools requires measures that schools can implement with their existing infrastructure and limited additional investment (such as increases in hand hygiene or air ventilation), as well as measures that may require more investment, coordination between the education sector and other sectors (such as health or transport) and public commitment. Globally, 98 of 99 countries confirmed that their Ministries of Education have endorsed specific health and hygiene guidelines and measures for schools. Countries have responded to the pandemic nearly universally by promoting practices that mitigate transmission in schools, particularly those related to physical distancing and hand and respiratory hygiene (figure 5-1). The reported rate of the use of all measures was higher in the current wave of the survey compared with the previous wave conducted in July-October 2020. The greatest

FIGURE 5-1: Complex measures included in Ministry endorsed school health and hygiene guidelines for schools, by income group



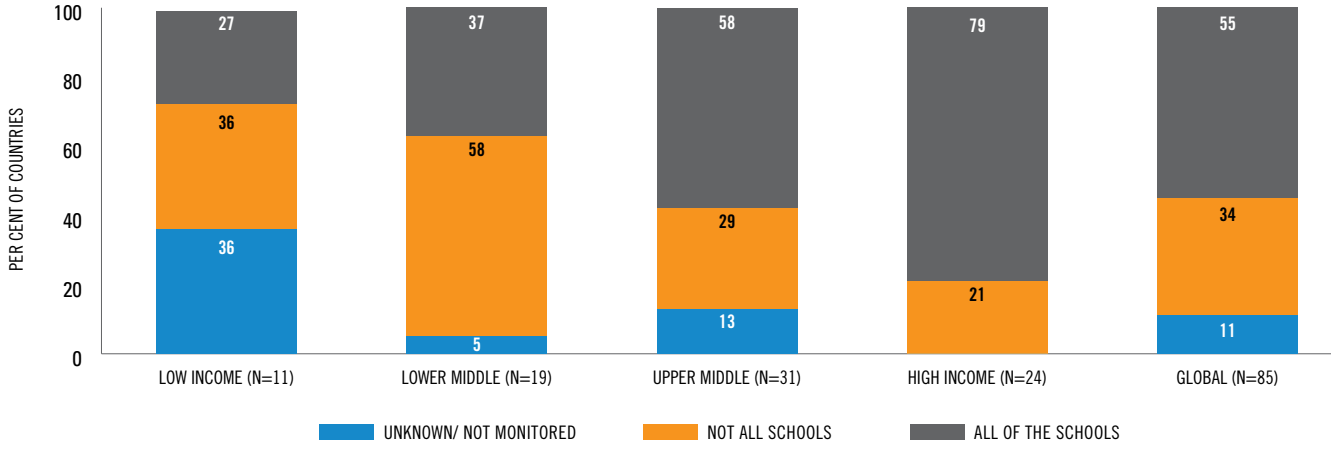
Note: *The chart shows the per cent of countries with valid responses. Countries that responded to OECD are not included in the sample due to differences in survey design in OECD questionnaire. Selected measures are displayed based on the degree that they require coordination with other sectors or between governance levels in the education sector. The sample size for measures represented here are based on three different questions (Kq2, Kq2b, Kq4). Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

increases were found in the use of self-isolation and tracking of staff/students who are exposed to/infected by COVID-19. However, activities that require additional investment or coordination with other sectors, such as contact tracing, COVID-19 testing in schools, waste management and transport safety still exhibit lower rates of adoption.

LOWER INCOME COUNTRIES REQUIRE ADDITIONAL SUPPORT IN IMPLEMENTING COMPLEX AND RESOURCE-INTENSIVE SAFETY MEASURES.

Low-income countries struggle the most with more expensive and coordination-intensive activities, as well as with ensuring that even the most basic disease mitigation measures are in place (figure 5-1). For example, 57 per cent of low-income country respondents in the sample reported that their country tracks students or staff exposed to/infected by COVID-19 compared with the global average of 73 per cent. Although the promotion of hand hygiene was nearly universal across countries, only one of 11 low-income countries reported that there were sufficient resources (such as soap, clean water, WASH facilities and masks) to ensure the safety of all learners and staff, in contrast to 96 per cent of respondents from high-income countries. Finally, while 55 per cent of countries globally indicate that health and safety guidelines were being implemented in all schools, only one in four respondents from low-income countries report universal implementation (figure 5-2).

FIGURE 5-2: Estimated share of schools implementing school health and hygiene guidelines, by income group



Note: *The chart shows the per cent of countries with valid responses. Countries that responded to OECD are not included in the sample due to differences in survey design in OECD questionnaire. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

FIGURE 5-3: Bottlenecks for implementation of health and hygiene guidelines, by income group

	LACK OF SAFETY COMMITMENT FROM PUBLIC	LACK OF RESOURCES FOR IMPLEMENTING PUBLIC HEALTH AND SOCIAL MEASURES	POOR SAFETY CULTURE	LACK OF MEDICAL FACILITIES AT COMMUNITY LEVEL	LACK OF DOOR TO DOOR SERVICES DURING QUARANTINE PERIOD
Low income (N=14)	50	64	50	64	43
Lower middle (N=20)	60	65	55	40	30
Upper middle (N=26)	54	27	31	15	19
High income (N=22)	18	14	18	14	9
Global (N=82)	45	39	37	29	23

	LACK OF STRICT ENFORCEMENT OF WHO REGULATIONS	PUBLIC STIGMATIZATION	LACK OF ADMINISTRATIVE COMMITMENT & SUPPORT AT COMMUNITY LEVEL	LACK OF PROPER COMMUNICATION BETWEEN HEALTH ADVISORS AND PUBLIC	LACK OF PROPER COMMUNICATION BETWEEN HEALTH ADVISORS AND PUBLIC
Low income (N=14)	43	14	21	7	7
Lower middle (N=20)	25	25	15	15	5
Upper middle (N=26)	12	12	8	12	4
High income (N=22)	0	9	0	0	5
Global (N=82)	17	15	10	10	5

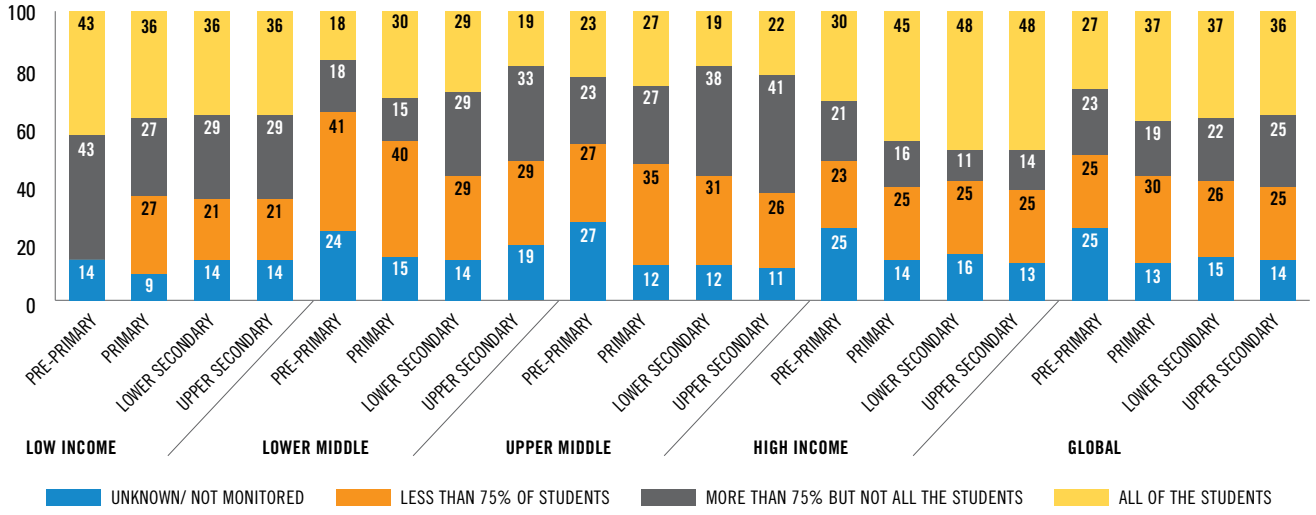
Note: *The chart shows the per cent of countries with valid responses. Countries that responded to OECD are not included in the sample due to differences in survey design in OECD questionnaire. Color scale is consistent across income groups, except global uses different color scale rule. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

When asked to identify bottlenecks that impede the implementation of safety measures, a lack of commitment or culture of safety among the public dominates responses (figure 5-3). The lack of resources and medical facilities in the community is also a central concern for lower-income countries. These countries must also rely more heavily on external donors to fund the purchase of resources required for the safety of school staff and learners, with 80 per cent of respondents from low-income countries citing external donors as a source of funds, compared to 22 per cent in high-income countries.

