Report on **blended education** and **educational poverty**

Disclaimer

This report was prepared by the G20 Education Working Group and submitted to the G20 Education Ministers' meeting on 22 June 2021.

The examples in the tables were submitted by G20 countries in response to the surveys of Blended education and Educational poverty conducted by the Italian Presidency of the G20. They are neither representative nor exhaustive of the practices undertaken by G20 countries. Some countries, especially federal countries, submitted more examples than others.

Acknowledgements

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Acronyms and abbreviations

EU   European Union

G20   The Group of Twenty

ICT   Information and Communication Technology

ILO   International Labour Organization

OECD   Organisation for Economic Co-operation and Development

SDG   Sustainable Development Goals

UNESCO   United Nations Educational, Scientific and Cultural Organization

UNICEF   United Nations Children's Fund

Foreword

The Italian Presidency of the G20 has taken place in a particularly historical moment characterized by the COVID-19 pandemic. While most G20 countries are gradually recovering thanks to an unprecedented vaccination plan, we should not forget the social and economic issues that overwhelmingly emerged during this long period of crisis – to which we are called to give adequate answers.

These issues have affected education systems and highlighted the risks of spreading different forms of educational poverty including early school leaving and learning losses. As well as underlining the impact that the educational crisis could have on the social and economic development of G20 countries, they have drawn attention to the need for considerable investment in ensuring educational quality and continuity, in particular for the most vulnerable children and adolescents.

While inequalities, including educational inequalities, have grown in this period, so has our awareness of the transformative role of education in ensuring sustainable and "regenerative" economic models, among others with the aid of new technologies. These innovations are enabling new educational scenarios, unthinkable a few years ago, with potential to increase inclusiveness and development of human capital.

Through remote teaching and learning, G20 countries have been able to respond immediately to the need for educational continuity. In particular, blended teaching and learning has become a driving force for innovation, transforming educational models and school management procedures while promoting the overall equity of our educational systems. The role of teachers has been critical in engaging with learners, innovating and actively building community of practices.

What kind of future school model should we aim at? Some of the main pillars could include: combating educational poverty including early school leaving and the digital divide; raising the quality of learning and achieving better learning outcomes; and investing in initial and in-service training for teachers and all school staff.

To realise this vision, we must strengthen our commitment to collaboration, enhancing the exchange of best practices and effective solutions aimed at improving and innovating our education systems, making them more resilient and attractive.

This report aims at providing deeper knowledge of these issues, in particular the implementation of blended teaching and learning and the fight against educational poverty in G20 countries that have shared their valuable policies and programmes.

Our main goal must remain to enable new generations to acquire the competencies they need to fully develop their potential, become responsible and active citizens, and contribute to the sustainable development of their countries.

Prof. Patrizio Bianchi
Minister of Education of the Italian Republic

Executive summary

1. Introduction

The Group of Twenty (G20) is a leading forum of major economies that seeks to develop global policies to address the world's most pressing challenges. The G20 members are Argentina, Australia, Brazil, Canada, China, France, Germany, Japan, India, Indonesia, Italy, Mexico, Russia, South Africa, Saudi Arabia, South Korea, Turkey, the United Kingdom, the United States, and the European Union. Spain is also invited as a permanent guest. Each year, the Presidency invites guest countries, which take full part in the G20 exercise.

Building on the legacy of previous summits, and taking the new situation created by the COVID-19 pandemic into account, the Italian Presidency of the G20 conducted two surveys of policies and programmes aimed at (i) organizing blended education and (ii) addressing educational poverty. The present report presents the results of the two surveys, with the aim of supporting the definition of policy orientations for education policy in G20 countries.

2. The impact of the COVID-19 pandemic on education

The COVID-19 pandemic has led to school closures worldwide. G20 countries have all been affected, but to a varying extent, owing to the severity of the pandemic. Educational policy responses have varied – some countries have kept schools open to ensure the continuity of education, other countries have closed schools to stop COVID-19 transmission among teachers and students. According to UNESCO, the median duration, across G20 countries, of total or partial school closures from March 2020 to March 2021 was 36.5 weeks. Schools have re-opened in a majority of countries. However, the situation might deteriorate again during the rest of the year, possibly leading to a continuation of ongoing school closures or to new closures. Vaccination might bring the situation under control by the second half

of 2021, although G20 countries differ greatly according to whether they are prioritizing teachers for vaccination.

The pandemic, school closures, other lockdown measures and the economic crisis have all had a strong, adverse impact on education and training, in terms of both school participation and learning outcomes. A major increase in educational poverty threatens to reverse years if not decades of progress towards Sustainable Development Goal 4 (SDG4). According to the UNESCO Institute for Statistics (UIS), at the global level, out of 1.06 billion children of primary and lower-secondary school-going age, 483 million fell below the proficiency threshold in reading in 2019; that figure would have increased by nearly 100 million in 2020, to 581 million at the end of that year. Returning to the previous trajectory of increasing proficiency levels may take nine to 15 years. There are risks of a permanent impact on employment, as young people are facing severe difficulties entering the labour market.

G20 governments have taken unprecedented measures to respond to the COVID-19 pandemic and the inducted economic and social crisis. Their capacity to sustain those efforts and to invest further in education and training risks being limited by the recession or slowdown experienced in 2020, while rebound prospects for 2021 remain uncertain. Investing in education will be vital to driving inclusive recovery and building resilience. Stimulus packages announced by G20 countries could provide substantial amounts. According to UNESCO, G20 countries account for 98 per cent of all education funding within stimulus packages. On average, this amounted to US $285 per capita, with dramatic variations across countries.

3. Organizing blended education

The shift to distance teaching and learning has been the key immediate policy response to ensure the continuity of education despite school closures. Blended education, relying on a combination of in-school and remote teaching and learning, has emerged as a common model across

education levels.

Countries have been using a wide range of technologies to deliver distance education throughout the pandemic. These technologies include high-tech solutions based on the internet, and lower-tech solutions relying on printed material, radio, television and DVDs or CD-ROMs. According to a joint UNESCO-UNICEF-OECD-World Bank survey, online education and television, which reach 80 to 90 per cent of the school-aged population across G20 countries, are the most common modalities. Almost 80 per cent of G20 countries provided free or subsidized devices, and the same proportion has provided free or subsidized internet access. According to the survey carried out by the Italian Presidency, many countries have adopted measures targeting disadvantaged children, including tailored teaching/learning materials, improved infrastructure, and flexible platforms. Countries have also introduced support measures for teachers, such as instructions regarding the use of online platforms, professional, psycho-social and emotional support, or teaching content adapted to remote teaching. G20 countries plan to measure learning losses, mostly through school-level assessments. Measuring the extent to which the digital divide shapes the distribution of learning losses in the population should be a key topic for these assessments.

Policies and programmes documented by G20 countries through the survey fall under five areas:

1. **Improving access, inclusion and connectivity;**

2. **Creating dedicated education platforms and producing digital teaching and learning materials;**

3. **Using lower-tech media to reach disadvantaged groups;**

4. **Training teachers and school leaders;**

5. **System-level interventions.**

4. Addressing educational poverty

G20 countries aim to implement the fundamental right to education, to achieve quality and equity in participation and learning outcomes, and to promote lifelong learning, as stated in Sustainable Development Goal 4 of the 2030 Agenda. Addressing factors behind education poverty is vital to reach those objectives.

Already before the pandemic began affecting social and economic life around the world, a significant part of the young population in G20 countries were leaving school without completing secondary education. According to UNESCO, the average completion rate was just 62 per cent, and wide disparities observed within countries, depending on gender, income, location, or ethnicity. During the pandemic, the lockdowns and closures of economic activities and services exacerbated existing economic hardships faced by some households. In addition, students from disadvantaged backgrounds were less likely to have the resources in place at home to make the most of online learning compared to affluent peers. Those constraints have taken a toll on students' mental health and wellbeing affecting their engagement with education. *

Policies and programmes documented by G20 countries through the survey conducted by the Italian Presidency fall under three main areas:

1. **Prevention measures, which tackle the root problems that eventually result in early school leaving. Those include expanding early childhood care and education, improving schools, reforming the curriculum, making education trajectories flexible, or providing teacher education;**

2. **Intervention measures, which address emerging difficulties experienced by students, by improving the quality of education and training and providing targeted support. Those include target support to schools, school meals, targeted support to poor students or students with special learning needs, or support to rural or indigenous communities;**

3. **Compensation measures, which create new opportunities for those who have left education and training prematurely to gain qualifications. Examples relate to second-chance programmes and vocational education. Some countries described an integrated package of measures covering the three areas. In addition, some interventions were related to system governance and monitoring.**

5. Orientations for future cooperation among G20 countries in the field of education and training

Three orientations for future cooperation among G20 countries in the field of education and training emerge from the information received for the present report:

1. Strengthen collaboration to accelerate progress on blended education and reduce educational poverty

Different levels of government should share promising practices and strengthen collaboration to support policies designed to reduce education poverty and bridge the digital divide within and among G20 countries. Sharing tools and outcomes of different monitoring and evaluation systems is crucial to support evidence-based decision-making and policy choices.

2. Collaborate to reimagine and transform education

By obliging us to adjust to blended teaching and learning, the pandemic has offered an opportunity to reimagine pedagogical approaches, assessment and curriculum. By continuing dialogue and collaboration, we can seize this opportunity to collectively rethink educational models and ways of tackling education poverty.

3. Contribute to international cooperation and the Education 2030 agenda

Progress in the G20 countries can offer a knowledge base for coping with the impact of COVID-19. This can enable progress to be scaled up and accelerated in many countries across the world – helping them to better adapt their education systems to fast changing, interconnected, digitized economies, while contributing to a green and smart recovery. This collaboration could also contribute to get SDG 4 back on track with the objective of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. It would also be important to ensuring that all learners acquire knowledge and skills needed to promote global citizenship and sustainable development, including among others through education for sustainable development.

1. Introduction

The Group of Twenty (G20) is a leading forum of major economies that seeks to develop global policies to address the world's most pressing challenges. Collectively, G20 members account for two-thirds of the world's population, 80 per cent of its economic output, and 75 per cent of its trade. The G20 members are: Argentina, Australia, Brazil, Canada, China, France, Germany, Japan, India, Indonesia, Italy, Mexico, Russia, South Africa, Saudi Arabia, South Korea, Turkey, the United Kingdom, the United States, and the European Union. Spain is also invited as a permanent guest. Each year, the Presidency invites guest countries, which take full part in the G20 exercise. Several international and regional organizations also participate, granting the forum an even broader representation.

Building on the legacy of previous G20 summits, and taking the new situation created by the COVID-19 pandemic into account, the Italian Presidency has moved the discussion on education forward into two new priority areas that are part of the educational policy response to the pandemic: (i) organizing blended education and (ii) addressing educational poverty. A common reflection was conducted during a first meeting that took place on 28-29 January. A survey of G20 countries was undertaken from February to April 2021 (see survey template in Annex), whereby countries outlined policies and programmes they initiated in those two areas. A total of 23 members and guests of the G20, including the European Union, submitted filled-in templates. The results provide a broad understanding of the field from which current and future implications emerge.

The present report presents the results of the two surveys, with the aim of supporting the definition of policy orientations for education policy in G20 countries. Further findings were taken from other sources as appropriate. **Section 2** provides an overview of the impact of the COVID-19 pandemic on the education sector. **Section 3** details policy initiatives in the area of blended education, which has emerged has the key policy response in the short term. **Section 4** envisages a broader set of policies that have sought to address educational poverty caused by the pandemic. **Section 5** proposes policy orientations as discussed at the meeting of the Education Working Group on 13-14 May 2021.

2. The impact of the COVID-19 pandemic on education

The COVID-19 pandemic has led to school closures worldwide. G20 countries have all been affected, but to a varying extent, owing to the severity of the pandemic. Educational policy responses have varied – some countries have kept schools open as a way to ensure the continuity of education; other countries have closed schools to stop COVID-19 transmission among teachers and students. The median duration, across G20 countries, of total or partial school closures from March 2020 to March 2021 was 36.5 weeks, ranging from a minimum of 10 weeks in France to a maximum of 51 in India. Some countries resorted to full closures throughout the period, while others never went beyond partial closures (**Figure 1**).[1]

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[1] UNESCO classifies countries into the following categories:

- Closed due to COVID-19: Government-mandated closures of educational institutions affecting most or all of the student population enrolled from pre-primary through to upper secondary levels [ISCED levels 0 to 3]. In most cases, various distance learning strategies are deployed to ensure educational continuity.

- Academic break: Most schools across the country are on scheduled academic breaks. All study during this period is suspended.

- Fully open: For the majority of schools, classes are being held exclusively in person, noting that measures to ensure safety and hygiene in schools vary considerably from context to context and/or by level of education.

- Partially open: Schools are : (a) open/closed in certain regions only; and/or (b) open/closed for some grade levels/age groups only; and/or (c) open but with reduced in-person class time, combined with distance learning (hybrid approach).

Figure 1 is based on the total numbers of weeks countries were classified in the 'closed' and 'partially open' categories from March 2020-March 2021. Those numbers might differ from those arrived at by G20 country governments, depending on their own definitions of those categories.

Figure 1: Duration of full and partial school closures in G20 countries, March 2020-March 2021 (weeks)
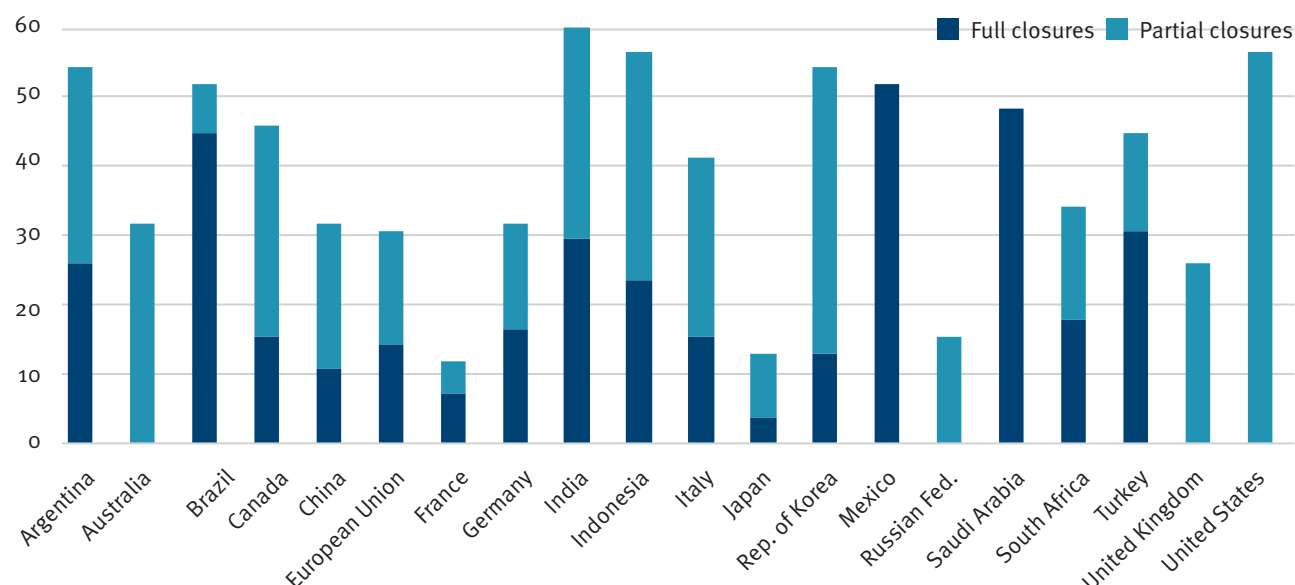
Notes: The value for the European Union is a median. School closing and reopening dates in Canada varied across provinces and territories. Figure for United Kingdom, England: 110 days calculated by assuming a five-day week and taking 14 weeks from 23 March 2020 to 27 July 2020 which excludes three weeks of school holidays (70 days), and then eight weeks from 4 January to 8 March 2021, which excludes one week of school holidays (40 days). The figure referred to here does not take into account vulnerable children and children of critical workers who have been allowed to attend school in person throughout the pandemic. *Source:* UNESCO school closure tracker.