EVEN AFTER SCHOOLS REOPENED, SOME STUDENTS MAY NOT RETURN TO SCHOOL.

Past experiences with extended and widespread school closures indicate that this is a risk, particularly for the most vulnerable students (e.g. Hallgarten, 2020; Wagner & Warren, 2020). A month following the global peak of school closures, less than one-third of countries tracked by UNICEF included considerations for the monitoring of re-enrolment/attendance in their national plans to reopen schools (Nugroho et al, 2020). Progress has since been

FIGURE 5-4: Estimated share of students who attended school in-person after the reopening of schools, by level of education and income group



Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question may not exceed 50 per cent of the total 4-17 year old population (depending on the education level). More information on the coverage of each income group can be found in Annex 1.*

made in monitoring re-enrolment, as a year following the start of school closures, 85 per cent of countries were able to provide an estimate of the share of primary and lower secondary students who attended school in-person after the first wave of reopening (figure 5-4). One in four countries, however, were not monitoring attendance levels of pre-primary students.

Close to half of high-income countries reported that all primary and secondary students attended school in-person when schools reopened. Meanwhile, fewer than a third of low- and middle-income countries reported that all students returned to in-person schooling following the first wave of reopening. Globally, and across all except for the low-income group, countries reported lower attendance for pre-primary students.

DESPITE SOME PROGRESS, MEASURES TO PREVENT EARLY DROPOUT ARE NOT BEING WIDELY IMPLEMENTED TO SUPPORT STUDENTS AT RISK.

Outreach to children who do not return to school was the least frequently reported national response in preparing for school reopening as of May 2020 (Nugroho et al, 2020). One year on, however, most low- and middle-income countries were able to report using at least one form of outreach or support measure to encourage vulnerable students to return to school. To support return to school, countries most frequently made modifications to water, sanitation and hygiene (WASH) services or undertake community engagement (figure 5-5). The high and consistent prevalence of these measure across all populations at risk suggests that countries were reporting on widespread measures assisting return to school, not targeted at specific vulnerable populations.

FIGURE 5-5: Outreach/support measures to encourage return to school for vulnerable populations, by income group

		MODIFICATIONS TO WASH SERVICES	COMMUNITY ENGAGEMENT	SCHOOL-BASED TRACKING	FINANCIAL INCENTIVES/WAIVED FEES	REVIEW/REVISE ACCESS POLICIES
Low income (N=12)	Disability	58	75	8	8	17
	Ethnicity	63	63	13	25	25
	Girls	50	75	8	17	17
	Refugee	67	67	22	22	33
	Other	63	63	25	25	25
Lower middle (N=24)	Disability	59	50	36	32	41
	Ethnicity	65	53	35	24	35
	Girls	71	38	24	24	33
	Refugee	67	56	33	33	44
	Other	67	4	2	43	33
Upper middle (N=30)	Disability	65	48	62	32	23
	Ethnicity	70	47	70	26	15
	Girls	47	44	53	11	11
	Refugee	61	53	67	38	28
	Other	77	44	65	32	19
High income (N=41)	Disability	38	23	49	16	29
	Ethnicity	43	20	43	16	20
	Girls	39	13	30	9	16
	Refugee	42	17	41	23	20
	Other	47	26	50	2	18
Global (N=107)	Disability	53	43	44	23	28
	Ethnicity	57	39	45	21	23
	Girls	51	35	30	14	19
	Refugee	55	41	43	30	29
	Other	62	39	47	31	23

Note: *The chart shows the per cent of countries with valid responses. Color scale is consistent across income groups, except global uses different color scale rule. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

Previous pandemic responses rarely prioritized education in light of responding to health and economic challenges (Hallgarten, 2020). The current survey indicates this may still be the case. School-based mechanisms to track students not returning to school were only reported by approximately a third of countries, and only upper-middle-income countries frequently reported the use of this measure. More costly measures, such as financial incentives (such as cash, food, or transport) or waived fees (such as tuition or uniform fees) were generally less commonly reported. Extensive literature supports the use of these types of measures and the removal of other costs, such as for uniforms, to support access to school (Carvalho et al, 2020). Reviewing and revising school access policies for at-risk students also saw limited use. Fewer than one in five countries globally are reviewing access policies for girls, despite girls aged 12-17 being projected to be at particular risk of drop-out in low- and lower-middle-income countries (Azevedo et al, 2021). Revising access policies was effective in preventing drop-out amongst Ebola survivors in Sierra Leone, particularly among girls (Government of Sierra Leone, 2015, cited in Hallgarten, 2020), while the current pandemic has led to reports of increased adolescent pregnancies (Smith, 2020) and early marriage (e.g. Grant, 2020; Kumar, Halim & Ha, 2020).

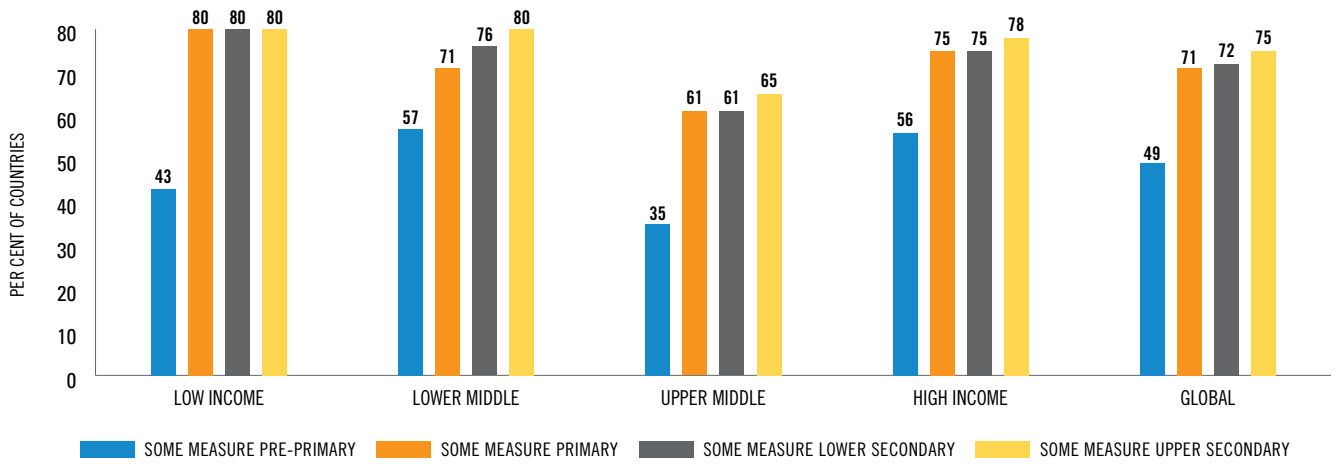
To minimize the impact of school closures on students' wellbeing, middle- and high-income countries are providing psychosocial and mental health supports for learners. This type of support is much less frequently reported by low-income countries, however. Similarly, fewer than one-fifth of low-income countries reported offering support to counter interrupted school meal services, compared to around half of middle- and high-income countries.

STUDENTS, PARTICULARLY THE DISADVANTAGED, WILL NEED TAILORED AND SUSTAINED SUPPORT TO HELP THEM READJUST AND CATCH-UP ON LOST LEARNING.

They may also require support to address mental health, gender-based violence and other issues that may arise or escalate during school closures. Reopening school doors alone is not enough. Due to the loss of instructional time, many children returning to school will not be ready for curricula that were appropriate prior to the pandemic, necessitating remedial instruction to get back on track (Giannini, Jenkins & Saavedra, 2021). Simulations suggest that even short-term remediation when children return to school could reduce long-term learning losses by half (Kaffenberger, 2021).