Schools have reopened in a majority of countries. As of 27 April 2021, schools remained closed in only 2 out of 19 G20 member countries, partially open in 11, and fully open in 5. Schools were either partially or fully open in all members of the European Union but one (**Table 1**).

Table 1: School status on 27 April 2021, G20 countries

Country	School status
Argentina	Partially open
Australia	Fully open
Brazil	Partially open
Canada	Partially open
China	Fully open
European Union	(see note)
France	Partially open
Germany	Partially open
India	Partially open
Indonesia	Partially open
Italy	Partially open
Japan	Fully open
Rep. of Korea	Partially open
Mexico	Closed due to COVID-19
Russian Fed.	Fully open
Saudi Arabia	Closed due to COVID-19
South Africa	Academic break
Turkey	Partially open
United Kingdom	Fully open
United States	Partially open

Note: Within the European Union, schools were fully open in 9 countries, partially open in 17, and closed in 1.
Source: UNESCO school closure tracker.

However, the situation might deteriorate again during the rest of the year, possibly leading to a continuation of ongoing school closures or to new closures. In late April 2021, global numbers of new, daily COVID-19 cases and deaths were close to their maximum since the beginning of the pandemic. The ongoing situation differed greatly across countries. Some G20 countries were facing dramatic waves of COVID-19 transmission, while others had seen the pandemic recede (**Table 2**).

Table 2: COVID-19 incidence in late April 2021 (average for the week ending on 26 April)

Country	COVID-19 cases	Related deaths
	(per million inhabitants)	
Argentina	530.4	8.4
Australia	0.9	0.0
Brazil	269.9	11.8
Canada	216.8	1.4
China	0.0	0.0
European Union	250.7	3.7
France	443.3	4.4
Germany	250.7	2.9
India	244.5	1.8
Indonesia	20.2	0.6
Italy	217.8	5.4
Japan	38.9	0.4
Mexico	25.6	3.0
Rep. of Korea	13.0	0.0
Russian Fed.	59.1	2.6
Saudi Arabia	30.7	0.3
South Africa	21.8	1.1
Turkey	596.4	4.2
United Kingdom	35.3	0.4
United States	168.9	2.1

Note: Value for the European Union is a median. Daily figures can differ noticeably from the weekly averages presented here. For instance, Saudi Arabia Ministry of Health figures put the number of new COVID-19 cases at 12.0 per million inhabitants on 26 April, compared with 30.7 for the weekly average.
Source: Johns Hopkins University.

Vaccination might bring the situation under control by the second half of 2021. Governments have been debating whether to target teachers and/or students as priority groups for vaccination. As of March 2021, G20 countries differed greatly according to whether they were prioritizing teachers for vaccination, and if so, whether teachers were in the first, second or third priority group (**Table 3**).

Table 3: Prioritization of teachers in COVID-19 vaccination efforts, G20 countries (March 2021)

Country	Priority group
Argentina	Priority group 3 or higher
Australia	Not prioritized
Brazil	Priority group 3 or higher
Canada	Not prioritized
China	Priority group 1
European Union	(see note)
France	Priority group 3 or higher
Germany	Priority group 2
India	Not prioritized
Indonesia	Priority group 2
Italy	Priority group 3 or higher
Japan	Not prioritized
Mexico	Priority group 3 or higher
Rep. of Korea	Priority group 2 or higher
Russian Fed.	Priority group 1
Saudi Arabia	Priority group 3 or higher
South Africa	Priority group 2
Turkey	Priority group 2
United Kingdom	Not prioritized
United States	Priority group 2

Note: The situation varies across provinces/territories/states within Canada, India, and the United States. In the European Union, teachers are not prioritized in eight countries; they are in priority group 2 in three, in priority group 3 in three, and the priority group is unspecified in the remaining 13 countries.
Source: UNESCO School closure tracker.

The pandemic per se, school closures, other lockdown measures and the economic crisis have all had a strong adverse impact on education and training, in terms of both school participation (and workplace-based training) and learning outcomes. There are numerous pathways, affecting both the demand for and the supply of education, among others: illness and/or loss of family members, loss of parental income; loss of contact with schools (with both teachers and classmates), difficulties faced when learning from home, degraded family environment; difficulties with completing grades, accessing student jobs or entering the labour market; and uncertainty with an impact on studies, well-being and mental health. The pandemic has widened inequalities at all levels, threatening the very fabric of societies – social equity has emerged as a key concern for policymakers.

Internationally comparable poverty and inequality estimates for 2020 are not yet available for individual G20 countries, but global and regional figures are relevant given the share of the world's population G20 countries account for. The number of persons living in extreme poverty (US$1.90 per day) increased by an estimated 88 to 93 million in 2020, while it was expected to decrease by 31 million had previous economic trends continued. Overall, COVID-19 can thus be considered to be responsible for an increase in global poverty ranging between 119 and 124 million. This was unprecedented in recent history, as global poverty had always declined since 1992, except in 1997 and 1998, when it increased by 18 and 47 million, respectively, in the wake of the Asian financial crisis. The impact was mostly felt in South Asia, which accounted for 60 per cent of the increase, followed by sub-Saharan Africa (28 per cent) and East Asia and the Pacific (7 per cent).[2]

The result is a major increase in educational poverty, which threatens to reverse years if not decades of progress towards SDG 4. Consequences faced by out-of-school or working children and adolescents, especially in low-income countries, will be particularly dire. But in all countries where schools have closed, the learning crisis will worsen, with long-term consequences for human development. According to the UNESCO Institute for Statistics (UIS), at the global level, out of 1.06 billion children of primary and lower-secondary school-going age, 483 million fell below the proficiency threshold in reading in 2019; that figure would have increased by nearly 100 million

in 2020, to 581 million at the end of that year. Returning to the previous trajectory of increasing proficiency levels may take 9 to 15 years.[3]

There risks being a permanent impact on labour markets, as young people are facing severe difficulties entering the labour market. This could affect their lifelong career prospects, through spells of unemployment, lower earnings and changes in career paths. The overall impact on the labour market in 2020 was dramatic – 8.5% of working hours were lost due to the COVID-19 pandemic across G20 countries in 2020, the equivalent to 195 million full-time jobs (for youth and adults aged 15 and above, based on a 40-hour week) (**Table 4**).

Table 4: Working hours lost due to the COVID-19 crisis, G20 countries, 2020

Country	Working hours lost	
	Per cent	Full-time jobs (thousands)
Argentina	21.0	3,493
Australia	4.7	503
Brazil	14.9	13,321
Canada	9.3	1,456
China	4.1	35,500
European Union	8.3	15,244
France	8.4	2,111
Germany	6.3	2,354
India	13.7	71,600
Indonesia	8.2	10,425
Italy	13.5	2,897
Japan	5.4	3,398
Republic of Korea	3.7	657
Mexico	12.5	7,526
Russian Federation	8.5	5,535
Saudi Arabia	8.3	1,268
South Africa	13.6	2,433
Turkey	14.7	4,796
United Kingdom	12.8	3,889
United States	9.2	13,743
G20	**8.5**	**195,155**

Source: International Labour Organization, ILO Stat.

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[2] Lakner, Christoph, et al. (2021). *Updated estimates of the impact of COVID-19 on global poverty: Looking back at 2020 and the outlook for 2021*. Washington, DC: World Bank.

[3] Gustafsson, Martin (2021). *Pandemic-related disruptions to schooling and impacts on learning proficiency indicators: A focus on the early grades*. Montreal, Que.: UNESCO Institute for Statistics.

G20 governments have taken unprecedented measures to respond to the COVID-19 pandemic and the ensuing economic and social crisis. Their capacity to sustain those efforts and to invest further in education and training risks being limited by the recession or slowdown experienced in 2020, while rebound prospects for 2021 remain uncertain. Soaring fiscal deficits and public debt may represent a threat to macroeconomic stability and public funding of education and training (**Table 5**).

Table 5: Macroeconomic indicators for G20 countries, 2019 to 2021

Country	GDP growth rate (per cent)			Fiscal deficit (per cent of GDP)			Public debt (per cent of GDP)		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Argentina	-2.1	-10.0	5.8	4.5	8.9	…	90	103	…
Australia	1.9	-2.4	4.5	3.8	9.9	10.4	47	63	72
Brazil	1.4	-4.1	3.7	5.9	13.4	8.3	88	99	98
Canada	1.9	-5.4	5.0	-0.5	10.7	7.8	87	118	116
China	5.8	2.3	8.4	6.3	11.4	9.6	57	67	70
European Union	1.7	-6.1	4.4	0.5	7.4	6.4	79	92	93
France	1.5	-8.2	5.8	3.0	9.9	7.2	98	113	115
Germany	0.6	-4.9	3.6	-1.5	4.2	5.5	60	69	70
India	4.0	-8.0	12.5	7.4	12.3	10.0	74	90	87
Indonesia	5.0	-2.1	4.3	2.2	5.9	6.1	31	37	41
Italy	0.3	-8.9	4.2	1.6	9.5	8.8	135	156	157
Japan	0.3	-4.8	3.3	3.1	12.6	9.4	235	256	256
Rep. of Korea	2.0	-1.0	3.6	-0.4	2.8	2.9	42	49	53
Mexico	-0.1	-8.2	5.0	2.3	4.6	3.4	53	61	61
Russian Fed.	2.0	-3.1	3.8	-1.9	4.1	0.8	14	19	18
Saudi Arabia	0.3	-4.1	2.9	4.5	11.1	3.8	23	32	31
South Africa	0.2	-7.0	3.1	5.3	12.2	10.6	62	77	81
Turkey	0.9	1.8	6.0	5.6	5.4	5.7	33	37	37
United Kingdom	1.4	-9.9	5.3	2.3	13.4	11.8	85	104	107
United States	2.2	-3.5	6.4	5.7	15.8	15.0	108	127	133

Source: International Monetary Fund, World Economic Outlook database, April 2021.

Investing in education will be vital to driving inclusive recovery and building resilience. Stimulus packages announced by G20 countries could provide substantial amounts. According to data collected by UNESCO,[4] as of April 2021, stimulus packages announced by G20 countries accounted for 88 per cent of the global total (**Table 6**). On average, 3.18 per cent of those packages went to education, which is relatively low – lower than the proportion of GDP allocated to public expenditure on education in G20 countries, for instance, though higher than the world average. G20 countries account for 98 per cent of all education funding within stimulus packages. On average, this amounted to US$285 per capita, with dramatic variations across countries. Only a handful of high-income countries were spending more than average, and there was no obvious correlation between total per capita spending and per capita spending on education (**Figure 2**).

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[4] UNESCO Survey on the place of education in national fiscal responses (2021).

Table 6: Share of G20 and EU countries in the global stimulus packages

	G20	EU	World
Cumulative share in global total of stimulus packages (per cent)	87.6	25.4	100
Share of stimulus packages going to education (per cent)	3.18	2.45	2.85
Cumulative share in global education spending as part of the packages (per cent)	97.7	21.3	100
Per capita education spending as part of the packages (USD)	285.4	847.2	146.8

Source: UNESCO, 2021.

Figure 2: Per capita education spending from stimulus packages
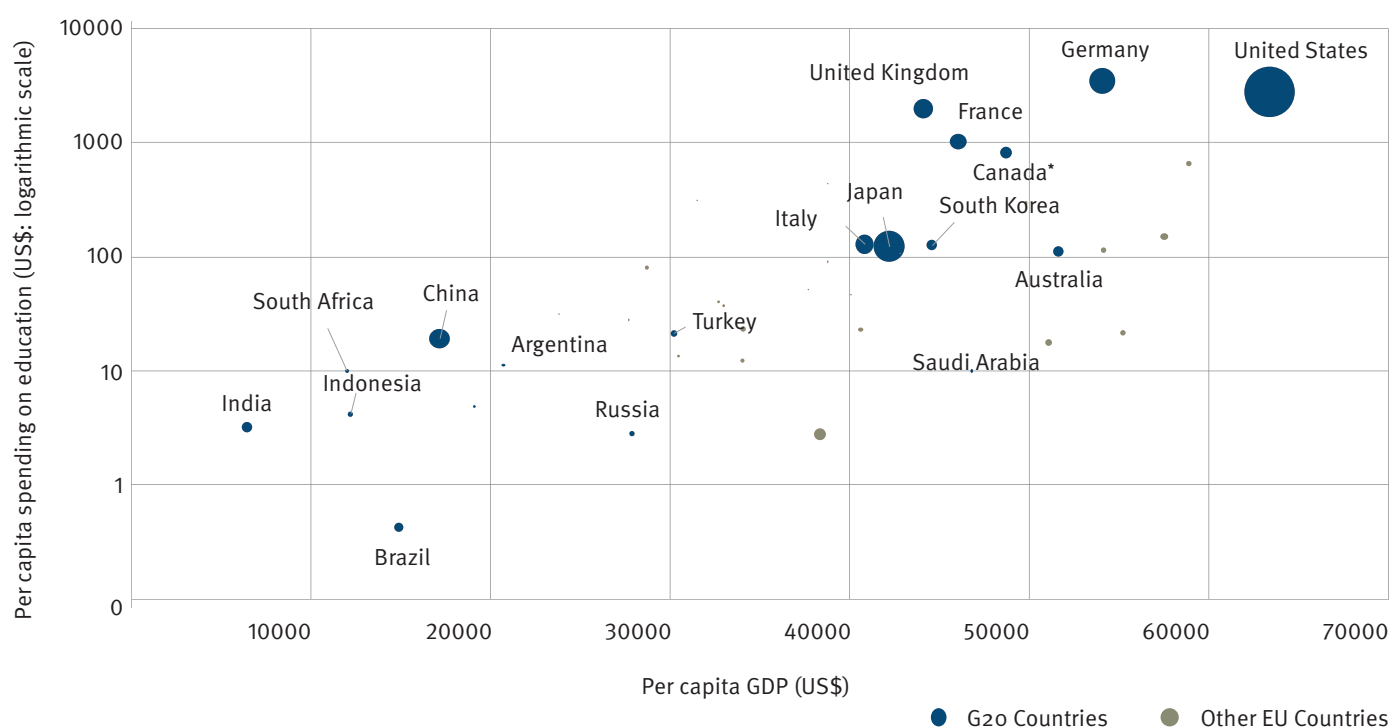
Notes: The size of the bubbles represents total per capita spending under the stimulus packages, while the Y-axis represents per capita spending on education. These figures are based on desk research. Total spending on education stimulus packages per capita may be higher than shown.
*In Canada, this issue varies across provinces and territories, as education funding is under the responsibility of each province/territory.
Source: UNESCO, 2021.

3. Organizing blended education

The shift to distance teaching and learning has been the key immediate policy response to ensure the continuity of education despite school closures. Blended education, relying on a combination of in-school and remote teaching and learning, has emerged as a common model across education levels.[5] This section first displays results of a joint UNESCO-UNICEF-OECD-World Bank survey of blended education modalities, before listing policies and programmes implemented in G20 countries, based on the survey organized by the Italian Presidency of the Education Working Group.

3.1. Modalities of blended education delivery

The COVID-19 pandemic has been a testing ground for the digitalization of education delivery. Over the past year, governments worldwide have made extraordinary efforts to rapidly respond to learning disruption: The massive school closure due to COVID-19 has dramatically increased the utilization of distance education modalities. Countries have been adapting and using a

wide range of technologies to deliver distance education throughout the pandemic. These technologies include high-tech solutions based on the internet, and lower-tech solutions relying on printed material, radio, television and DVDs or CD-ROMs.

G20 countries employ a mix of distance education modalities. Online education and television, which reach 80 to 90 per cent of the school-aged population across G20 countries, are the most common modalities, far ahead of take-home materials and radio (**Figure 3**).

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[5] Blended learning is understood as a hybrid approach that combines learning in school with distance learning, including online learning. Blended learning is a flexible model that can support a project or course of study to progress while not requiring teachers and learners to be in the same physical space at all times. On a practical level, this is useful for times when attending a school site is not possible, or when other sites are more appropriate for the learning approach. It demands a careful consideration of pedagogical approach by requiring decisions to be made about how and when to best use the different environments for independent study, collaborative enquiry, social interaction and practical application. It encourages a review of what the school site is and can be for the learner and its community, and how in-school time is best utilised. It also prompts a review of national and school curricula as the expectations set down for learner competences affect the design of pedagogical approach, including assessment. See European Commission, *Blended Learning in School Education. Guidelines for the Start of the Academic Year 2020/2021*, June 2020.