Globally, over two-thirds of countries reported that remedial measures to address learning gaps were widely implemented for primary and secondary school students when schools reopened (figure 5-6). This represents an increase from previous rounds of the survey (UNESCO, UNICEF & World Bank, 2020). Two-thirds of countries that previously did not implement a remedial programme reported one in the current survey. Most of these were high- and upper-middle-income countries, which earlier in the pandemic were less likely to report implementing remediation. Across all income levels, remedial measures were considerably less likely to be implemented at the pre-primary level. Pre-primary remediation was particularly low among upper-middle-income countries, with only one in three reporting its use.

FIGURE 5-6: Remedial measures to address learning gaps implemented when schools reopened, by level of education and income group



Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question may not exceed 50 per cent of the total 4-17 year old population (depending on the education level). More information on the coverage of each income group can be found in Annex 1.*

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Remedial measures in response to COVID-19 were most frequently targeted for specific groups (Johns Hopkins University, World Bank & UNICEF, 2021). In the current survey, most countries implementing remediation reported broad-based programmes for all children who need them, as well as for targeted groups. At the primary and lower secondary levels, targeted programmes were frequently focused on students who were unable to access distance learning, while at the upper secondary level they were most often focused on students facing national examinations.

CONCLUSION

Progress is being made in supporting children's return to schools, compared to data collected earlier in the pandemic. However, salient gaps remain. Pre-primary students were much less likely to be monitored and supported in their return to schools. Considering the evidence that pre-primary education may serve as substantial protection from children's learning loss (e.g. Kim et al, 2021), efforts to address this gap will not only ameliorate the long-term impact of the current crisis on the youngest learners, but also contribute to resilience of education systems against future crises. The lack of measures to support the return of girls to school, including in low-income countries, also warrants attention, as adolescent girls in this setting are at great risk of dropping out following prolonged school closures. Finally, countries were less likely to utilize measures that require coordination across governance levels or with other sectors. While this may be unsurprising, it is important to note that more complex, multi-sector measures often have a stronger evidence of effectiveness. Coordination with the health and nutrition sectors, for example, is essential to address the multi-dimensional effects of school closures. Low-income countries in particular need extended support in this area.

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PART 6

EDUCATION FINANCING

The ongoing pandemic has been a double challenge to global education financing. Demand for more funding has risen as education systems and schools invest in distance learning strategies, maintain safe hygiene and sanitary conditions, and compensate for potential teacher shortages and learning loss, particularly among the most vulnerable students. At the same time, governments are increasingly under financial pressure to mitigate the rippling effects of the crisis across all sectors from health to the economy. It is estimated that the financing gap to achieve the education SDGs by 2030 in low- and lower-middle-income countries has now risen by about a third to almost US$200 billion as a result of COVID-19 (UNESCO, 2020[1]). Almost all countries responding to the first (May-June 2020) and second (July-October 2020) waves of the joint survey on educational responses to COVID-19 reported needing additional funding to support the educational response to the COVID-19 crisis. Inadequate funding to education, particularly in times of crisis, is likely to have longer-term repercussions on learning and the development of human capital, and ultimately to economic growth and recovery.

EDUCATION BUDGETS HAVE EITHER INCREASED OR REMAINED STABLE AT THE ONSET OF THE COVID-19 CRISIS IN 2020 ACROSS MOST COUNTRIES

Across pre-primary, primary and secondary levels, 49% of countries increased their expenditure to education to support schools during the COVID-19 pandemic, while 43% reported a stable budget. In most countries, funding was not targeted to a specific level of education. Across all income levels, countries that increased funding to primary education generally also increased funding to lower and upper secondary education.

Ensuring adequate funding to education is particularly critical for low-, lower-middle- or even upper-middle-income countries, where learning outcomes and spending per student can be significantly lower than in high-income countries. At lower secondary level, high-income countries spend USD 10,300[11] per student compared to USD 2,400 in upper middle-income countries. In lower-middle and low-income countries, less than USD 1,000 per student is devoted to educational institutions at lower secondary level

11 All spending per student figures refer to median values across each country income group. Expenditure in national currencies is converted into equivalent USD by dividing the national currency figure by the purchasing power parity (PPP) index for GDP.

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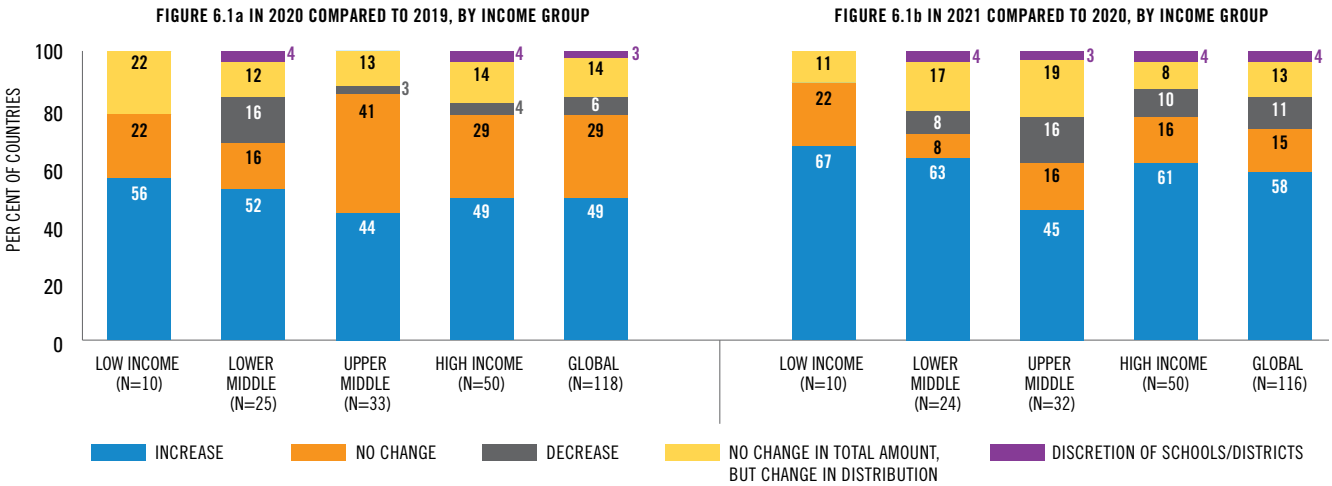
(UIS, 2021[2]). Governments in lower-income countries also tend to devote a lower share of national wealth to education. In 2018–19, public education spending in low-income countries was 3.5 per cent of GDP, compared to 4.7 per cent in high-income countries (UNESCO and World Bank Group, 2021[3]). In addition, low- and lower-middle-income countries were more likely to suffer from prolonged school closures than high- or upper-middle-income countries.

Lower-middle-income countries were the most likely to report a decline in funding to education following the COVID-19 crisis (Figure 6-1). About 16% of lower-middle-income countries reported a drop in budget across pre-primary, primary and secondary levels of education in 2020 compared to less than 5% of upper-middle- and high-income countries. None of the low-income countries reported decreasing education expenditure.

FIGURE 6-1a/b: Changes to the fiscal year education budget to ensure the response to COVID-19 for lower secondary education: a) In 2020 compared to 2019; b) In 2021 compared to 2020, by income group



Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

AS THE PANDEMIC PROGRESSES INTO 2021, MORE COUNTRIES EXPECT TO INCREASE THEIR EDUCATION BUDGET

Across all education levels, more than 60% of countries in each income group expect to raise their education budgets in 2021 compared to 2020 levels, with the exception of upper-middle-income countries, where the share remained similar. About one-third of countries that increased their budget in 2021 had not increased it in 2020, while the remaining two-thirds increased their education budget for two consecutive years. While this data collection did not inquire about the value of the increase, other recent surveys suggest that, on average, annual education budgets increased by 4 per cent post-COVID compared to 1.1 per cent pre-COVID across all regions (UNESCO and World Bank Group, 2021[3]). Despite this positive pattern, the share of countries expecting their education budget to contract in 2021 is almost double that in 2020. This has increased the most among high- and upper-middle-income countries that had not adjusted their budget envelope in response to the pandemic in 2020 (Figure 6-1).