Figure 3: Modalities of distance education delivery in 2020–21 (percentage of the school-aged population)

Source: Joint UNESCO-UNICEF-OECD-World Bank survey.
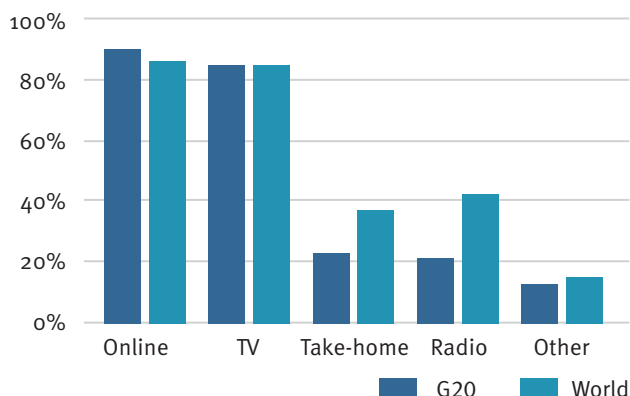
The coverage of the school-age population increases with education levels. Enrolment in pre-primary education is not universal across G20 countries, and distance education is least relevant to the learning needs of young children, hence a low coverage of that population, ranging from 25 to less than 40 per cent across modalities. Conversely, coverage is almost universal at upper secondary level, with 90 per cent of students reached either by online platforms or by television (**Figure 4**).

Figure 4: Use of distance education modalities by level of education (per cent)
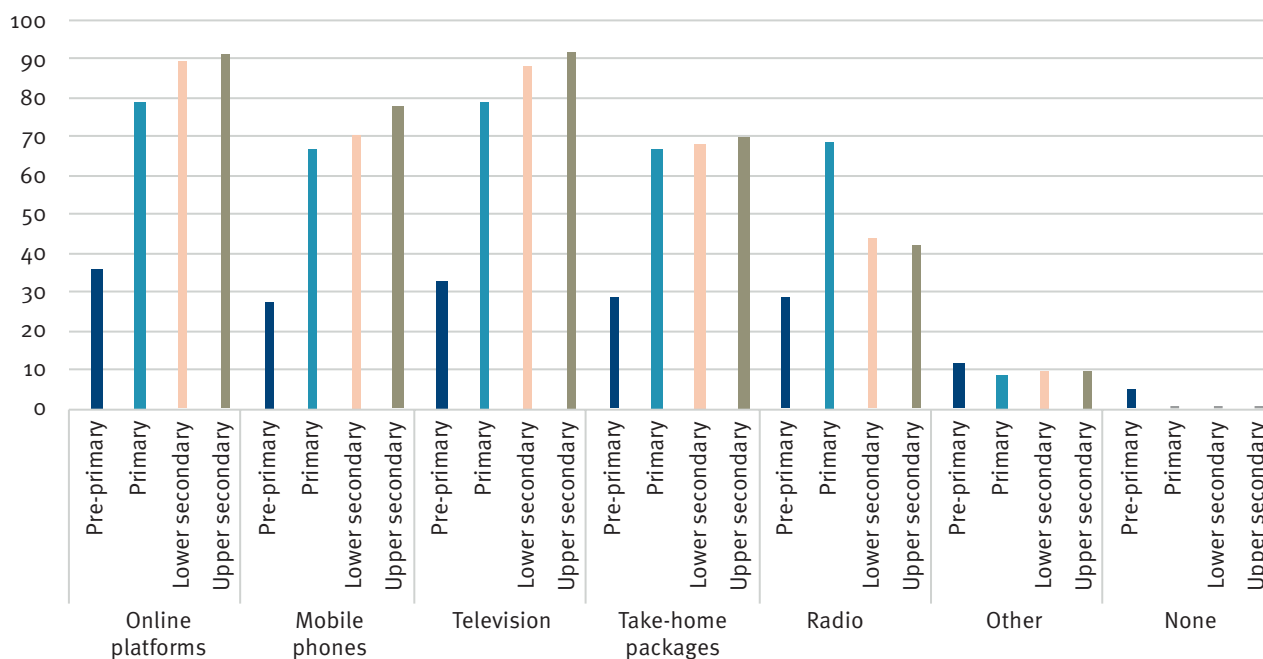
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

G20 countries have taken measures to ensure inclusion in distance education. By October 2020, almost 80 per cent of G20 countries were providing free or subsidized devices, and the same proportion were providing free or subsidized internet access (**Figure 5**). Many countries had adopted measures targeting children with disabilities; ethnic minority children; refugee, displaced or migrant children; or, more generally, children from poorer households or living in remote areas. Those included, first,

tailored teaching/learning materials, followed by improved infrastructure and flexible platforms (for instance, asynchronous learning platforms, allowing each learner greater flexibility and the freedom to advance at an individual pace, thus integrating varying learning habits. Other measures included using school facilities to support learners in need and those at risk of dropout and disengagement. (**Figure 6**).

Figure 5: Measures taken to facilitate access to distance education, October 2020
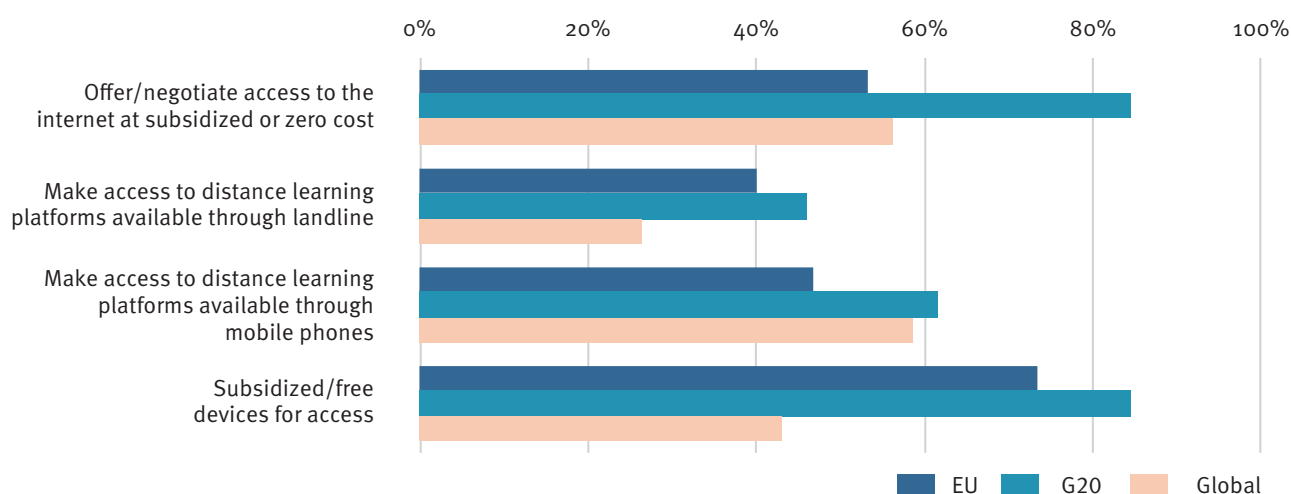
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

Figure 6: Measures targeting populations at risk of exclusion from distance education platforms, October 2020
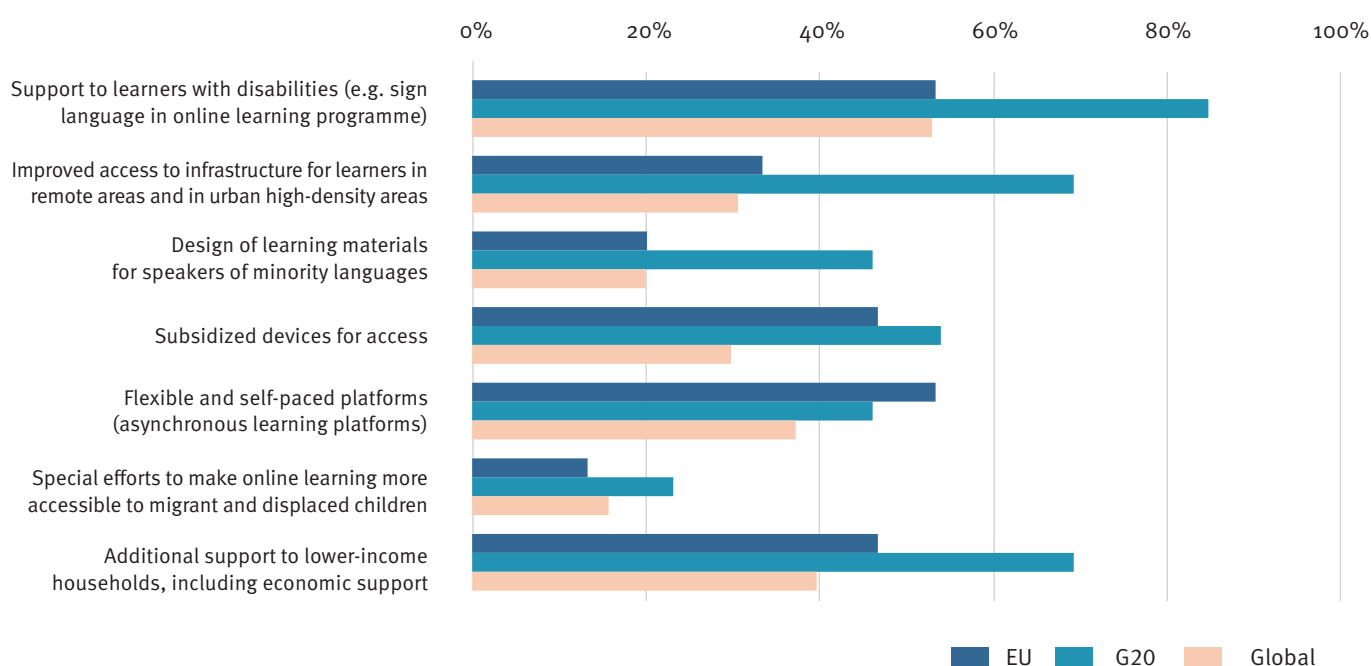
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

Countries transitioning towards remote teaching introduced support measures for teachers (**Figure 7**). Instructions on distance education for online platforms were most common and provided in 81 per cent of countries. A similar proportion of countries offered teachers professional, psychosocial and emotional support, including chat rooms and online forums to share ideas and educational content, as well as teaching content adapted to remote teaching. In the European Union,

92 per cent of countries provided teachers with teaching content adapted to remote teaching, compared with just 63 per cent among G20 countries including middle-income countries such as Turkey and South Africa. Just 70 per cent provided specialized training, which focused mostly on digital and ICT skills including using online platforms and remote teaching skills. ICT tools and free internet connectivity were the least common forms of support.

Figure 7: Types of support provided to teachers for remote teaching, 2020

Source: Joint UNESCO-UNICEF-OECD-World Bank survey.
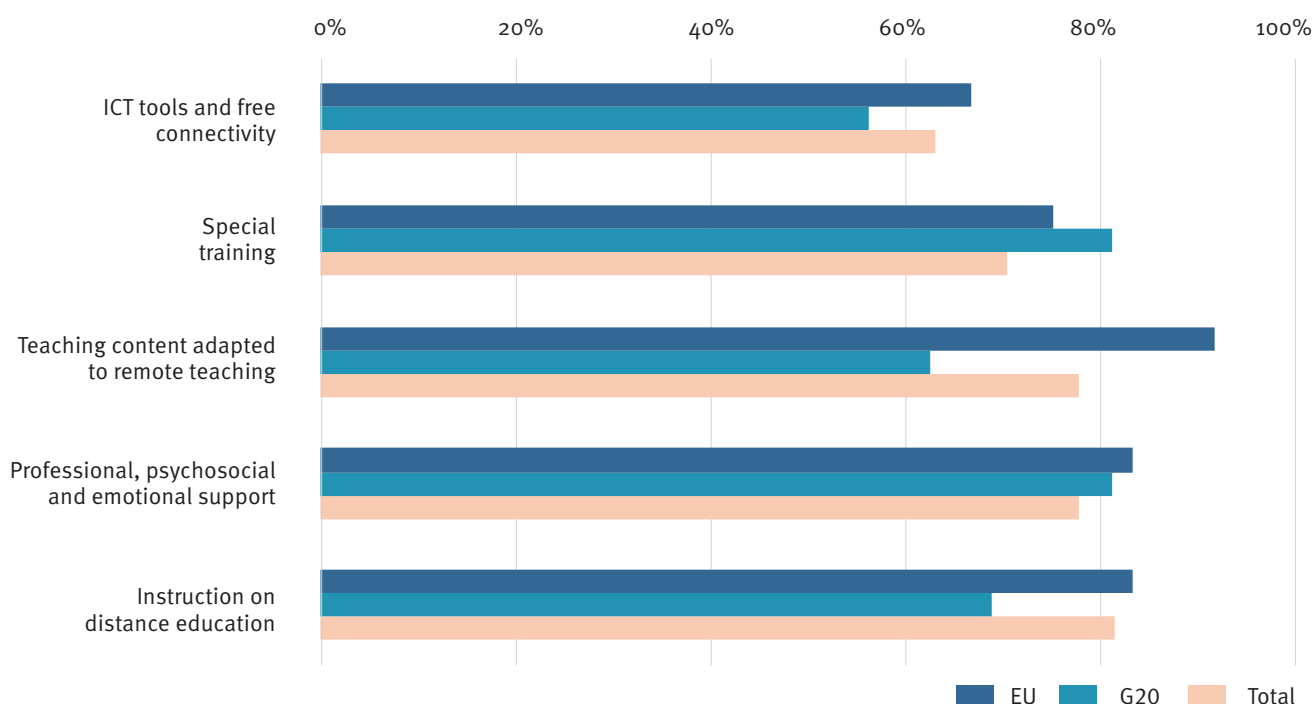
In almost all countries, teachers were required to teach during school closures, but they were not allowed to use school premises in several G20 or European Union (**Table 7**).

Table 7: Countries that permitted teachers to teach from school premises

Permitted	Not permitted
G20: Argentina, Japan, Republic of Korea, Saudi Arabia, United Kingdom	**G20:** Brazil, China, Italy, Mexico, Turkey, South Africa
EU: Austria, Belgium, Estonia, Finland, Latvia, Poland, Portugal, Romania	**EU:** Bulgaria, Ireland, Luxembourg

Note: In the Netherlands, teachers were encouraged to work from home. However, some teachers used primary and secondary school premises as the most vulnerable children and those with parents in crucial professions were allowed to attend school even during school closures. *Source:* Joint UNESCO-UNICEF-OECD-World Bank survey.

ICT played an important role in monitoring students and keeping track of their learning (**Figure 8**). Email was the main means of communication, used in three-quarters of G20 countries. Phone calls and texting applications were also encouraged widely. Home visits was the least common form of interaction, encouraged in just 3 out of 10 countries. As a group, ICT-based solutions were somewhat less common across G20 countries. In fact, 4 out of 10 countries in the G20 encouraged home visits as a form of interaction.