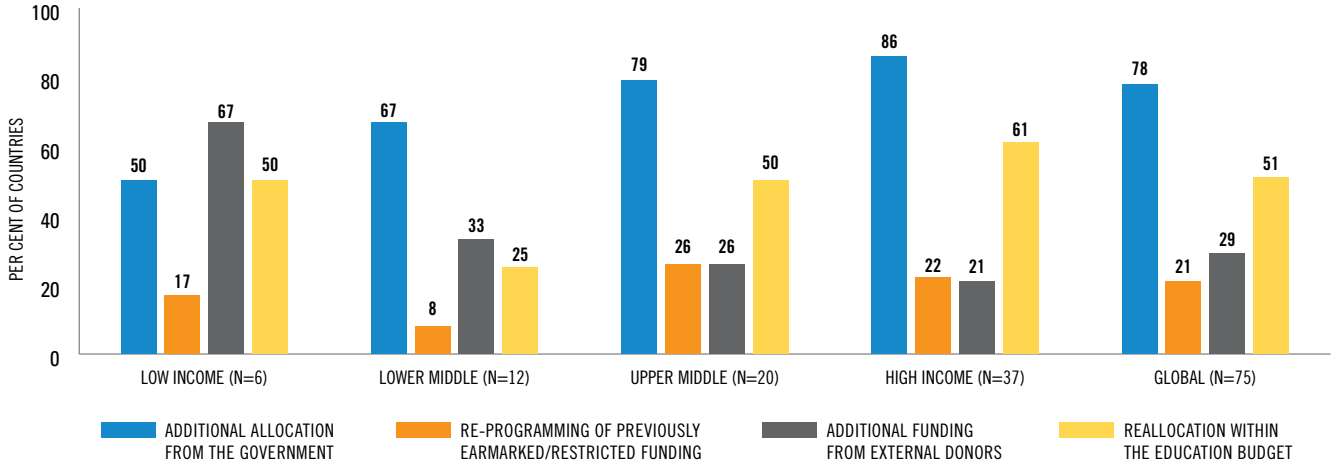
The majority of countries that increased spending to education in response to the COVID-19 pandemic increased both current and capital expenditure. The additional investment was critical to ensure blended learning, support to the most vulnerable students and teacher training in digital learning, and a safe return of students to school with the recommended sanitary and hygiene measures in place. In contrast, the majority of countries that reported maintaining a constant total education expenditure maintained a similar distribution of expenditure across cost items. This pattern was largely similar across countries of all income groups. Lower-middle- and low-income countries were more likely to invest in financial support to students and in conditional cash transfers, whereas high-income countries were more likely to increase teacher compensation.

SHARE OF COUNTRIES IN EACH INCOME GROUP REPORTING THEY RECEIVED ADDITIONAL FUNDING FROM EACH OF THE SOURCES

Additional funding to support the educational responses to the pandemic came from a multitude of sources: external donors, reprogramming of previously earmarked or restricted funding, an additional allocation from the government or a reallocation from within the education budget. An additional allocation from the government was the most commonly cited source for additional funding, but the share of countries reporting this tended to decrease in lower-income groups (figure 6-2). While more than 85% of high- income countries reported receiving an additional allocation of funds, just 50% of low-income countries did.

In contrast, aid to education from external donors was more common among low-income countries and may have helped mitigate the risk of declining investment in education in the early stages of the pandemic. Even before the pandemic hit, official development assistance represented almost 20 per cent of total education spending in these countries (UNESCO and World Bank Group, 2021[3]). In this survey, 67% of low-income countries reported receiving development assistance from external donors to cover COVID-related costs in education, more than twice the share among countries from any other income group. However, education aid may contract in the aftermath of the pandemic as donor countries prioritise domestic support measures over global aid.

FIGURE 6-2: Sources of additional funding for education during the COVID-19 pandemic, by income group



Note: *The chart shows the per cent of countries with valid responses. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

COUNTRIES CONSIDERED DIFFERENT CRITERIA IN ALLOCATING ADDITIONAL RESOURCES TO SUPPORT THE COVID-19 RESPONSE IN SCHOOLS

In general, high- and upper-middle-income countries are more likely to include equity considerations in their education financing policies and programmes than low- and lower-middle-income countries. Disadvantaged groups are commonly targeted through policies that aim to expand the coverage of the school-age population and ensure a larger share of education spending to vulnerable populations (UNESCO, 2020b)[12]. However, the efficient and equitable use of resources is a key factor in enabling inclusive opportunities for personal growth, particularly during the pandemic (Al-Samarrai, 2020).

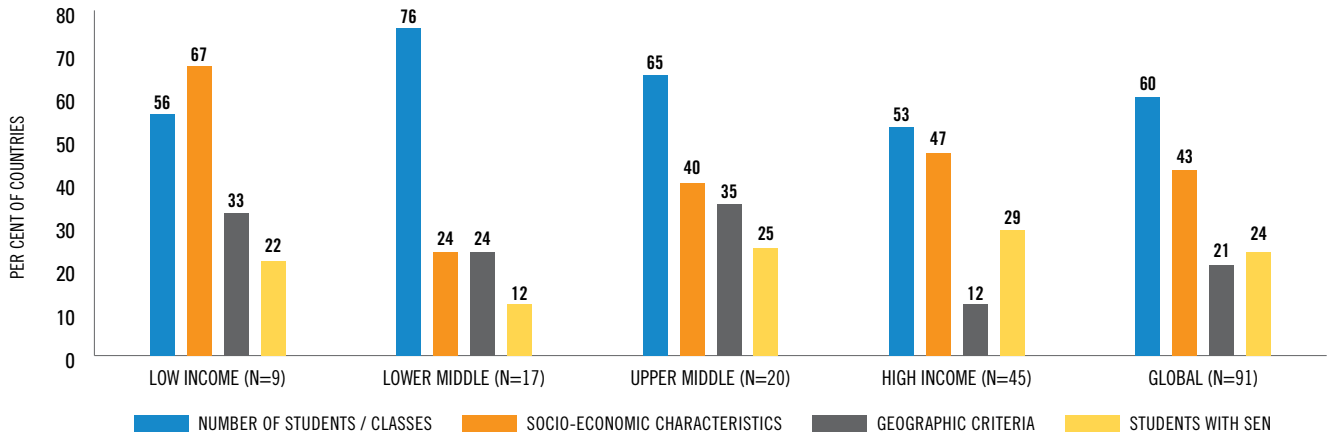
Results from the third round of the survey show that over 90 per cent of countries used at least one specific criterion to allocate additional public funds or resources in primary and secondary education[13]. The number of students or classes was the most commonly reported selection criterion considered for the allocation of additional funds across all income groups. At least half of the countries in each of the income groups considered this criterion, and more than 75 per cent of lower-middle-income countries did. Among the four criteria evaluated, considerations on the socio-economic characteristics of students were the most likely to differ by income group: Close to 70 per cent of low-income countries reported considering this criterion when allocating funds compared to nearly 25 per cent among lower-middle income countries. The availability of poverty assessments in low-income countries may encourage an equity-minded funding allocation mechanism that includes socio-economic considerations. Geographical location and special education needs were the least commonly cited criteria to allocate additional funding to education, particularly among lower-middle-income countries. In contrast, high-income countries were the most likely to provide additional investment to support students with special education needs, in part due to developed assessment and tracking mechanisms in place (figure 6-3).

CONCLUSION

Observations from earlier periods of economic slowdown suggest that budget cuts tend to follow the emergence of crises, as emergency funds injected into various sectors help keep economy and society afloat. For example, the first signs of any budget cuts to education in the aftermath of the 2008 financial crisis in OECD countries started appearing only in 2010 (OECD, 2013[4]). While the response to support education systems financially through the pandemic has been positive in many countries, it will be critical to sustain this investment in education in the coming years, particularly to overcome learning loss that may have accumulated during school closures. This is particularly critical for vulnerable student groups. Allocating funding based on specific criteria and/or needs can help ensure learning continuity among those that face the greatest barriers to accessing remote schooling. Equity considerations in financing education policies and programmes both in regular and emergency budget allocations can help ensure that essential funds reach disadvantaged groups and provide inclusive educational opportunities for all.

12 The UNESCO GEM Report team conducted survey for 78 low- and middle-income countries, focusing on financing policies in formal education at primary and secondary level.
13 This sub-section focuses on the allocation criteria for additional funding to respond COVID-19 and does not cover the criteria for regular budget allocation.

FIGURE 6-3: Criteria used to allocate additional public funds/resources in primary and secondary education, by income group



Note: *The chart shows the per cent of countries with valid responses. Per cent of countries in this figure was calculated by the formula: "number of countries who responded "Yes" to specific allocation criteria (for instance, 'Number of students/ classes')", divided by "number of countries excluding the countries whose responses to this question (section 7, question 3) were missing or who responded "unknown" for each income group and total (global). Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

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PART 7

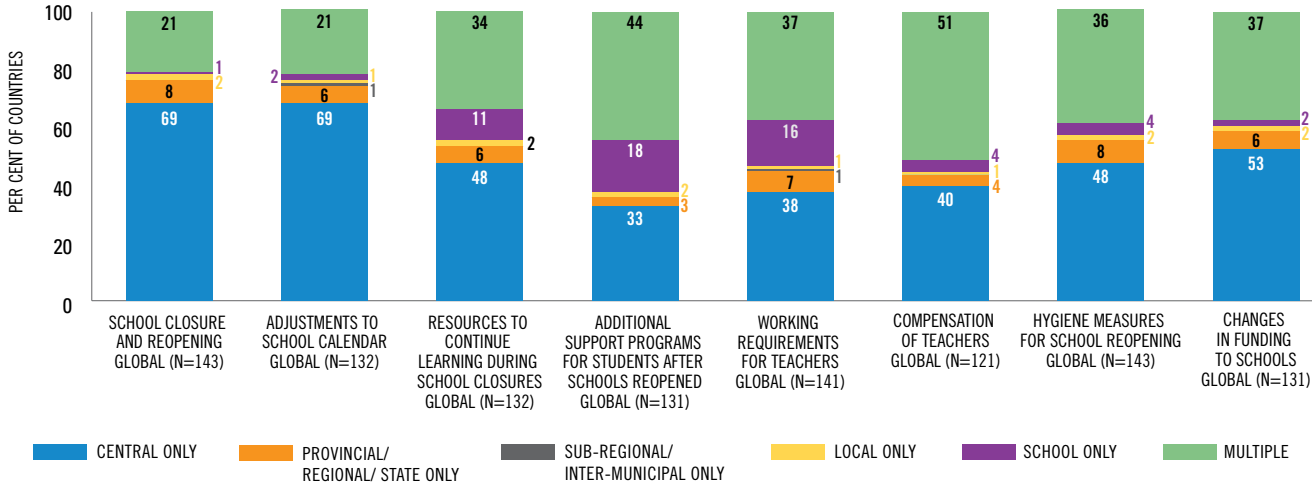
LOCUS OF DECISION MAKING

To investigate the patterns of decision-making, this survey asked countries to identify the administrative levels at which decisions were taken regarding eight strategic measures during the pandemic: school closures and reopening; adjustments to the school calendar; resources to continue learning during school closures; additional support programs for students after school reopening; working requirements for teachers; compensation for teachers; hygiene measures for school reopening; and changes in funding to schools.

CENTRAL GOVERNMENTS PLAYED A PROMINENT ROLE IN DECISION MAKING DURING THE PANDEMIC

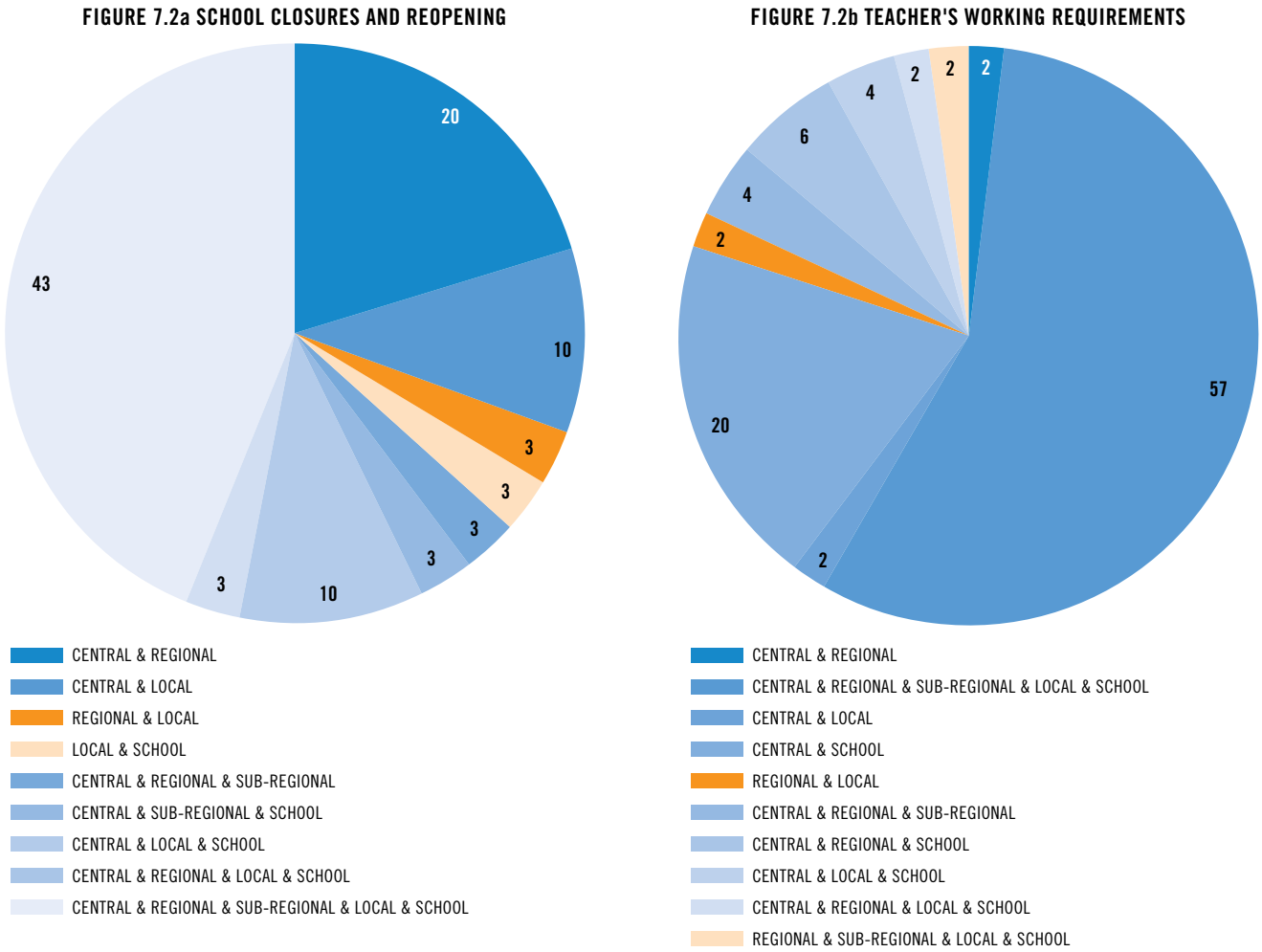
The overall findings (figure 7-1) indicate that by and large, most countries made decisions either exclusively at the central level or through coordination across different

FIGURE 7-1: Decision locus for eight educational policy measures



Note: *The chart shows the per cent of countries with valid responses. Please refer to the annex for N.*

FIGURE 7-2a/b: Mix of loci under the 'multiple' loci category for two educational policy measures



Note: *The chart shows the per cent of countries with valid responses. The per cent of countries is based on countries with valid reponses and who responded multiple locus of decisions. Caution is advised in generalizing the results represented in the figure as the countries that responded to this question cover less than 50 per cent of the total 4-17 year old population. More information on the coverage of each income group can be found in Annex 1.*

layers of administration. Central government decision has been most prevalent in measures relating to school closure/ reopening and adjustment to the school calendar.

The 'multiple locus' category usually includes the central government making decisions in conjunction with one or more of the sub-national levels (figure 7-2).