Figure 8: Forms of interactions encouraged between teachers and students/parents, 2020
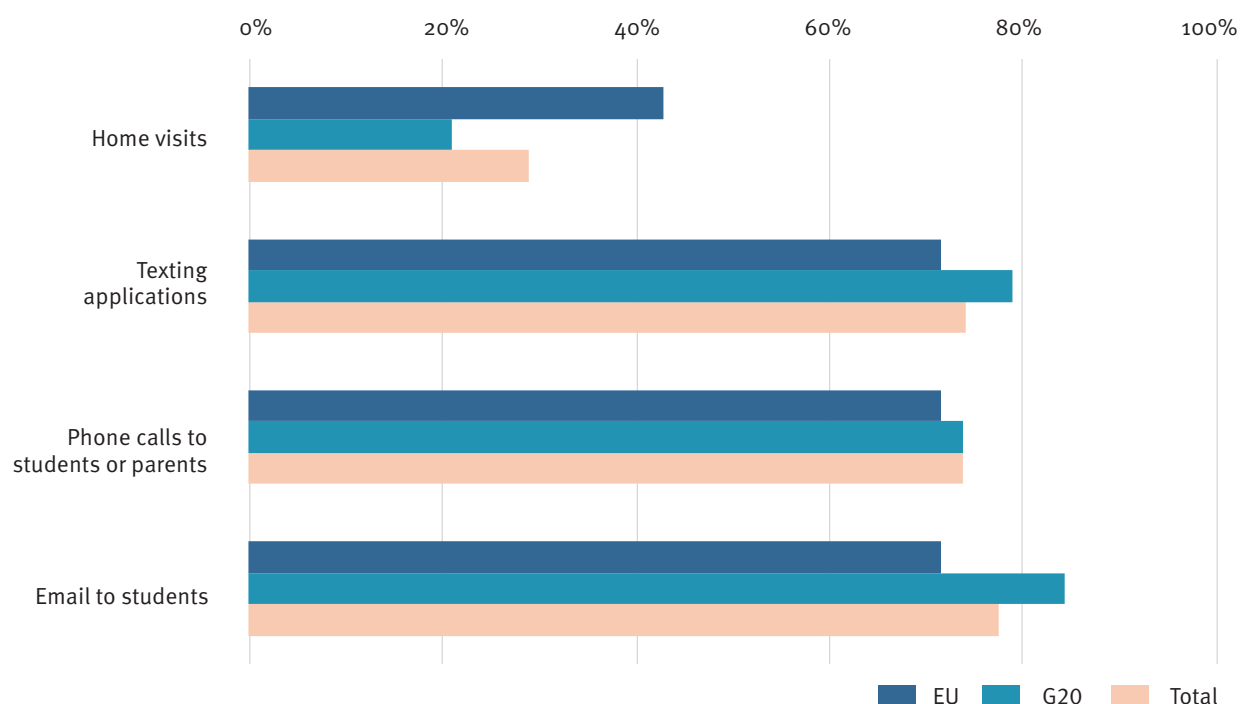
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

G20 countries perceive distance education to be fairly effective in compensating for school closures. By July 2020, more than 80 per cent considered remote learning the equivalent of official school days, and about two-thirds were planning to keep using distance education even after schools would have reopened (**Figure 9**). G20 countries plan to measure learning losses, mostly through school-level assessments (**Figure 10**). Measuring the extent to which the digital divide shapes the distribution of learning losses in the population should be a key topic for these assessments.

Figure 9: Perceptions of remote learning in G20 countries, July 2020
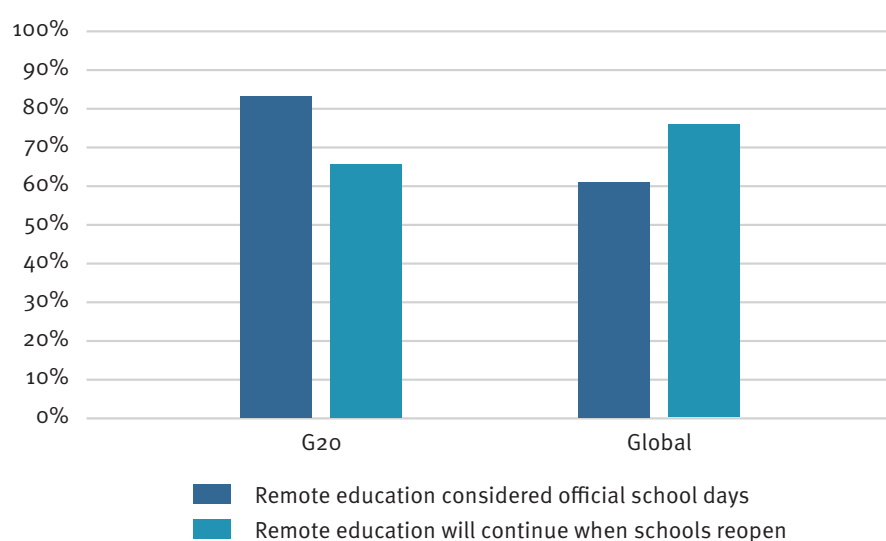
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

Figure 10: Approaches to student assessment following school reopening

Primary

Lower secondary

Upper secondary

EU   G20   Global
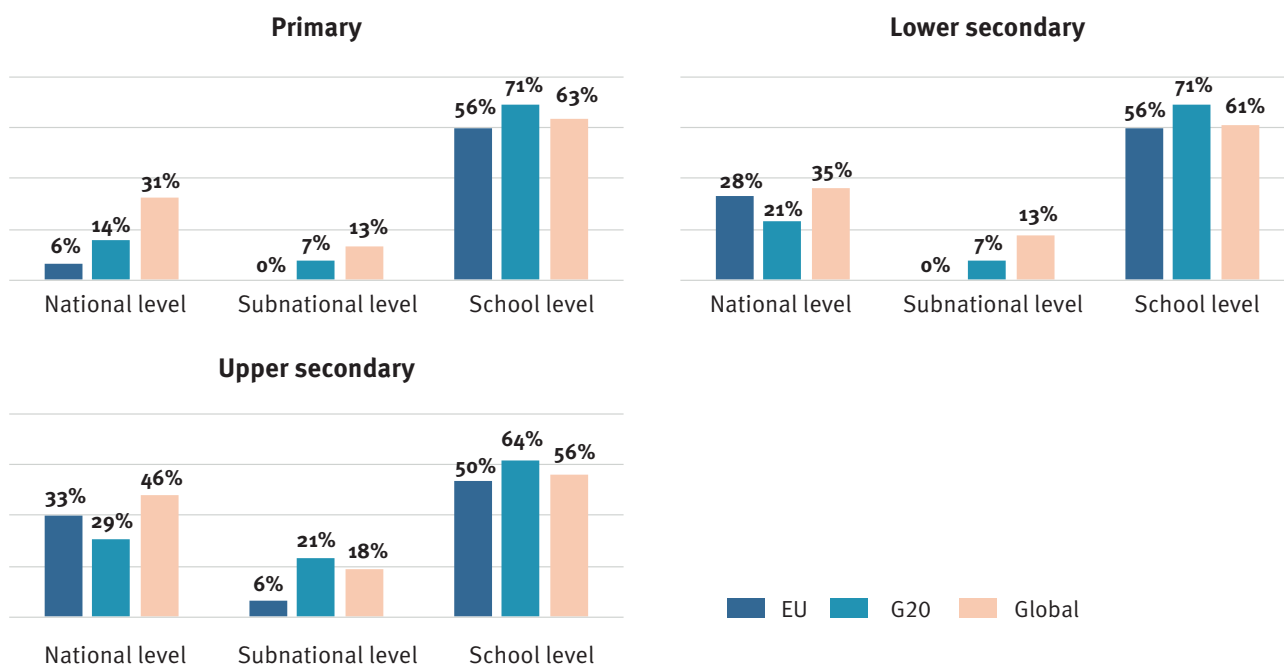
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

Compared with the EU and the world, G20 countries prioritize increasing in-person class time as a strategy for catching up the lost learning rather than organizing additional remedial or accelerated learning programmes (**Figure 11**).

Figure 11: Types of additional learning support programmes

Increased in-person class time

EU   G20   Global
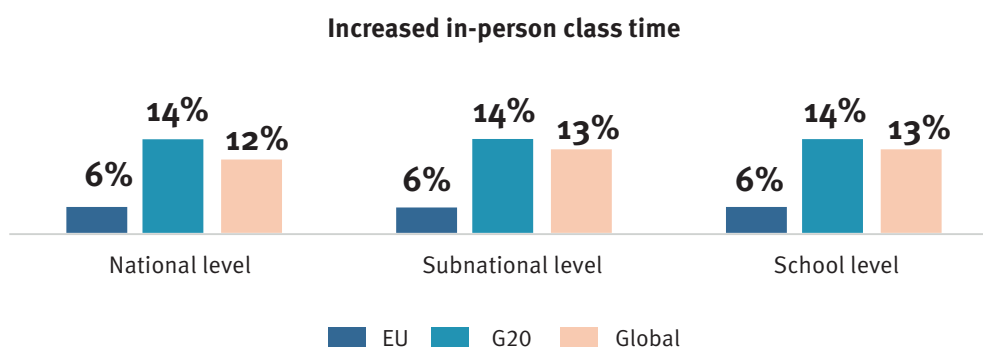
Source: Joint UNESCO-UNICEF-OECD-World Bank survey.

3.2. Inventory of blended education programmes in G20 countries

Organizing blended or fully remote education, first in a situation of emergency, then over periods of several months now extending over at least two academic years, has been a challenge for education authorities in G20 countries. Many decisions needed to be taken rapidly to avoid a disruption of learning. According to a toolkit produced by UNESCO in cooperation with consultancy firm McKinsey, from March to October 2020, involving ministries of education all over the world, organizing blended education implies an ex-ante evaluation to be structured in three areas:

1. Assess the needs and capabilities: define guiding principles, assess students' needs for remote and in-person learning, assess the accessibility and effectiveness of current remote learning solutions, assess teacher capacity, assess availability of physical space for in-person learning, assess availability and flexibility of support levers (e.g. transportation, cleaning and budget).

2. Determine the blended education model: decide whether to distribute capacity evenly or prioritize certain segments, decide which grades to prioritize for in-person learning, decide whether certain vulnerable groups should be brought back irrespective of grade, define a blended education combination considering the school system context, decide how to phase in more students over time as epidemiological conditions improve.

3. Operationalize the blended education method for each grade level: decide which subjects should be studied remotely, and which ones prioritized for in-person learning, determine which learning activities should be prioritized for in-person learning, determine optimal distribution of blended education across age and subjects, organize a shift system that distributes access to in-person learning among students (e.g. half days), define the teacher allocation model between learning methods, and fill capability gaps to enable delivery of quality hybrid learning.

As the pandemic rages on and a continuation or resumption of school closures cannot be ruled out, G20 countries are investing in programmes that will strengthen and sustain blended education. This is necessary to ensure the continuity of education and the inclusion of all learners, especially those from disadvantaged backgrounds. Blended education is bound to remain relevant in the post-COVID-19 world, for instance in situations of emergencies, or to facilitate access to specific curricula that may be difficult to provide universally through the physical school infrastructure.

The Italian Presidency therefore chose blended education, made possible by the spread of digital technologies, as one of the two priority themes for the G20 Education Working Group, seeking to identify innovative approaches, practices and tools. On 27-28 January 2021, participants in the first meeting of the G20 Education Working Group were requested to provide descriptive information on their policies and initiatives in the area of blended education, using a common template. Information was received about 114 different programmes, which constitutes a useful inventory for knowledge- and experience-sharing.

Three facts stand out from the analysis of the templates. First, the COVID-19 pandemic accelerated the implementation of public policy interventions that were already developed to leverage the power of digital technologies for education. Second, G20 countries chose to devote more than one policy to the promotion of blended education, with a view to regulating all the different areas that come into play in the implementation of blended teaching and learning. This holistic vision has probably favoured the construction of partnerships that accompany the different policies and initiatives, primarily with those central administrations dealing with digital technologies. Third, the level of articulation of policies and initiatives for the promotion of blended education is broad, reflecting those different areas of intervention that ensure the quality growth of education systems in terms of educational success, level of acquired skills, equal opportunities and inclusiveness.

The 114 programmes documented by G20 countries fall under five thematic areas, which are detailed below.

1. Improving access, inclusion and connectivity

2. Creating dedicated education platforms and producing digital teaching and learning materials

3. Using lower-tech media to reach disadvantaged groups

4. Training teachers and school leaders

5. System-level interventions.

1) Improving access, inclusion and connectivity

As schools closed and nations went into lockdown at the onset of the COVID-19 pandemic, governments worldwide responded by launching plans to protect the continuity of education – principally through policy measures and earmarked resources to increase the availability of digital and technological devices (tablets, computers and netbooks, etc.), but also studying more deeply the question of connectivity to educational services from home and outside of schools.

One year later, the COVID-19 pandemic continues to put the issue of free and fair access to educational technologies, and access to online learning, under scrutiny. Not only can some students not afford digital devices, but many of them live in low-income, rural or remote areas with limited access to telecommunication networks. Thirteen countries documented 31 interventions in this area, providing or improving connectivity in geographical areas not yet covered by the internet, providing cloud services, offering free mobile traffic or free internet, or supplying free hardware (computers or tablets) (**Table 8**). Notice that, besides issues of access to digital devices or connectivity, many students face housing or living conditions that are not conducive to distance learning.

Table 8: Improving access, inclusion and connectivity

Country: Argentina

Title: Plan Federal Juana Manso (Federal Plan Juana Manso)

Short description: The Federal Plan Juana Manso comprises actions for ICT to ensure the continuity of education in emergency situations. One of its remits is the distribution of netbooks for students and the offer of broadband and other alternatives when connectivity in schools is an issue.

Country: Federative Republic of Brazil

Title: Expansion of Online Learning in Federal Public Institutions (REUNI DIGITAL)
Implementer: Federal government   **Beneficiary group/s:** Learners in higher education institutes

Short description: Creating a Federal Digital University (UFD), and online learning opportunities within federal public institutions (REUNI DIGITAL), is a priority of the federal government. As highlighted by the 2019 Census of Higher Education, the number of people accessing distance training in the public system in Brazil is still low, with a rate of 5.8%. The aim to expand digital access to learning has gained even greater urgency given the learning disruptions due to the COVID-19 pandemic. The project thus sets out to support and reconfigure how distance education in Brazil is organized through the network of Federal Institutes of Higher Education (IFES).

Country: Federative Republic of Brazil

Title: Amazônia Conectada Project   **Implementer:** Government
Beneficiary group/s: Public education at all levels   **Target coverage:** 50 cities and 4.5 million people

Short description: The Amazônia Conectada Project is an infrastructure initiative supporting public education at all levels, alongside promoting health and sustainable development, for the most remote Amazonian populations. The project was developed by the Brazilian army with the support of the Ministries of Defence, Health, Education and Communications. The target is to install around 8,000 km of sub-river fibre optic cable along the rivers of the Amazonas region providing an efficient and reliable internet connection to more than 50 cities and 4.5 million people.

Country: Federative Republic of Brazil

Title: The Connected Students project   **Implementer:** Government
Beneficiary group/s: Vulnerable students within Federal Higher Education Institutions (IFES) and Federal Institutes of Education, Science and Technology (IFS)

Short description: The Connected Students project sets out to provide and monitor data packages in Personal Mobile Services (SMP) for students within Federal Higher Education Institutions (IFES) and Federal Institutes of Education, Science and Technology (IFS). The project has been developed as an immediate response to COVID-19, and especially benefits vulnerable students so that they can continue to access education contents online. It includes two types of strategic action: (i) support for IFES students in vulnerable socio-economic contexts so that, thanks to internet data plans compatible with the development of their academic activities, they can access teaching contents remotely; (ii) monitoring and controlling credits granted to students participating in the initiative.

Country: Federative Republic of Brazil

Title: Donation of information technology equipment to the Institutions of the Federal Network of Professional, Scientific and Technological Education   **Implementer:** Federal Public Administration
Beneficiary group/s: Students living in economically disadvantaged territories

Short description: The Federal Public Administration is supporting strengthened digital access through periodic transfers of working computer equipment to public education institutions of the Federal Network. These institutions then make it available to vulnerable students living in economically disadvantaged territories. The main objective is to reduce the impact of the pandemic on their lives through the donation of computers.

Country: Canada (Ontario)

Title: Policy/Program Memorandum No. 164: Requirements for Remote Learning
Implementer: Provincial government **Beneficiary group/s:** School boards

Short description: This memorandum provides specific direction to Ontario school boards on requirements for remote learning, including implementation and reporting, for times of extended interruption to conventional in-person learning. The requirements aim to support all students in receiving a consistent approach to remote learning. It also identifies effective support practices that school boards should develop – including providing technical support and educator training and using standardized platforms, and setting out roles and responsibilities. It also specifies that school boards are expected to provide remote learning devices and internet connectivity to students who do not currently have access to them, and to develop policies on how these resources will be allocated on an equitable basis. The memorandum also provides additional guidance for students with special needs.