OECD countries tended to have taken decisions pertaining to school closures at more central levels while teaching arrangements and pedagogical practices were mostly decided at school levels[14] (OECD 2021). This is in line with findings from figure 7-3 for high-income countries that generally centralized decisions regarding school closure measures but tended to exclusively delegate the decisions on working requirements of teachers to regions, local level and schools.

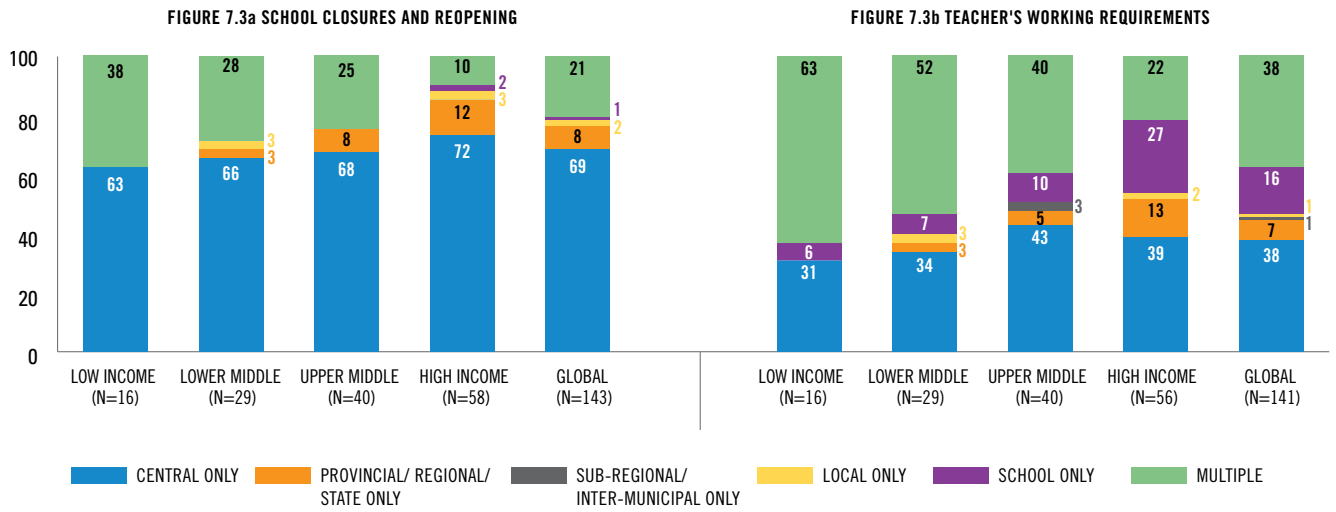
The decision to close or open schools was exclusively taken at the central level in 69 per cent of countries, and 21 per cent of countries made that decision at multiple levels (figure 7-1). The decision followed the advice of expert groups such as the Coronavirus Scientific Board in Turkey (Genç, 2021), the Ministries of Education in collaboration with various central entities including the Prime Minister's office, with the Chief Sanitary Inspectorate as in Poland[15] or the Ministries of Health and Home Affairs in Romania[16]. In Montenegro and Poland, central governments set

14 The OECD had a measure 'adapting teaching practices' that did not correspond to the Joint Survey's eight measures questions, for more detailed results see Fig 7.1 and Table 7.1 in chapter 7 of the report.

15 Unless a reference is quoted, the country-specific information comes from the locus comments in the Joint Survey questionnaire.

16 https://transylvanianow.com/schools-reopen-in-romania/

FIGURE 7-3a/b: **Decision locus across income groups for two educational policy measures, by income group**



Note: *The per cent of countries is based on countries with valid reponses. Countries who responded 'Do not know', 'Not applicable' or countries who did not respond to the question for each level are not included in the analysis. While the results represented in this Figure covers more than 50 per cent of the global student-aged population, this may not apply to specific income groups. More information on the population coverage of each income group can be found in Annex 1.*

up pandemic alert scales and local/school levels had discretion on school closures in consultation with school principals, sanitary inspectors and other relevant entities in municipalities. In Liberia, the Ministry of Education led the education response plan (MoE Liberia 2020) while setting up coordinating mechanisms across administrative levels and stakeholders, including with development partners.

Beyond the school closure decision, the prevalence of exclusively **centrally made decision-making** remained, especially for the three decisions regarding adjustments to the school calendar, changes in funding to school and school reopening hygiene measures, where 48 to 69 per cent of countries decided on those measures exclusively centrally and 27 to 37 per cent at multiple levels that mostly involved the central government (figure 7-1).

DECISIONS AT OTHER LEVELS WERE LARGELY FOCUSED ON STUDENT AND TEACHER SUPPORT.

The decisions taken mostly at **multiple levels** were about teacher compensation (51 per cent of countries) and additional support programs for students (44 per cent of countries) (figure 7-1). Across all eight measures, Brazil used multiple decision levels and, depending on the measure, involved a combination of central government/ MoE, school officials, managers of state and municipal networks. In Afghanistan, five out of eight measures were decided at multiple levels, with the exception of compensation of teachers and changes in funding to schools, which were central. In Jordan, Mauritania, Pakistan and Vietnam most decisions were made at the central level with the active role of state entities and educational circuits.

Depending on the measure, seven to eight per cent of countries gave regions the exclusive power to decide on school closures/opening, teachers' working requirements and hygiene measures for school reopening (figure 7-1). Countries that delegated decisions exclusively to regions for the majority of measures include Bosnia Herzegovina, Germany, Canada, Italy, Hungary, Spain, Sao Tome and Principe and the Russian Federation.

Only two per cent of countries allowed exclusive decision-making at the local level (figure 7.1), and for select measures only. For instance, in Finland, local levels decided exclusively on resources to continue learning during school closures, teacher working requirements and school reopening hygiene measures. Across countries, funding decisions typically involved the central government, with the exception of Mexico and Norway, who empowered local authorities to decide on changes in funding to schools.

Decisions on additional support programs for students and teacher working requirements were taken exclusively at the school level, for 18 and 16 per cent of countries respectively (figure 7-1). Some examples are Cameroon, the Czech Republic, England, Estonia, Mozambique, the Netherlands, Thailand and Ukraine. The percentages are much higher when looking only at OECD countries, where almost 50

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per cent of countries let teacher working requirements be decided at the school level (OECD 2021). The working requirement decisions concerned a variety of elements such as the number of working hours or requirements for teachers to be present at schools even without students. Cameroon is one of the educational systems that empowered schools the most as it allowed them to exclusively decide on four measures, followed by England and the Slovak Republic with three measures. Cameroon's empowerment of schools falls in line with the April 2020 announcement that the COVID-19 response would be decentralized to regions and local levels (Bang 2020). According to their technical capacities, schools and teachers were encouraged to implement parallel solutions to the centrally mandated educational television programs, leading to the proliferation of WhatsApp group discussions, Google classroom accounts and online tutoring applications (Beche 2020).

CONCLUSIONS

Across all eight measures, decisions were made mostly centrally or involving the central government together with some of the sub-national entities. This trend is especially true in lower- income countries, while in higher-income countries some of the decisions were more devolved. Centrally made decisions allowed policy makers to enact swift responses but were by design less responsive to local needs and circumstances. The pandemic has demonstrated the need for a strong and effective public sector but the evaluation of the net impact of central vs decentralized pandemic response has yet to be established.

In terms of potential planning criteria for school closures, the data from the planning module shows that 63 of the responding countries did define criteria for new school closures. The predominant criteria (42 of those 63 countries) is the 'multiple' criteria that combines national prevalence rates, local prevalence rates and in-school outbreaks. Very few responding countries use local prevalence rates or in-school outbreaks, with the usage of national prevalence rates being the most customary criteria after 'multiple'. Of the 22 countries that did not define a criteria for deciding if schools should close again, almost 70 per cent are low-income (seven) or lower-middle-income (eight) countries. 60 per cent of responding countries are in the upper-middle- and higher-income brackets and have defined criteria on school closures.

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PART 8

CONCLUSION

This report highlighted key findings from the third round of the Survey on National Education Responses to COVID-19 School Closures, conducted jointly by UNESCO, UNICEF, the World Bank and OECD. This round of the survey allows a clear retrospective look at 2020, including the evolution of responses over time and the latest situation, through data collected in the first half of 2021.