Country: Canada (Ontario)

Title: Broadband Modernization Program   **Implementer:** Provincial government
Beneficiary group/s: Students from kindergarten to Grade 12

Short description: The Broadband Modernization Program aims to modernise e-learning opportunities and support students' access to the virtual learning environment wherever educational resources are available. It is understood that, with fast and reliable internet, students can access materials that are not readily available locally, connect with experts, collaborate on projects with students from all over the world, and, in turn, develop their digital skills. Modernization has so far been completed in 22 school boards, while work is under way to connect any school boards that have not been reached yet.

Country: Canada (British Columbia)

Title: Supporting students with additional needs and ensuring inclusive education during COVID-19

Implementer: Provincial government   **Beneficiary group/s:** Students with complex medical conditions, students with disabilities and diverse abilities, Indigenous students, and students who require more support in school

Short description: A website, COVID-19 Return to School, has been created to share information and useful resources for parents and students during the 2020/21 school year. It contains information on the support available to students with complex medical conditions, with disabilities and diverse abilities, and Indigenous students. It also offers information on how inclusive education is ensured.

Country: Canada (Nova Scotia)

Title: New Computers, Technology for Students   **Implementer:** Provincial government

Beneficiary group/s: Students in elementary and secondary schools without or with limited access to digital devices

Short description: As part of Nova Scotia's "Back to School Plan" for the 2020/21 school year, the province planned a roll-out of equipment for students without or with limited access to a digital device. Over 14,000 new and refurbished devices were ordered for autumn 2020. In November 2020, the Nova Scotia provincial government announced a further investment of $21.5 million in new computers and technologies. The province planned to buy up to 32,000 new Chromebooks so that students can learn from home, if needed. Schools throughout the province also received enhanced Wi-Fi, servers and routers to increase the capacity of teachers to support students learning remotely.

Country: Canada (Newfoundland and Labrador)

Title: Investing in Technology to Support Digital Learning   **Implementer:** Provincial government

Beneficiary group/s: Teachers and students in lower and upper secondary

Short description: The Newfoundland and Labrador provincial government has invested $20 million in the purchase of laptops for all teachers and Chromebooks for all students in lower and upper secondary throughout the K-12 education system. Devices were distributed as soon as they became available through a public procurement process. The investment ensures equal access to education so that each student, regardless of their ability, where they live or their socio-economic status, can continue learning outside the classroom, while providing teachers with the tools they need to provide distance education effectively. The project is part of efforts to modernize the K-12 system towards a true digital learning environment.

Country: Canada (New Brunswick)

Title: Investments in digital devices and internet services to support home learning

Implementer: Provincial Government   **Beneficiary group/s:** Students who do not have access to internet at home and/or in need of digital devices to learn from home

Short description: In order to support more equitable access to learning at home, the New Brunswick Department of Education and Early Childhood Development invested $860,000 to acquire 1,000 iPads with data plans, 500 laptops and 300 MiFi Hubs. The department worked with school districts and teachers to reach families of students and understand what types of technologies are already available for individual students at home. The measure will last a year and will be reviewed when the pandemic is over. During the spring 2020 school closures, schools and school districts also lent technology to students who needed it to support remote learning.

Country: Canada (Northwest Territories)

Title: COVID-19 Technology Grant; COVID-19 Support Grant
Implementer: Territorial Government   **Beneficiary group/s:** Post-secondary students

Short description: Two new grants are available for all post-secondary students accessing full-time Student Financial Assistance (SFA) benefits in the 2020/21 academic year to address the realities they face with the transition to online learning and COVID-19 impacts. This is part of the government's COVID-19 economic relief measures. The Technology Grant is a one-time grant of $750 to offset the cost of computers, printers, scanners, tablets, etc. The Support Grant provides an additional $100 monthly for this academic year to assist with additional costs, such as internet expenses.

Coutry: Canada (New Brunswick)

Title: 'Bring your own device' policies   **Implementer:** Provincial Government
Beneficiary group/s: Students and teachers in all high schools

Short description: For the 202/21 school year, high school students are expected to bring their own electronic devices to school as part of a shift towards a more personalized, collaborative and tech-based model of learning. The Department of Education and Early Childhood Development is currently investing 7 million CAD to improve equitable access to technology and putting 5 million CAD towards infrastructure to support new learning models. These infrastructure investments will support the need for increased connectivity and digital collaboration. They include plans to boost access points in schools and upgrade school firewalls and bandwidth. The new approach allows students to use devices they already own while modernizing the way in which they learn and interact. It also allows teachers the freedom to use technology to innovate and enhance the student learning experience.

Country: France

Title: Digital Educational Regions (Les territoires numériques éducatifs)
Implementer: Government and local authorities   **Beneficiary groups:** Learners, teachers, parents

Short description: Launched in two French local authorities in September 2020 (EUR27.3million for Aisne and Val-d'Oise) and extended to 10 more departments in September 2021 through a funding programme "For the Future", each training and equipment scheme aims to be adapted to the local needs and contexts so as to: **improve educational performance through an integrated, proactive policy:** run training programmes for teachers and parents; make teaching resources and equipment available (to pupils, classes, resource centres, teachers) to create a lever effect on the education system as a whole; **ensure pedagogical continuity** in times of crisis by ensuring teaching and learning continuity, but also at any time by better supporting pupil's individual working times in a coordinated approach; **contribute to reducing the digital gap** and continue the general aim of social justice in schools; **measure the impact of mastering digital education** on the professional actions of teachers and on pupils' learning; **prove that certain learning resources are robust** and demonstrate their effects on teaching and learning, in line with the research. In order to make distance teaching and learning easier, "digital" kits will be given to the pupils, teachers and schools participating in the project. These "digital" kits will make it possible to implement educational scenarios and hold special events when used in classrooms. At home, they will help teachers to prepare courses for their class and enable pupils to learn the lessons seen in the classroom. Of course, the sustainable development has not been forgotten, since 700 refurbished computers were used in the first phase of the scheme.

Country: Federal Republic of Germany

Title: Corona-Hilfe I: Sofortausstattung   **Implementer:** Federal Government
Beneficiary group/s: Learners without digital devices at home

Short description: Not all parents are able to buy their children a mobile device for digital learning at home. A federal investment initiative is strengthening the 'Digitalpakt Schule' ensuring that all pupils have access to distance learning through the necessary digital devices. The Federal government (on the basis of the coalition committee) provides 500 million euros, and the Länder 50 million euros, for students who do not have learning devices at home. The Länder are supervising the practical implementation of the initiative (procurement processes, device setup, additional equipment, etc.). The initiative will be fully implemented by the end of 2021.

Country: Republic of Indonesia

Title: Subsidy of internet data package   **Implementer:** Government
Beneficiary group/s: Learners from early childhood to university level, teachers and education staff

Short description: This subsidy initiative is helping to finance an internet data package to students, from early childhood to university, teachers and educational staff. The data package consists of two components: 1) general fee that can be used to access all websites and applications; 2) learning fee that can only be used for learning on certain websites and applications. The programme was launched in September 2020 and is expected to continue until May 2021 with the aim of ensuring the sustainability of the education system during the COVID-19 pandemic.

Country: Japan

Title: GIGA School Programme

Short description: In order to improve ICT environments in all schools, the Japanese Ministry of Education provides one computer per student. It is hoped this will lead to "personalized and self-regulated learning" as well as "collaborative learning" for all students in elementary and secondary schools.

Country: The Republic of Korea

Title: Priority Project for the Welfare of Education and Online Education
Implementer: Government, local education authorities
Beneficiary group/s: Students from low-income and disadvantaged backgrounds

Short description: The Korean Ministry of Education has provided tailored educational support for students, including those from disadvantaged backgrounds, to facilitate online education during the COVID-19 pandemic. In the first semester of 2020, 283,000 digital devices were provided, followed by 263,000 digital devices in the second semester to students in need. In addition, from April to December 2020, Korea adopted the zero-rating policy to make mobile data free of charge for educational websites. In addition, through the Priority Project for Education Welfare, which puts educational welfare workers in schools densely populated with disadvantaged students, tailored support for vulnerable students was provided. As a result, emergency supplies and learning packages were offered to students, and online learning was supported by providing digital devices and guidance on how to use them. As of 2020, 330,000 students from all 17 metropolitan and provincial offices of education benefited from this service.

Country: The Republic of Korea

Title: Project for Supporting Disadvantaged Groups   **Implementer:** Government
Beneficiary group/s: Students from disadvantaged backgrounds

Short description: Students from low-income families without digital devices (e.g. educational grant recipients) as well as those from families with multiple children, single-parent families, families in which primary caregivers are grandparents and those from multicultural families were given priority in borrowing digital devices from their schools. In addition, tailored support was provided to disadvantaged students who had difficulty participating in online classes. Multicultural students were guided to use various online content, including video content for Korean language classes (222 classes in 2020; 96 classes in 2021). Not only that, the Central Multicultural Education Center and the regional multicultural education support centers under the 17 metropolitan and provincial offices of education worked together to develop parent notices in multiple languages to distribute to multicultural households. In order to provide tailored educational support to students with disabilities, an "online learning site for students with disabilities" was established. A total of 4,247 teaching and learning materials were produced for different types of disability needs, and the government covered the cost of data usage incurred by using the site. In particular, for students with disabilities who have difficulty participating in online classes, learning packages were offered by considering the type and degree of their disability needs. Also, 1:1 or 1:2 in-person education (at school or home) was also offered.

Country: Russian Federation

Title: "Modern Digital Educational Environment" State Information System
Implementer: Ministry of Science and Higher Education
Beneficiary group/s: Students, higher education teachers, employees seeking further educational opportunities, professional development and new qualifications

Short description: The State Information System, which was created in 2017, aims to ensure virtual academic mobility and educational networking through the collection, processing and provision of up-to-date information on online higher education courses and programmes, as well as credit transfers for online courses and verification of learning outcomes. The system currently offers access to nearly 2,000 online courses, more than 140 different higher education institutions and 47 education platforms. This includes reviews and quality assessments of online courses, as well as electronic workflows to facilitate joined-up decision making. Up to now, the system has provided more than 7,330,000 educational sessions for more than 3 million people. The implementation of this system has improved significantly since the onset of the pandemic and will continue its development plan until 2024.

Country: Kingdom of Saudi Arabia

Title: Madrasati Platform (Ensuring accessibility to all students)

Short description: The national Learning Management System of the Ministry of Education (Madrasati Platform), launching in August 2020, targets more than 6 million users (98% of students) in all governorates and provinces of the kingdom. Madrasati "My School" was developed to ensure the continuity of education under the motto "my school is my home". One of the principles aiming to mitigate the challenges emerging from the pandemic is ensuring students, teachers, education staff and parents have equitable access to distance education, learning and training, regardless of their geographical location, income or physical abilities thus enhancing equalities among them and preventing early school dropout due to poverty. The Ministry of Education has worked on securing internet services to students, teachers and educational staff, enhancing infrastructure capacity and platforms, including provision of free access to educational sites hosting distance education platforms by listing these domains under the free access listings. Parents, school administrators, counselors, and educational supervisors have access to Madrasati based on their educational needs and responsibilities. It has been proven that the Ministry of Education has overcome the challenges in association with distance education by achieving the following long-term objectives: 1-providing free education opportunities to all learners. 2-enhancing education efficiency. 3-decreasing school fees and transportation costs. 4-improving learners' outcomes. 5- supporting remote learning and teaching process. 6- improving students and teachers' digital skills.

Country: Kingdom of Saudi Arabia

Title: Madrasati Platform (Reduction of digital divide)   **Implementer:** Ministry of Education
Beneficiary group/s: K-12 students, teachers and educational staff

Short description: The Ministry of Education decision- and policymakers launched an integrated programme comprising several initiatives to address challenges of distance education aimed at ensuring equitable access to the internet and learning platforms. To combat the digital divide during the pandemic, the ministry implemented initiatives to mitigate the unprecedent challenges targeting students and teachers. For example, the Ministry of Education, in partnership with the Takaful Charity Foundation, has provided support to low-income families by providing laptops, tablets and free internet connectivity to thousands of students in need. The ministry has ensured the continuity of the education process, providing high-quality distance teaching and learning to all students and ensuring education opportunities to residents in remote areas. Students' lack of computers was resolved by providing more options (discussed in the section on Satellite Broadcasting Channels) for education that do not require computers. Internet services were facilitated to overcome technical hitches and obstacles that may hinder students learning. Readiness to adopt distance learning was achieved by providing training sessions and materials, usage guides, educational messages, and videos to help educate and prepare all stakeholders to accept and use distance education platforms and other available options positively. The infrastructure capacity was enhanced by utilizing the cloud services to host the unified education system to ensure quality performance and serve significant number of users.

Country: Singapore

Title: Making Blended Learning a key feature of the schooling experience

Short description: Blended Learning is supported by the Ministry of Education. It mixes traditional methods of learning with educational technology such as the Singapore Student Learning Space (SLS) and device provision through Singapore's National Digital Literacy Programme. The latter will ensure that all secondary school students own personal learning devices such as a tablet or computer by the end of 2021.

Country: Turkey

Title: Free Data Packages   **Implementer:** Ministry of Education
Beneficiary group/s: Disadvantaged learners

Short description: At the beginning of the COVID-19 pandemic, the Ministry of National Education signed protocols with the country's mobile phone operators to provide 8GB of free data, enabling use of the national online learning platform (EBA). Since the contents of the EBA are compatible with smartphones, this data package is helpful for students with no access to computers, or who must share their computers with siblings. While all students can benefit from this initiative, its impacts are greatest for disadvantaged students.

Country: Turkey

Title: EBA Access Points   **Implementer:** Government
Beneficiary group/s: Disadvantaged students in grades 1-12

Short description: An Access Point is a classroom observing COVID-19 related health and sanitation protocols with free internet access for disadvantaged students in grades 1-12. The students are usually experiencing difficulties in accessing online learning due to their lack of computers or internet at home. Some 15,277 access points have so far been established in schools, public training centres and other institutions. To reach outlying and rural areas, buses have also been adapted to create mobile Access Points, of which there are currently 175. During a three-month period (September-November 2020), around 420,000 Turkish students and 25,000 refugee students benefited from Access Points and 38,000 students benefited from mobile Access Points in the period to 22 January 2021.

Country: Turkey

Title: Free Tablet Computers with Free Data Packages   **Implementer:** Government
Beneficiary group/s: Students unable to participate in distance education due to their vulnerability

Short description: Since the onset of the pandemic, 500,000 tablet computers have been delivered to students with no computer or internet at home, students with special education needs, families with numerous children of school age and low income levels. Each tablet is provided with a 4.5G GSM SIM card and has a monthly 25 GB data package to be used for the online learning platform (EBA). An estimated 100,000 tablets were delivered to students by the end of February 2021, and this number is aimed to reach 657,000 by the third week of March 2021.

Country: Turkey

Title: Strengthening the infrastructure of the online learning platform of the Ministry

Short description: The online learning platform of the Ministry of National Education (EBA) has been strengthened to ensure that it provides uninterrupted service for distance education activities. Live-lesson capacity has also been increased on the platform: 250,000 live lessons can presently be held at the same time. Approximately 3 million live lessons are held on any given day.

Country: United Kingdom of Great Britain and Northern Ireland (Wales)

Title: The Hwb Edtech Programme   **Implementer:** Government
Beneficiary group/s: All schools in Wales/broader education groups

Short description: The Hwb EdTech programme has been in operation since 2012, providing broadband, digital infrastructure and cloud services to all schools in Wales. The programme has supported maintained schools and local authorities in upgrading their digital infrastructure, including the digital resources to support users engaged in remote learning – during the pandemic it has also secured MiFi connectivity and software which has allowed schools and local authorities to provide the necessary technology to support digitally excluded learners learning remotely. The Hwb platform has played a crucial role during the difficult period of the pandemic, offering access to a wide range of bilingual digital resources to support the delivery of the curriculum for Wales, along with support for key areas such as keeping safe online and well-being. Hwb has delivered a daily average of 50 logins per second allowing students and teachers access to centrally funded digital services including email and online learning tools. The platform itself has registered record daily usage with over 337,000 logins and 1 million page views per day – Hwb is available to all pupils and teachers in maintained schools, along with wider education stakeholders in Wales.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: Digital Inclusion   **Implementer:** Government
Beneficiary group/s: Primary, secondary schools and further education settings (years 3-13)

Short description: In England, through the Get Help with Technology programme, more than GBP 400 million has been invested in ensuring access to remote learning and online social care since the pandemic began for primary and secondary schools (years 3-11), academies, colleges (years 12-13) and other institutions of further education (FE). This includes the provision of over 1.3 million laptops and tablets to schools, trusts and local authorities for use by disadvantaged learners and young people. Over 100,000 families in England have also received support to get online through uplifts in mobile data and 4G wireless routers. Work has also been undertaken to ensure that every school has access to free and effective technical support to set up on Google for Education, or Microsoft Office 365 Education, offering peer-to-peer training and support from schools and colleges leading the way with the use of technology and, working alongside the Department for Digital, Culture, Media & Sport, to accelerate the roll-out of full fibre internet connectivity to schools.

Country: United Kingdom of Great Britain and Northern Ireland (Scotland)

Title: Digital Inclusion   **Implementer:** Government
Beneficiary group/s: Primary and secondary schools (years 3-13)

Short description: In Scotland, the government has invested GBP 25 million to address digital exclusion, with a further GBP 45 million made available to local authorities to further support distance learning. Funding is allocated proportionately to each of the 32 local education authorities through a formula based on levels of deprivation and rurality. This financing may be used to provide devices, improve connectivity, hire additional staff or provide support to households. Eligibility criteria are left relatively open for local authorities (children and young people who do not have access to an appropriate device and/or internet connectivity to undertake remote learning). To date, around 70,000 devices and 14,000 connectivity packages (MiFi units and data SIMs) had been distributed to learners across every local authority area.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: Digital Teaching and Learning Review   **Implementer:** Government
Beneficiary groups: Learners in higher education institutions

Short description: A report titled 'Gravity assist: Propelling higher education towards a brighter future' was published in February 2021. The report presented a model for the effective delivery of digital teaching and learning that could be used by any higher education provider globally. The report gave a series of practical recommendations for higher education providers based on this model. On access, inclusion and connectivity, the report presented specific recommendations and a clear definition of digital access made up of six components which could be used by any higher education provider or government globally to measure progress on tackling digital access.

Country: United States of America (Connecticut)

Title: Everybody Learns Initiative   **Implementer:** State Government of Connecticut
Beneficiary group/s: All learners in the public school system

Short description: The Everybody Learns Initiative, launched by the State of Connecticut in 2020, aims to ensure that all students have access to a computer and an internet connection at home. The funding, which comes from the state portion of the federal CARES Act, the Governor's Emergency Education Relief Fund and the Elementary and Secondary School Emergency Relief Fund, has been used to purchase 50,000 laptop computers for learners and 12 months of internet access at home for 60,000 students. Free public hotspots have also been created at 200 community sites in addition to the provision of emotional-social learning contents to school districts across the state. In December 2020, 141,000 laptops were delivered to students PK-12. At the end of January 2021, the Commission extended the necessary technological resources to meet the needs of families during the 2020/21 school year.

Singapore is aiming to provide every secondary student in the country with a personal learning device by the end of 2021. Japan already does this. Ensuring that teaching and education staff have access to devices and quality online resources is a crucial part of the jigsaw puzzle. Saudi Arabia guarantees access to educational platforms for teaching staff by offering free connectivity and has partnered with a charitable foundation to make sure students in need do not miss out on learning because they have no IT devices. In Canada, some provinces and territories provide specific resources for parents and guardians to support students' learning while education is taking place remotely.

In the United States, the Everybody Learns Initiative, launched by the State of Connecticut in 2020, aims to ensure that all students have access to a computer and an internet connection at home. The funding, from the state portion of the Federal CARES Act, the Governor's Emergency Education Relief Fund and the Elementary and Secondary School Emergency Relief Fund, has been used to purchase 50,000 laptop computers for learners and 12 months of internet access at home for 60,000 students.

Reducing the digital divide is not merely a question of increasing access to suitable hardware, however, but also includes access to software and data (particularly if internet access is available only via mobile phone networks). In Brazil, the Connected Students Project sets out to provide and monitor data packages in personal mobile services (SMP) for students within Federal Higher Education Institutions (IFES) and Federal Institutes of Education, Science and Technology (IFS). In Turkey, each of the 500,000 tablet computers so far delivered to students with no computer or internet at home has been provided with a 4.5G GSM SIM card and a monthly 25 GB data package to be used for the online learning platform (EBA).

Support is also needed for households where parents and guardians may not feel comfortable or have insufficient knowledge to support remote digital learning. Learners who have become vulnerable or disengaged due to their isolation also need dedicated support. In British Columbia, Canada, a website, COVID-19 Return to School, has been created to share information and useful resources for parents and students during the 2020/21 school year. It contains information on the supports available for students with complex medical conditions, with disabilities and diverse abilities, and Indigenous students.

These interventions contribute to bridging the digital divide, among other dimensions of socio-economic inequality affecting learners. They will provide the neces-

sary infrastructure for continued use of remote education after the pandemic is over, to the extent countries decide to rely on this.

2) Creating dedicated education platforms and producing digital teaching and learning materials

Forty-seven programmes reported by 20 G20 countries relate to the creation of dedicated platforms and/or to the production of digital materials. Investment in dedicated platforms is the main tool through which both educational activities and educational content are conveyed, covering all levels of education, from early childhood care and education to TVET and higher education.

Activities and services include digital libraries, messaging, digital kits for classroom and home learning, digital extracurricular opportunities, educational offers for adults with certification, also accessible through smartphones and tablets, language courses, virtual workshops, MOOCs, teaching materials for students with special educational needs, virtual kindergartens, cyber education pedagogy, and artificial intelligence-based learning.

The rise of blended learning is witnessed across public basic education systems, but also in practical, hands-on areas of learning such as vocational education and training. Australia rolled out short online courses designed for students to reskill in areas of national value. In Turkey, the Ministry of Education website massively increased its capacity so that 250,000 live lessons could be held. The European Union takes the concept of blended learning a step further and has instituted what it calls "blended mobility" — meaning virtual learning combined with a physical component of education. In France, students and teachers alike are given "digital kits" which span school and home environments. And it is not just about how many students can connect and what they can learn, but the quantity of learning contents now available through online platforms. India's virtual capacity is impressive: the online storehouse DIKSHA holds more than 3,500 energized textbooks and has over 60 million daily hits. Its e-contents are available in 31 Indian languages.

These programmes (**Table 9**) also include activities to support distance learning for young people and guidance for parents, to strengthen participation in the intellectual development of their children.

Table 9: Creating education platforms and digital content

Country: Argentina

Title: Plan Federal Juana Manso (Federal Plan Juana Manso)

Short description: The Federal Plan Juana Manso covers ICT in education, but also establishes a federal educational platform which includes virtual classrooms, interchange networks (messaging and video calling) and a multimedia repository for educational content.

Country: Argentina

Title: Seguimos Educando

Short description: The Seguimos Educando programme is designed to accompany schools and educators. The pedagogical materials, resources and ideas on its multiplatform system are aimed at helping continue education in the context of the health emergency. TV content, booklets and digital materials are articulated to facilitate and promote access until normal class schedules resumes.

Country: Australia

Title: Short courses

Short description: As a response to the COVID-19 pandemic in 2020, the Higher Education Relief Package introduced short online courses for new students impacted by the pandemic. The short courses allow students to upskill or retrain in fields of national priority. In 2020, 55 higher education providers were reported to be offering 400 online short courses.

Country: Federative Republic of Brazil

Title: Tell Me a Story

Short description: Tell Me a Story is a complete literacy programme aimed at pre-school and first- and second-year elementary school children. Its measures were initially designed to combat learning problems, but have been revamped and revised to mitigate the impact of the COVID-19 pandemic. The strategies employed are similar to those successfully used in different international contexts (and inspired by a World Bank report titled "Educational Policies in the COVID-19 Pandemic: What Can Brazil Learn from the Rest of the World? "). One strategy is to encourage and guide parents towards greater participation in their children's development process by engaging with online resources and websites with free accessible content.

Country: Federative Republic of Brazil

Title: Promotion of new vacancies and technological education courses through distance education

Short description: The programme's main objective is to expand and open up vocational and technological education courses with face-to-face teaching as well as distance education offered via public and private vocational education networks. Thirty institutions of the Federal Professional, Scientific and Technological Education Network (RFEPCT), 25 Federal Institutes of Education, Science and Technology (IF), and 5 Technical Schools are now linked to Federal Universities. In 2020, through an agreement worth BRL65.9 million, they offered 208,200 new vacancies in distance education qualification courses. Given that the courses were offered entirely online, citizens from all regions were able to participate in the selection processes of all institutions, regardless of the place of residence and the institution's headquarters. These courses have an average workload of 200 hours and are expected to last 4 to 6 months.

Country: Federative Republic of Brazil

Title: National Programme of Textbook and Courseware (PNLD)

Short description: The National Programme of Textbook and Courseware (PNLD) enables the distribution of didactic, pedagogical and literary resources for individual and collective use. These resources can be pedagogical documents, educational software and games, training materials, content on school management, and materials to support educational practice. Guidance on how to qualify materials for decentralized acquisition by federal entities is also delivered. This initiative promotes new approaches to teaching and learning via the use of video classes and video tutorials as well as guidelines for the better use of resources.

Country: Canada (British Columbia)

Title: Keep Learning BC (website)

Short description: This online resource helps parents and caregivers support their children's learning at home. These programmes are available province-wide.

Country: Canada (Manitoba)

Title: Manitoba Remote Learning Support Centre (RLSC); InformNet

Short description: These two initiatives, RLSC and InformNet, ensure continuity of learning, build capacity, and aim to achieve greater consistency, and support educators in providing effective online learning.

The plan includes:

- the development of a Remote Learning Framework to outline guiding principles to help build common understandings and support evidence-based practices for online learning and teaching
- the development of Education Remote Learning Standards to ensure consistent application of remote learning programming across Manitoba during the COVID -19 pandemic
- the launch of an RLSC to underpin system-wide remote learning from kindergarten to grade 8 for students learning from home as well as students and families who have registered for homeschooling in response to the COVID-19 pandemic
- the expansion of InformNet (an online teacher-directed learning option for grades 9 to 12). This enables an improved distance learning experience for students throughout Manitoba. In addition, in order to benefit students with no or low internet connectivity, funding for the Teacher Mediated Option, for grades 9-12 with a grades 5-8 pilot, has been expanded (see www.edu.gov.mb.ca/k12/dl/learning_opportunities.html).

Country: Canada (Nova Scotia)

Title: Nova Scotia Virtual School/Moodle

Short description: The Nova Scotia Virtual School site is a provincial online learning platform providing online delivery of courses, and blended learning sites for the classroom as well as professional development resources.

Country: Canada (Prince Edward Island)

Title: 2020/21 Apprenticeship In-school Training

Short description: Due to COVID-19 — and after consultation with Holland College, the provincial community college, as well as public health officials — apprenticeship technical training classes for 2020/21 will be delivered through a blended learning model. The online portion includes scheduled real-time classes using a virtual classroom application. This provides the opportunity for apprentices to listen to instructor explanations, discuss topics with classmates, ask questions and then receive immediate feedback. Apprentices will also be able to work on their own at home and communicate directly with instructors by email and phone. Depending on the trade being studied, the required practical component (1 to 2 days per week) will be delivered on-site at a training location following physical distancing guidelines.

Country: Canada (Yukon)

Title: Yukon's modernized curriculum

Short description: As part of Yukon's modernized curriculum, teachers and students will continue to use technology through blended learning to develop students' digital literacy and skills. Blended learning is adapted to grade level, the online and digital tools being used, and students' learning needs.

Country: Canada (Nunavut)

Title: Strategies for Supporting Remote Learning during COVID-19

Short description: This document is intended for parents and guardians to support their child when they are engaged in remote learning or blended learning. Remote learning situations created by the COVID-19 pandemic have meant that parents and guardians often find themselves more involved in their child's learning than before.

Country: People's Republic of China

Title: Disrupted Classes, Undisrupted Learning

Short description: In order to minimize the impact of the pandemic on teaching schedules, the Chinese government has taken a number of key measures to ensure educational continuity. For vocational education, 203 national resource databases have been opened for free, and more than 130 high-quality online courses made available. Higher education institutions selected 37 technology platforms to provide more than 30,000 free online courses. At the same time, 515 lectures by academics, 37,000 micro courses and 63,000 courses were made available to the public free of charge.

Country: European Union

Title: Erasmus+ mobility and cooperation: A new role for blended learning

Short description: From 2021 onwards, any study period or traineeship abroad of any duration, including at doctoral level, can be carried out as so-called "blended mobility". Blended mobility is a combination of physical learning with a virtual component to facilitate collaborative online learning and teamwork. Students (short cycle/bachelor/master) not able to participate in long-term study or traineeship in person will be able to carry out a short-term physical component combined with a compulsory virtual component.

Country: France

Title: Territoires numériques éducatifs (Digital Education Regions)

Short description: In order to make distance-teaching easier, "digital" kits will be given to pupils, teachers and education establishments. The "digital" kits enable various educational situations to be recreated in classrooms. Teachers can then better prepare their teaching and remote-learning pupils can revise lessons seen in the classroom.

Country: France

Title: My Classroom at Home (Ma classe à la maison)
Implementer: The French national agency for distance learning (the CNED).
Beneficiary: Students and teachers

Short description: The My Classroom at Home programme offers three free educational platforms, one for each school level, including a set of courses in line with the curriculum: online activities, lesson sessions, exercises, modern language resources, etc. These courses are classified by subject, allowing students to select the most appropriate content to discover, revise or deepen their knowledge of the curriculum. A complementary virtual classroom system offers teachers the possibility of leading their classes remotely, involving students and providing them with additional educational resources. This digital platform is set up by the French national agency for distance learning (the CNED). Two and a half million users, from primary school to upper secondary, have benefited from this initiative, which can now support more than 15 million connections simultaneously.

Country: Federal Republic of Germany

Title: MINT-Allianz 'Wir bleiben schlau', STEM-Alliance 'We stay smart'

Short description: On the initiative of the Federal Ministry of Education and Research (BMBF) and the STEM working group of the Standing Conference of Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany (KMK), more than 90 STEM actors are joining an "Alliance for STEM Education at Home". Faced with nationwide school closures, extracurricular digital learning is being presented as a quick and direct route. Since early 2020, the number of members of the STEM alliance and the number of digital courses on offer have been steadily growing.

Country: Federal Republic of Germany

Title: VHS-Lernportal "VHS Learning Portal"

Short description: The VHS learning portal offers free digital learning from the "Deutschen Volkshochschul-Verbands e.V." (DVV) for German as a second language (literacy and basic education). The learning portal includes online literacy courses for native German speakers, courses for German as a second language, catch-up training and courses on other basic topics such as media education and healthy nutrition.

Country: Federal Republic of Germany

Title: International Programme Digital (IP Digital – English Site) at the German Academic Exchange Service (DAAD)

Short description: DAAD intends to use its IP Digital programme to make a central contribution to the digitalization of successful internationally minded master study programmes. This will assist higher education institutions meet a huge increase in demand for digital courses. In addition, models for internationally compatible digitalization standards will be established at German higher education institutions. IP Digital has two main objectives: 1) assist German higher education institutions (individually or through partnerships) in offering internationally oriented digital study programmes, 2) underpin the competences of participating higher education institutions so they can develop further digital courses.

Country: Republic of India

Title: The 'National Mission on Education through Information and Communication Technology (NMEICT)'

Short description: The 'National Mission on Education through Information and Communication Technology (NMEICT)' is implemented by the Ministry of Education. It is one of the government of India's major programmatic initiatives to improve teaching-learning processes, particularly the quality and effectiveness of blended learning with the "Any Time - Any Where" model.