School closures have been substantial, amounting to an average of 79 instruction days in 2020. Low-income countries reporting the longest average duration of closures, placing them at greatest risk of significant learning loss, in particular for the most disadvantaged children. The extent of these learning losses as well as the effectiveness of remote learning approaches are difficult to define in many countries, in particular where student assessments are lacking.

Many education systems rely on national examinations to decide which students progress to the next level. Governments in many counties have adjusted the tested subjects or reduced the number of questions. As in the past academic year, it remains important that education systems take a closer look at how best to assess and certify students, so that the most disadvantaged students do not bear the brunt.

Despite differences between low-income countries (relying more on radio and television) and high-income countries (relying more on online platforms), most countries used multiple modalities to facilitate remote learning. As countries have followed a range of responses to replace lost in-person instruction time and stem learning losses, the lessons from these efforts need to be documented to help guide countries that are experiencing later waves of the pandemic but also to build more effective remote learning systems for resilience in the future. Remote learning will likely continue to play an important role even after schools reopen. Such systems require sound policy and adequate funding to facilitate a mix of approaches that cater to different contexts as well as provide a supportive environment to mitigate the risks of exclusion and disengagement.

Most countries – with electricity and internet connectivity – reported most or all teachers were required to teach remotely/

online. Teachers in most countries had to shift to remote, especially online, teaching and to interact with students and families using a variety of modalities including phone calls, messaging apps and email, to ensure learning continuity. Many received instructions, training, access to equipment or psychological support, but more should have been done to facilitate this major change. As COVID-19 vaccine programs expand, many countries are prioritizing teachers in national COVID-19 vaccine rollout plans, a necessary move to making school reopening possible and safe.

Compared to earlier reports, countries have taken more measures to prepare for safe school reopening, including health and hygiene interventions, monitoring of student attendance, and remedial programmes. However, low-income countries cannot afford even the most basic measures related to water and hygiene. Moreover, globally, countries were less likely to apply measures that require coordination across levels of government or with other sectors. Fewer than a third of low-and-middle income countries reported that all students attended school in-person following the first wave of reopening. However, school-based tracking. financial measures and revisions to access policies were not frequently reported to reach out to groups of students at greatest risk of not returning. Globally, over two-thirds of countries reported that they had implemented remedial measures to address learning gaps for primary and secondary school students when schools reopened.

Additional investment was critical to ensure blended learning, support vulnerable students, train teachers, and ensure safe school reopening. Despite the pressure on government revenues and the multiple demands to which treasuries had to respond, most countries reported that their first post-COVID education budgets were resilient or increased. Low- and lower-middle-income countries more commonly reported providing financial support to students, while high-income countries more commonly reported increasing teacher compensation. There is also a dire need for other interventions, such as psychosocial support to ensure better mental health.

Taken together, the findings from this survey demonstrate the diversity of experiences of and responses to the COVID-19 crisis. This further highlights the importance of ongoing monitoring and reporting on the impact of these different approaches. In particular, low income countries and education systems that were already lower performing prior to the pandemic are at greatest risk for experiencing the most significant learning losses.

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ANNEX

COUNTRY AND POPULATION COVERAGE IN EACH FIGURE

The table below provide information on the survey questions used to produce the analyses presented in each Figure in this document. Additional notes on how the survey data were used can be found at the start of this report, and the survey questionnaire (with the specific questions asked) can be found along with the data at the following page: tcg.uis.unesco.org/survey-education-covid-school-closures. For each Figure, the number of country respondents that provided valid answers are included, as well as the coverage of these countries' school-aged population (4-to-17-year-olds) and student enrollment (in pre-primary, primary and secondary education) as a proportion of respectively the total population of school-aged children and the total enrollment in (pre-primary, primary and secondary) education. Where the population coverage falls below 50 per cent, this is noted under the relevant Figure in the text.

TABLE 1-1: Number of countries that participated in the survey Country and population coverage in each figure

INCOME LEVEL	NUMBER OF COUNTRIES THAT PARTICIPATED	POPULATION COVERAGE (POPULATION AGED 4-17)	ENROLLMENT COVERAGE
Low income	16	144,549,528	72,878,072
Lower middle income	29	331,605,569	232,379,596
Upper middle income	40	446,469,336	439,022,496
High income	58	113,906,805	127,557,339
Global	**143**	**1,036,531,239**	**871,837,503**

TABLE 1-2: Country, population and enrollment coverage in each figure

FIGURE NUMBER	QUESTIONS	INCOME LEVEL	NUMBER OF COUNTRIES WITH A VALID ANSWER	POPULATION COVERAGE (PER CENT OF TOTAL POPULATION AGED 4-17)	ENROLLMENT COVERAGE (PER CENT OF ENROLMENT)
Figure 1-1	AQ6	Low income	12	45	42
Figure 1-1	AQ6	Lower middle income	22	30	27
Figure 1-1	AQ6	Upper middle income	24	17	17
Figure 1-1	AQ6	High income	48	45	47
Figure 1-1	AQ6	Global	106	30	28
Figure 1-3a	AQ1	Low income	16	60	59
Figure 1-3a	AQ1	Lower middle income	29	41	38
Figure 1-3a	AQ1	Upper middle income	40	80	82
Figure 1-3a	AQ1	High income	58	60	63
Figure 1-3a	AQ1	Global	143	58	59
Figure 1-4	FQ2	Low income	16	60	59
Figure 1-4	FQ2	Lower middle income	29	41	38
Figure 1-4	FQ2	Upper middle income	40	80	82
Figure 1-4	FQ2	High income	58	60	63
Figure 1-4	FQ2	Global	143	58	59
Figure 2-1	FQ1	Global	119	50	51
Figure 3-1	DQ1	Low income	14	55	53
Figure 3-1	DQ1	Lower middle income	27	41	38
Figure 3-1	DQ1	Upper middle income	40	80	82
Figure 3-1	DQ1	High income	57	60	62
Figure 3-1	DQ1	Global	138	57	58
Figure 3-2	DQ2	Low income	8	34	38
Figure 3-2	DQ2	Lower middle income	21	35	31
Figure 3-2	DQ2	Upper middle income	32	69	70
Figure 3-2	DQ2	High income	26	5	4
Figure 3-2	DQ2	Global	87	42	42
Figure 3-3	LQ2	Low income	12	46	44
Figure 3-3	LQ2	Lower middle income	21	32	28
Figure 3-3	LQ2	Upper middle income	24	55	54
Figure 3-3	LQ2	High income	25	7	6
Figure 3-3	LQ2	Global	82	38	36
Figure 4-1	EQ1	Low income	5	21	24
Figure 4-1	EQ1	Lower middle income	22	34	30
Figure 4-1	EQ1	Upper middle income	32	34	34
Figure 4-1	EQ1	High income	55	59	61
Figure 4-1	EQ1	Global	114	35	35

FIGURE NUMBER	QUESTIONS	INCOME LEVEL	NUMBER OF COUNTRIES WITH A VALID ANSWER	POPULATION COVERAGE (PER CENT OF TOTAL POPULATION AGED 4-17)	ENROLLMENT COVERAGE (PER CENT OF ENROLMENT)
Figure 4-2	ALL_2020	Low income	8	27	29
Figure 4-2	ALL_2021	Low income	8	26	27
Figure 4-2	NONTEACHER_2021	Low income	8	32	35
Figure 4-2	ALL_2020	Lower middle income	25	41	37
Figure 4-2	ALL_2021	Lower middle income	24	40	37
Figure 4-2	NONTEACHER_2021	Lower middle income	20	21	23
Figure 4-2	ALL_2020	Upper middle income	35	76	78
Figure 4-2	ALL_2021	Upper middle income	32	76	77
Figure 4-2	NONTEACHER_2021	Upper middle income	28	14	13
Figure 4-2	ALL_2020	High income	55	60	62
Figure 4-2	ALL_2021	High income	51	56	59
Figure 4-2	NONTEACHER_2021	High income	17	2	1
Figure 4-2	ALL_2020	Global	123	52	55
Figure 4-2	ALL_2021	Global	115	51	54
Figure 4-2	NONTEACHER_2021	Global	73	18	17
Figure 4-3	EQ5	Low income	12	38	35
Figure 4-3	EQ5	Lower middle income	24	31	32
Figure 4-3	EQ5	Upper middle income	37	36	36
Figure 4-3	EQ5	High income	54	55	56
Figure 4-3	EQ5	Global	127	36	37
Figure 4-4	EQ4	Low income	13	42	38
Figure 4-4	EQ4	Lower middle income	25	41	37
Figure 4-4	EQ4	Upper middle income	36	77	79
Figure 4-4	EQ4	High income	54	57	60
Figure 4-4	EQ4	Global	128	54	56
Figure 5-1	KQ2	Low income	14	51	52
Figure 5-1	KQ2B	Low income	11	43	42
Figure 5-1	KQ4	Low income	14	54	52
Figure 5-1	KQ2	Lower middle income	23	36	32
Figure 5-1	KQ2B	Lower middle income	19	34	30
Figure 5-1	KQ4	Lower middle income	25	36	33
Figure 5-1	KQ2	Upper middle income	34	30	29
Figure 5-1	KQ2B	Upper middle income	31	29	29
Figure 5-1	KQ4	Upper middle income	37	72	73
Figure 5-1	KQ2	High income	27	7	7
Figure 5-1	KQ2B	High income	24	6	6
Figure 5-1	KQ4	High income	27	7	7