Country: Republic of India

Title: Technology Use and Integration in Higher Education

Short description: An alliance of the Ministry of Education, the Government of India, the University Grants Commission, the Inter University Centres (IUCs), the Information and Library Network (INFLIBNET) and the Consortium for Educational Communication (CEC) has led to the creation of digital platforms which can be accessed by students, teachers and researchers at universities and colleges. The aim is to ensure education continuity and build a more resilient education system in the context of the COVID-19 pandemic. Some of the key results to come out of this are: 1) The promotion of blended learning, conventional face-to-face learning with open and distance learning modes of education. This has been enhanced from 20% to 40%; 2) About 100 top ranked universities in the country have initiated measures to introduce full-fledged online learning programmes; 3) Digital educational content is now available on various e-learning platforms such as SWAYAM, UG/PG MOOCs, e-PG Pathshala, etc.

Country: Republic of India

Title: Virtual Labs

Short description: Virtual Labs provide a fully interactive simulation environment to perform experiments, collect data and assess student learning outcomes. The initiative is designed to develop virtual laboratories with state-of-the-art computer simulation technology and boost problem-handling capabilities. The project covers 200 Virtual Labs, and approximately 1,800 web-enabled experiments to benefit more than 1.5 million students.

Country: Republic of India

Title: e-Yantra

Short description: e-Yantra is a project for enabling effective education across engineering colleges in India thanks to embedded systems and robotics. The training of teachers and students is imparted through workshops where participants are taught the basics of embedded systems and programming. The engagement of teachers and students in hands-on experiments with robots is stimulated by innovative methods of problem-solving and out-of-the-box thinking. e-Yantra also helps colleges set up robotics labs and clubs to make it a part of their routine training. All the projects and code are available on the e-Yantra website, www.e-yantra.org, as open source content.

Country: Republic of India

Title: BAADAL (https://baadal.nmeict.in/)

Short description: A cloud computing platform has been developed and deployed as an open academic source. Its prime focus is providing an infrastructure service to various organizations across the country. The cloud orchestration and virtualization management layer of the platform is capable of integrating multiple virtualization technologies such as KVM, Xen and VMware. The cloud system was designed and developed to handle various challenges around disaster recovery and optimized resource scheduling.

Country: Republic of India

Title: SWAYAM for school education & teacher education

Short description: SWAYAM MOOCs seek to enrich student knowledge and connect teachers and teacher educators through online models to facilitate their continuous professional development. The portal offers various MOOCs for school education for grades XI – XII and for teachers. There are about 34 courses run by NCERT. Nearly 250,000 participants have been enrolled in seven cycles.

Country: Republic of India

Title: DIKSHA (Digital infrastructure for school education)

Short description: DIKSHA is India's digital infrastructure for providing quality e-content for school education in states/UTs as well as QR-coded energized textbooks for all grades (one nation, one digital platform). DIKSHA is premised on the core principles of open architecture, open access, open licensing, and diversity in choice and autonomy. The platform is built on open-source technology which incorporates internet scale technologies and enables several solutions for teaching and learning. Key components within DIKSHA are as follows: contextualized digital courses for supporting teachers in their professional development; games and exercises to test and increase cognition; assessments to gauge the understanding of a topic/chapter/unit and help for teachers to improve the overall learning experience; video and audio clips to explain concepts creatively; interactive games or exercises to stimulate cognition; worksheets to assess understanding of particular topics/units/chapters; images (pictures, drawings or photographs) to explain concepts and different contexts; quizzes with interactive tests of knowledge with in-built time-bound competitions between students; lesson plans which help streamline teaching and create an engaging learning experience. DIKSHA is a giant storehouse with 3,500 or more energized textbooks, 150,000 eContents, 2685 eCourses with over 60 million daily page hits. The energized textbook solution allows educational boards to achieve access to digital content through QR codes printed in textbooks. E-content on DIKSHA is available in 31 Indian languages.

Country: Republic of India

Title: Free/Libre and Open Source Software for Education (FOSSEE)

Short description: FOSSEE is part of the National Mission on Education through Information and Communication Technology. It promotes the use of open source software in educational institutions (http://fossee.in), fostering instructional material such as spoken tutorials, documentation, textbook companions, awareness programmes, conferences, training workshops and Internships. Textbook Companion (TBC) is a collection of code for standard textbooks. A large number of college students and teachers have participated, and close to 1,000 TBCs have been created in Scilab programming language and made available for free download.

Country: Republic of India

Title: National Digital Library (NDL)

Short description: The NDL seeks to develop a virtual repository of learning resources with a single-window search facility. The NDL has more than 38 million digital resources (e-books/journals/audiobooks/question banks) and the contents cover almost all major domains of education and disciplines. More than 5.2 million students have registered with the NDL, and it has more than 2 million active users. The NDL is available through a mobile app too. It may be accessed on ndl.gov.in and http://fossee.in. There have been over 1.4 million mobile apps downloaded.

Country: Republic of India

Title: National Repository of Open Educational Resources (NROER)

Short description: The repository hosts a variety of eBooks and eContent in multiple Indian languages for a range of stakeholders. It is a collaborative platform which brings together everyone interested in school and teacher education.

Country: Republic of India

Title: ePathshala.gov.in

Short description: The platform addresses the dual challenge of reaching out to diverse clientele groups and bridging the digital divide by offering the eBooks and eContent of NCERT in multiple Indian languages while ensuring free access at all times and in all places via portals and mobile apps.

Country: Republic of India

Title: Inclusiveness of Children with special needs

Short description: To ensure the inclusion of children with special needs, different content is available, namely videos in sign language and audiobooks (uploaded on DIKSHA); study material in the Digitally Accessible Information System (DAISY) as well as sign language. One DTH channel is operated specifically for hearing impaired students in sign language.

Country: Indonesia

Title: Belajar.id account or Learning.id

Short description: Belajar.id is an account using a Google platform, created in December 2020 by the Ministry of Education, Culture, Research, and Technology of Indonesia to support learning processes during the pandemic. It can be used by students, teachers and education personnel. Belajar.id is an optional learning methodology to support students, teachers and education personnel in accessing material from official learning applications linked via this account to teaching activities.

Country: Japan

Title: Plan for universities/colleges aiming for a smart-campus through digital transformation in the current/post COVID-19 environment

Short description: The Ministry of Education (known as MEXT) supports universities and colleges which are proactively working on preparing environments that contribute to the "realization of learner-oriented education" and the "improvement of learning quality" through the adoption of digital technology. MEXT aims to highlight relevant educational methods in higher education in the post-COVID era and disseminate outcomes.

Country: Republic of Korea

Title: K-Edu Integrated Online Learning Platform

Short description: The Korean Ministry of Education is establishing an integrated online learning platform to gather scattered digital learning content together and combine it with its Learning Management Systems (LMS) and its learning tools. It will be powered by big data, AI-based learning analytics, and will promote self-directed learning under the title "K-Edu Integrated Platform." This platform will allow the products of various edu-tech services and educational content created by teachers and public/private entities to be freely up- and downloaded, so that they can be accessed by schools for their use. Also, the outcomes of both on- and offline education will be managed on this platform in conjunction with student records on the National Education Information Service (NEIS). AI and big data will be used to analyse the information on learning activities (e.g. learner characteristics, learning time, attendance, communications, etc.) to create educational content which reflects learners' interests and academic levels.

Country: United Mexican States

Title: Aprende en Casa

Short description: The main objective of "Aprende en Casa" is to enable students to continue their education during the COVID-19 health emergency. The initiative is aimed at all levels of compulsory education and covers content set in national study plans and programmes.

Country: Russian Federation

Title: Federal project "Digital Education Environment"

Short description: The aim is to unify educational spaces and ensure the availability of quality learning throughout the country by strengthening modern educational infrastructures with a library of verified content and connected services. Schools will thereby become better able to deal with challenges (such as the epidemic and other emergencies), and allow educational processes to continue online. This benefits the individual (when a child is ill, for example), as much as when a pandemic occurs.

Country: **Kingdom of Saudi Arabia**

Title: **Madrasati Platform (A National E-Learning Portal)**

Short description: The Madrasati Platform has accelerated the development of the national strategy for e-learning and distance learning, providing multiple educational tools to support the planning and implementation of educational processes, including e-assignments, discussion forums, electronic questionnaires and multiple lessons promoting the 21st-century skills as well as programming and STEM education. It now serves more than 6 million users and provides teachers and students with synchronized and asynchronized virtual classes and meetings supported by interactive content, tools and resources. In addition, the portal is supported by a Content Management System providing various educational resources such as videos, augmented reality, science labs, 3D resources, educational stories and e-books on educational curricula approved by the Ministry of Education.

Country: **Kingdom of Saudi Arabia**

Title: **Virtual Kindergarten**

Short description: The Virtual Kindergarten is a free application containing educational content, games, stories and interactive activities to boost children's learning experiences and provide access to new education opportunities for all children. The Virtual Kindergarten was mainly launched to provide education to children with limited access to kindergarten schools. The platform serves children in early childhood education (from ages of 3-6 years old) under the supervision of their parents, offering a variety of educational elements, guidelines and educational content through 11 units according to a timeline that monitors progress, achievement and evaluation of children's skills.

Country: **Kingdom of Saudi Arabia**

Title: **SHMS – Saudi OER Network**   **Implementer:** **Government of Saudi Arabia**
Beneficiary group/s: **All learners, with a focus on promoting Arabic language contents**

Short description: SHMS is the main initiative of the National Open Education Resources Program (OER) – a national platform that offers secure and reliable educational resources for all students, teachers, faculties and parents. Aimed at enriching opportunities to support education, this program seeks to find sustainable partnerships that contribute to providing more educational opportunities for Arabic language speakers and enable them to search, create and share open resource documents.
The services of SHMS include:
1 - SHMS platform won the award of Open Education Awards for Excellence 2018 for OER Repository and was listed in the Open Education Week 2018, in addition to hosting OER for both Saudi institutions and leading global providers such as Khan Academy, CK-12 Foundation, M.I.T., TED and many more. The platform hosts about 272,000 OER, of which 95% are from Saudi Arabia and around 83% in Arabic.
2 - SHMS Author is an interactive authoring tool enabling educators to design and share 30 different types of content and allowing students to review educational content on any device or browser.
3 - SHMS SANA is an interactive virtual meeting system in which educational staff, including faculty members, teachers, students and administrative staff, can create virtual classrooms, training meetings, synchronized and asynchronous lessons, and broadcast them directly or indirectly, with the possibility of recording and sharing them.
4 - SHMS Cloud is a dedicated repository for institutions to share their resources.
5 - SHMS OER Champions is a Train the Trainer programme in which the best OER champions are identified from individual institutions and trained on the SHMS training series, who in turn, train their peers at their instutions.
6 - SHMS Ambassadors is an initiative aiming at supporting the creative minds with distinctive skills in production at the open educational institutions enabling them to publish their work in the Saudi Resources Network.
7 - SHMS Training Series consists of 6 levels focused on capacity building for the stakeholders in the area of OER.

Country: **Kingdom of Saudi Arabia**

Title: **iEN National Gate**

Short description: iEN Gate is a safe portal that was launched prior to the pandemic to support E-learning and education and improving the teaching and learning process. It provides asynchronized E-learning content and tools to all students, teachers, education leaders, supervisors and parents inside and outside the kingdom. The Gate features educational materials, E-Curriculum and E-assessment tools.

Country: **Kingdom of Saudi Arabia**

Title: **Educational Curriculum Development: Facilitating Distance Learning and Addressing Educational Inequalities**   **Implementer:** **Ministry of Education**
Beneficiary group/s: **Special Education teachers**

Short description: The Ministry of Education has supported the development of digital educational contents through two main initiatives. First, the digital Educational Content Development initiative aims to provide profound digital educational content for K-12 public and private schools, enriched with the latest educational strategies and technologies, innovative augmented reality experiences, various videos and interactive activities, IQ games, question banks, 3D cartoons, various innovative experiences and digital training courses. New interactive educational content has been translated to sign language and directed to other special needs students. Second, The Curriculum Design and development of disability textbooks and special education teacher manuals (addressing educational inequalities) initiative, to improve the quality of special education, MOE worked on designing and developing curriculum for students with disabilities and manuals for special education teachers, which is aligned with the latest scientific studies and research on teaching intellectual and developmental disability students. It includes visually illustrated and functional content taking into account the psychological and mental development of student with a flexible and integrated curriculum with QR technology.

Country: **Singapore**

Title: **Student Learning Space (SLS)**

Short description: The SLS platform aims to transform the learning experiences of Singaporean students through the purposeful use of technology. It is an online learning portal that allows all students to have equal access to quality curriculum resources. These resources are available in all major subjects at primary to pre-university level. In line with the development of 21st Century Competencies (21CC), the SLS encourages learners to be self-directed and allows them to personalize their learning according to their needs and interests.

Country: **Spain**

Title: **eTwinning programme (Erasmus+ action)**

Short description: The network for teachers, students and schools in Europe offers the opportunity to create collaborative projects between schools in different countries. eTwinning also provides continuous professional development, digital resources and the opportunity for teachers and students to exchange on good practices. The use of platforms and digital tools or programmes such as eTwinning have avoided isolation and maintained motivation and contact for teachers and students.

Country: Turkey

Title: Establishment of Distance Learning Platform for Life Long Learning

Short description: The platform aims to strengthen the use of technology in education and enable citizens to access courses whenever they wish with electronic devices such as phones, tablets, etc. Lifelong learning will be possible for those who cannot access public education centres.

Country: Turkey

Title: Platform for Measurement and Evaluation

Implementer: Government   **Beneficiary group/s:** Teachers

Short description: The purposes of the Platform for Measurement and Evaluation are to establish a common pool for high-quality measurement questions and practices and move teachers' preparatory activities for evaluations to the web during COVID-19 and beyond. The platform will enable teachers to prepare tests for students automatically through the platform's software and transmit them to selected schools, as well as undertaking evaluations on the website. Questions are offered for all grade levels by class, course, subject and outcome selection. The developed software is designed to be easily used by all teachers in 81 provinces under the coordination of Measurement and Evaluation Centres. This platform started to operate on odmplatform.meb.gov.tr website on 1 February 2021.

Country: Turkey

Title: Question Bank Mobile Application   **Implementer:** Government

Beneficiary group/s: Learners in grades 9-12 from low-income families and vulnerable situations with low access to the internet

Short description: Question Bank Mobile Application was developed to assist students in grades 9-12 through access to thousands of teaching questions and their solutions. The Application includes 15,000 questions covering the entire curriculum of Turkish language and literature, history, geography, philosophy, mathematics, physics, chemistry, biology and English courses. It is free of charge and can be downloaded via Appstore and Playstore.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: EdTech Demonstrator Programme

Short description: The EdTech Demonstrator programme provides schools and colleges free peer-to-peer support on effective use of technology in education, underpinned by an online library of webinars, tutorials and recorded content. The Demonstrators are schools and colleges that have significant experience and expertise in the effective use of education technology.

Country: United Kingdom of Great Britain and Northern Ireland (Wales)

Title: Accelerating Learning Programme

Short description: The support packages provided at school level include personalized learning programmes, extra coaching and the mentoring of learners, as well as the allocation of additional time and resources. The distribution of these resources will be done according to local needs. Wales will use current investment in professional training, digital infrastructure and connectivity to enrich the learner experience at schools.

Country: United Kingdom of Great Britain and Northern Ireland

Title: Oak National Academy (Oak) – Provision of Online Lessons for Remote Education

Short description: Oak National Academy was formed in April 2020 by teachers, schools and education organisations, with funding support from the Department for Education. It provides support to schools in developing the ability to switch from classroom teaching to remote provision immediately in case of coronavirus restrictions or self-isolation. Oak provides over 10,000 free online video lessons in a broad range of subjects for pupils aged between 4 and 16, including specialist content for pupils with special educational needs and disabilities (SEND).

3) Using lower-tech media to reach disadvantaged groups

While online education has been prioritized across G20 countries, there are several countries with initiatives using lower-tech media to reach learners from disadvantaged backgrounds, especially those living in remote areas, without connectivity (**Table 10**). Media such as radio, television or telephones were used. For instance, television or online channels were specifically dedicated to learners with intellectual disabilities. Moreover, textbooks and other educational materials have also been distributed in some areas.

China, for instance, digitalized academic lectures and made them accessible to a wide public. Others have created free online access to previously closed databases. Others yet have set about creating new and tailor-made contents for broadcast, streaming and downloading, including designing apps for easy use.