FIGURE NUMBER	QUESTIONS	INCOME LEVEL	NUMBER OF COUNTRIES WITH A VALID ANSWER	POPULATION COVERAGE (PER CENT OF TOTAL POPULATION AGED 4-17)	ENROLLMENT COVERAGE (PER CENT OF ENROLMENT)
Figure 5-1	KQ2	Global	98	33	29
Figure 5-1	KQ2B	Global	85	31	27
Figure 5-1	KQ4	Global	103	47	45
Figure 5-2	KQ2B	Low income	11	43	42
Figure 5-2	KQ2B	Lower middle income	19	34	30
Figure 5-2	KQ2B	Upper middle income	31	29	29
Figure 5-2	KQ2B	High income	24	6	6
Figure 5-2	KQ2B	Global	85	31	27
Figure 5-3	KQ2C	Low income	14	51	52
Figure 5-3	KQ2C	Lower middle income	20	32	28
Figure 5-3	KQ2C	Upper middle income	26	23	22
Figure 5-3	KQ2C	High income	22	7	7
Figure 5-3	KQ2C	Global	82	29	25
Figure 5-5	IQ4	Low income	12	45	43
Figure 5-5	IQ4	Lower middle income	24	37	33
Figure 5-5	IQ4	Upper middle income	30	34	34
Figure 5-5	IQ4	High income	41	33	35
Figure 5-5	IQ4	Global	107	37	35
Figure 6-1a	GQ1_2020	Low income	10	40	40
Figure 6-1a	GQ1_2020	Lower middle income	25	31	29
Figure 6-1a	GQ1_2020	Upper middle income	33	36	36
Figure 6-1a	GQ1_2020	High income	50	59	61
Figure 6-1a	GQ1_2020	Global	118	36	37
Figure 6-1b	GQ1_2021	Low income	10	40	40
Figure 6-1b	GQ1_2021	Lower middle income	24	30	28
Figure 6-1b	GQ1_2021	Upper middle income	32	36	35
Figure 6-1b	GQ1_2021	High income	50	57	60
Figure 6-1b	GQ1_2021	Global	116	36	36
Figure 6-2	GQ2A	Low income	6	31	25
Figure 6-2	GQ2A	Lower middle income	12	19	16
Figure 6-2	GQ2A	Upper middle income	20	26	27
Figure 6-2	GQ2A	High income	37	45	47
Figure 6-2	GQ2A	Global	75	26	25
Figure 6-3	GQ3	Low income	9	37	35
Figure 6-3	GQ3	Lower middle income	17	20	17
Figure 6-3	GQ3	Upper middle income	20	32	32
Figure 6-3	GQ3	High income	45	55	58

FIGURE NUMBER	QUESTIONS	INCOME LEVEL	NUMBER OF COUNTRIES WITH A VALID ANSWER	POPULATION COVERAGE (PER CENT OF TOTAL POPULATION AGED 4-17)	ENROLLMENT COVERAGE (PER CENT OF ENROLMENT)
Figure 6-3	GQ3	Global	91	30	30
Figure 7-1	HQ1_Additional support programs for students after schools reopened	Global	131	58	59
Figure 7-1	HQ1_Adjustments to school calendar	Global	132	58	59
Figure 7-1	HQ1_Changes in funding to schools	Global	131	58	59
Figure 7-1	HQ1_Compensation of teachers	Global	121	58	59
Figure 7-1	HQ1_Hygiene measures for school reopening	Global	143	58	59
Figure 7-1	HQ1_Resources to continue learning during school closures	Global	132	58	59
Figure 7-1	HQ1_School closure and reopening	Global	143	58	59
Figure 7-1	HQ1_Working requirements for teachers	Global	141	58	59
Figure 7-2	HQ1_School closure and reopening	Global	30	28	30
Figure 7-2	HQ1_Working requirements for teachers	Global	54	38	37
Figure 7-3	HQ1_School closure and reopening	Low income	16	60	59
Figure 7-3	HQ1_Working requirements for teachers	Low income	16	60	59
Figure 7-3	HQ1_School closure and reopening	Lower middle income	29	41	38
Figure 7-3	HQ1_Working requirements for teachers	Lower middle income	29	41	38
Figure 7-3	HQ1_School closure and reopening	Upper middle income	40	80	82
Figure 7-3	HQ1_Working requirements for teachers	Upper middle income	40	80	82
Figure 7-3	HQ1_School closure and reopening	High income	58	60	63
Figure 7-3	HQ1_Working requirements for teachers	High income	56	60	63
Figure 7-3	HQ1_School closure and reopening	Global	143	58	59
Figure 7-3	HQ1_Working requirements for teachers	Global	141	58	59

TABLE 1-3: Number of countries with a valid answer for figures by education level

FIGURE NUMBER	QUESTIONS	INCOME LEVEL	NUMBER OF COUNTRIES WITH A VALID ANSWER FOR PRE-PRIMARY EDUCATION	NUMBER OF COUNTRIES WITH A VALID ANSWER FOR PRIMARY EDUCATION	NUMBER OF COUNTRIES WITH A VALID ANSWER FOR LOWER SECONDARY EDUCATION	NUMBER OF COUNTRIES WITH A VALID ANSWER FOR UPPER SECONDARY EDUCATION
Figure 2-2	FQ1	Low income	N/A	12	11	13
Figure 2-2	FQ1	Lower middle income	N/A	22	24	25
Figure 2-2	FQ1	Upper middle income	N/A	32	32	36
Figure 2-2	FQ1	High income	N/A	25	38	51
Figure 2-2	FQ1	Global	N/A	91	105	125
Figure 2-3	FQ1	Low income	N/A	12	11	13
Figure 2-3	FQ1	Lower middle income	N/A	22	24	25
Figure 2-3	FQ1	Upper middle income	N/A	32	32	36
Figure 2-3	FQ1	High income	N/A	25	37	50
Figure 2-3	FQ1	Global	N/A	91	104	124
Figure 2-4	FQ3	Low income	N/A	10	10	10
Figure 2-4	FQ3	Lower middle income	N/A	22	22	22
Figure 2-4	FQ3	Upper middle income	N/A	24	24	31
Figure 2-4	FQ3	High income	N/A	41	45	53
Figure 2-4	FQ3	Global	N/A	97	101	116
Figure 5-4	CQ3	Low income	7	11	14	14
Figure 5-4	CQ3	Lower middle income	17	20	21	21
Figure 5-4	CQ3	Upper middle income	22	26	26	27
Figure 5-4	CQ3	High income	56	56	56	56
Figure 5-4	CQ3	Global	102	113	117	118
Figure 5-6	CQ1	Low income	7	10	10	10
Figure 5-6	CQ1	Lower middle income	14	21	21	20
Figure 5-6	CQ1	Upper middle income	23	33	33	34
Figure 5-6	CQ1	High income	43	52	53	54
Figure 5-6	CQ1	Global	87	116	117	118

WHAT'S NEXT?

Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic

JUNE 2021

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