India's National Digital Library (NDL), for example, has more than 38 million digitalized resources. Its services are available via mobile phone app, with the app already downloaded 1.4 million times. The "Seguimos Educando" programme in Argentina has updated past training and educational contents to reach new listeners. It now broadcasts seven hours of educational TV a day and divides the content by learning level for ease of access. India also makes extensive use of national TV channels. Its SWAYAM Prabha initiative broadcasts 32 different education channels throughout the country on a 24/7 basis. Mexico's "Aprende en Casa" transmits its learning though four media: free textbooks, TV, radio and online. This has led to 36 TV stations of the national grid broadcasting 1,140 programmes, and 444 radio programmes. Some of Saudi Arabia's online content has a particular slant towards special education. Saudi Arabia broadcast 23 TV educational channels on a 24/7 basis (1 channel for continuing education, 3 channels for students with special needs, 6 channels for primary education, 3 channels for intermediate education and 10 channels for secondary education).The daily rate of broadcasting was 124 TV lessons. Turkey harnessed the energy and know-how of a thousand teachers to produce education courses for TV. These began broadcasting soon after school closures took place.

Table 10: Using lower-tech media

Country: Argentina

Title: Seguimos Educando

Short description: The programme produces and broadcasts seven hours of educational radio programming a day (in total 1,253 programmes have been broadcast through Radio Nacional). Alongside this, there have been 14 hours a day of audiovisual content broadcast (with 1,271 programmes shown on Argentinian Public Television and its repeats on Encuentro, Pakapaka, DeporTV, Radio Nacional and Cont. ar). The programming is organized via time slots and divided by educational level. More than 2,000 hours of educational radio and television programmes were broadcast during 2020, using updated training that reached thousands of teachers throughout the country.

Country: People's Republic of China

Title: Disrupted Classes, Undisrupted Learning

Short description: The Chinese government officially opened its National Network Cloud Platform for Primary and Secondary Schools and its China Education TV Channel 4 Classroom in the Air in February 2020. They offer online courses and high-quality learning resources for primary and secondary school students.

Country: Republic of India

Title: SWAYAM Prabha

Short description: As many students do not have adequate access to digital education, and in order to address the digital divide, India has been making extensive use of TV channels — namely via SWAYAM Prabha, an initiative that broadcasts 32 high-quality educational channels across the country, night and day. The curriculum-based course contents are aimed at post-graduate and undergraduate level. There are four IIT PAL channels to assist students in classes 11 and 12 who are engaged in competitive examinations (IIT, JEE). In School Education (9-12 levels) there are modules for teacher training as well as learning aids for children. The channels can be viewed using antenna and other devices. They are also available on the Jio mobile app. Every day, there is new content for at least four hours which is repeated five more times in a day.

Country: Indonesia

Title: Using lower-tech media to reach disadvantaged groups

Short description: The initiative to use lower-tech media to reach the disadvantaged groups was applied since April 2020 with a television programme called Learning from Home, broadcast on national television. Since April 2021, the programme has been broadcast through local televisions, official Education TV managed by the Ministry of Education, Culture, Research, and Technology, and the Ministry's YouTube channel.

Country: Italy

Title: Cooperation between the Ministry of Education and the national public broadcasting organization RAI

Short description: The pandemic crisis triggered by the spread of the COVID-19 virus in Italy has led to an acceleration in the use of distance education. The Ministry of Education and RAI have created a new and richer television programme dedicated to schools with an offer aimed at all school levels, in order to support students' learning and with the aim of ensuring the right to education for all. The programme designed and dedicated to schools was realized on the TV channels of Rai Scuola (channel 146 Dt, 133 Tivusat and 806 Sky Italia), Rai Storia (channel 54), Rai 3 and – for the offer of Rai Ragazzi – on Rai Gulp (channel 42) and Rai Yoyo (channel 43)but also on the Rai Cultura portal and on Raiplay. The programme of Rai Cultura, in particular, is aimed primarily at upper secondary school students, parents and a wider audience. Among the programmes there are: #teachers with lessons – led by personalities from the world of culture, #raistoriaperstudenti; The school on TV with lessons by teachers who are in class every day; The TV school - Adult education designed for members of the Provincial Centers for Adult Education. Rai Yoyo and Rai Gulp realize a targeted programming for children. Highlights include: *The Band of Champions*, in the name of knowledge, exploration and getting involved; *Rob-O-Cod*, a game show dedicated to coding; *Fumbleland! I Missed a Mistake*, an innovative programme that mixes animation with live footage to teach children elements of the English language. Broadcasts are always available also through the online portal of Raiplay.

Country: Republic of Korea

Title: Education Broadcasting System (EBS) Channels for Young Learners

Short description: In consideration of students' developmental stages, kindergarteners and lower graders of primary schools (e.g. 1st and 2nd graders) are povided with learning packets and are instructed to watch EBS TV channels for their education instead of accessing online with digital devices. For example, kindergartners are offered packets to play with, and the packets are also used in connection with the EBS (Educational Broadcasting System) channels to help the children actively partake in play-based learning activities. The first graders are instructed to watch educational TV channels to learn Korean language and numbers, as well as to engage in art activities, whereas the 2ndgraders receive education on Korean language, mathematics, integrated subjects, and safety.

Country: United Mexican States

Title: Aprende en Casa

Short description: This scheme allows for learning through four major media: free textbooks, television, radio in remote communities, and the internet (via an online platform). 1,140 television programmes were produced through 36 different television stations of the Network of Cultural and Educational Radio and Television Stations in Mexico. The private sector is involved in the retransmission of material. In addition, 444 radio programmes were broadcast.

Country: Kingdom of Saudi Arabia

Title: Satellite Broadcasting Channels (Providing open access to education in all regions of Saudi Arabia including remote areas)

Short description: "iEN" Channel creates an opportunity for distance education for those who need it through television broadcast, which provides access to the knowledge assets of all educational levels and their activities, as well as spread the culture of "knowledge community" among all segments of society. In addition to introducing distinguished experiences that would enhance global leadership and competitiveness, providing opportunities for the educational continuity through 23 satellite channels, also available on YouTube, for all educational levels creating a communication channel between students and teachers as well as parents to enhance parents' role in supervising distance learning from home. Therefore, diversifying education and taking into consideration individual differences among learners and facilitating learners in different ways. Lessons are broadcast to students at their homes and are aired according to a specific time plan consistent with the educational plan reaching 124 TV lessons per day. Broadcasting repeated lessons around the clock until the lessons for the next day start broadcasting. All lessons needed for students were stored in the servers on iEN Satellite Educational Channels for regular broadcast around the the clock for all students.

Country: Kingdom of Saudi Arabia

Title: Distance Learning for Persons with Disabilities

Short description: The Ministry of Education has launched three initiatives to facilitate distance education for students with disabilities. The first is "The Comprehensive Educational Channel for Autism" which is a TV channel that provides suitable training for the family of students with autism to direct them with the key skills and strategies to help educate and teach their children. The second is launching two TV channels for children with disabilities; one is dedicated to primary grades and the other is dedicated to intermediate grades and the rehabilitation education programme. The third is developing the e-learning portal to support the needs of university students with disabilities, updating them to incorporate supporting tools which facilitate the learning of students and simplify the usage of the portal.

Country: South Africa

Title: Teaching and Learning Support

Short description: South Africa was able to make use of WhatsApp and other media platforms to share material, and also deployed the use of radio and television to render lessons. Provinces made use of community radio stations. Interactive sessions were used, and learners were able to call in and receive clarification from teachers on areas where they did not understand the work. There were challenges with regards to funding, and the private sector provided support to the DBE in order to ensure the delivery of the programmes was a success. Print media was also available to assist with making content available to learners. Going forward, South Africa will sustain the existing arrangements with radio and television broadcasting stations. It is also working on establishing a basic education television channel. To this end, it will integrate the school calendar with radio and television and will also source more educational content that will be compliant with standards that accommodate learners living with disabilities to be channelled through these broadcasting channels. The connectivity problem in rural areas is a priority that South Africa is looking at addressing and government is engaging network providers to ensure that platforms and websites that provide education content are zero rated.

Country: Turkey

Title: **"TRT EBA TV CHANNELS"**

Short description: These channels started broadcasting in March 2020 and about 1,000 volunteer teachers have now worked in 112 branches to produce video content. Their main purpose is to ensure that all students can safely access courses and extracurricular content during the pandemic. The TV channels started broadcasting a week after the school closures in Turkey.

4) Training teachers and school leaders

Blended education requires teachers and school leaders to possess both generic ICT skills and specific skills linked to the use of educational platforms and digital teaching/learning materials. Training in those skills has emerged as a priority, with 48 interventions in 19 countries – the largest number across the five areas that fall under blended education (**Table 11**). Prior to the COVID-19 pandemic, many teachers indeed would not have used online platforms, and used general commercial software mostly for communication with students and parents rather than for teaching. In that respect, school closures provided an opportunity to rethink the role of digital technologies in education, regarding the content of education, pedagogical approaches and assessment methodologies.

Examples include online teacher training, the creation of new methodologies and teaching content, and initiatives concerning the use of artificial intelligence and big data. There are also mentoring activities, training activities to support teachers in adapting online teaching to the specific learning needs of learners of all ages and training activities on the evaluation of distance learning up to the management of the virtual classroom.

In countries such as Argentina, programmes such as Seguimos Educando provide guidelines and recommendations to accompany teachers and principals in their task, while online platforms include message and video-calling options so learners can exchange directly in real time with their teachers and facilitators. In Canada, similar methods have been employed in Prince Edward Island for apprentices in certain fields who were able to complete real-time classes on a virtual classroom application to discuss topics with classmates, message instructors and receive immediate feedback.

What about preparation for assessing learning outcomes in the new education landscape? In Turkey, the Platform for Measurement and Evaluation has established a common pool for high-quality measurement questions and practices and moved teachers' preparatory activities for assessments to the web during COVID-19 and beyond. The platform will enable teachers to prepare tests for students automatically through the platform's software and transmit them via selected schools, as well as undertaking evaluations on the website.

In Brazil, the need to train teachers in blended teaching-learning processes appropriate for working with special needs learners has been recognized - resulting in a partnership between the IFES and the State Education Departments at federal district and municipality level. The beneficiaries are most often blind, visually impaired, hearing impaired, have autistic spectrum disorder or are considered high capacity and gifted learners.

An overarching question is how teacher training can best be organized and carried out in a COVID and post-COVID world? In India, resources have been earmarked to strengthen and upgrade State Institutes of Education as nodal agencies for teacher training. However, education systems are in transition and attachment to traditional in-person models of teacher training is loosening. In Indonesia, teachers are producing training videos themselves. In Germany, schools are organizing training sessions for one another. In the Republic of Korea, an online training platform was built for teachers, on which they can voluntarily organize and operate the subject, content and time of training and take real-time lectures made by their colleagues, deviating from the existing institution-led training method, in order to strengthen teachers' edu-tech capabilities.

Some policies also include the availability of scholarships for the continuous training of teachers and new training content for pre-service and in-service training of teachers, including trainers' training. The wide range of educational content dedicated to the topic also includes training activities to prevent cyberbullying and training in psychological counselling in order to enrich the skills of teachers, also in the direction of giving psychological support to learners and their families during lockdown periods. Finally, the educational offer also reaches school leaders in order to support them through the change affecting the school organization as a whole.

Table 11: Training teachers and school leaders

Country: Argentina

Title: Plan Federal Juana Manso (Federal Plan Juana Manso)

Short description: Professional training courses for principals and teachers have been developed as part of the Juana Manso Federal Plan. The aim is to accompany teachers in their reflections on practice in the COVID-19 emergency; to understand the possibilities and limitations of different online modalities; and to make decisions on teaching via virtual platforms based on knowledge, trends and lessons learned.

Country: Argentina

Title: Seguimos Educando

Short description: Seguimos Educando's 20 virtual courses give training and technical pedagogical support to teachers. The courses are made available by the National Institute for Teacher Training (INFoD) at the National Ministry of Education. The content of the courses particularly aims to provide tools for the use of ICT in teaching different disciplines and fields of knowledge. Enrolment is free for all the country's teachers.

Country: Australia

Title: Transformational Learning through Creativity

Short description: The Australian Government and the Department of Education, Skills and Employment, supports The Song Room to deliver quality arts education materials and resources to 17 disadvantaged schools through its Transformational Learning through Creativity (TLC) programme. Following COVID-19 school closures, The Song Room swapped to an online format to deliver its TLC programme. This included online teacher mentoring; online content for teaching art; and additional teacher assistance in how to use the digital education site ARTS: LIVE. It also included assistance with sourcing online tools and activities to support remote learning.

Country: Federative Republic of Brazil

Title: Renafor – National Training Network for Education Professionals

Short description: The focus of the project is to strengthen continuing education and professional development online, especially for teachers who work with deaf students in schools, enabling them to access bilingual services (combining sign language as a first language and Portuguese as the second language in written form).

Country: Federative Republic of Brazil

Title: Continuing Education of Teachers in Special Education

Short description: This offers 6,500 places on online courses for teachers and professionals of basic education in public systems who work with blind students, partially sighted students, deaf and blind pupils, and those with autism spectrum disorder. Working with gifted students is also part of these courses.

Country: Federative Republic of Brazil

Title: Tell Me a Story

Short description: The "Time to learn" programme is especially designed for the continuing education of literacy professionals who work either in teaching or school management. All courses are of the highest quality and bring effective examples of literacy practices from around the world to Brazil. The programme is bolstered by evidence from cognitive science.

Country: Federative Republic of Brazil

Title: Continuing Education of Teachers in Special Education

Short description: During the pandemic, a specific continuing course was implemented to train special education teachers in the use of distance mediation technologies. This required the adoption of resources and didactic strategies to develop pedagogical activities with special education students.

Country: Federative Republic of Brazil

Title: Promotion of new vacancies and technological education courses thanks to distance education modality

Short description: Part of the funds transferred to education institutions are allocated for the granting of scholarships for teachers, who are then able to invest in training and continuing education in distance learning methodologies.

Country: Canada (Manitoba)

Title: Manitoba Remote Learning Support Centre (RLSC); InformNet

Short description: Manitoba Remote Learning Support Centre teachers receive online professional learning sessions from a team of educators expertly trained in delivering literacy and numeracy instruction in remote learning environments. The RLSC has also posted videos on using technology and strategies for teaching online, which are accessible to all Manitoba educators.

Country: Canada (Nova Scotia)

Title: Nova Scotia Virtual School/Moodle

Short description: The site provides a space for professional communities of practice for online professional development.

Country: Canada (Newfoundland and Labrador)

Title: 2020/21 return to school plans for kindergarten to grade 12; Expansion of Online Learning Platform – Brightspace by Desire2Learn (D2L) – to Private Training Institutions

Short description: For K-12, there was significant upfront professional learning this academic year to prepare teachers for new teaching approaches. Staff came in three days before the start of the school year to prepare. Additional training was given on how to work with the digital platform (Google Classroom) to provide teachers with the necessary tools to ensure successful continuity of learning. Several online resources were created by the English School District to support school communities. For post-secondary education, there was also training for instructors and educational personnel who will be using Brightspace.

Country: Canada (Yukon)

Title: Yukon's modernized curriculum

Short description: The Department of Education provides several professional development opportunities as well as resources to help educators develop blended learning tools and practices. These include a blended learning website, a Learning Continuity Toolkit and on-demand professional learning recordings.

Country: Canada (Northwest Territories)

Title: Northern Distance Learning (NDL)

Short description: NDL teachers are given additional preparation time to work on course development in the learning management system with the support of the NDL coordinator, and have time to learn and develop quality blended-learning opportunities for their students. Each September-October, NDL teachers are expected to review the Content Development Standards Rubric, self-reflect and set goals for their courses. A Guide for NDL Teachers is also available on the government website.

Country: People's Republic of China

Title: Disrupted Classes, Undisrupted Learning

Short description: The government carried out teacher training to improve online methods and technological abilities. It also opened teacher training resources, integrating a so-called "Online Teaching Ability Enhancement Training Resource Package" published on the platform of the National Academy of Education Administration (www.enaea.edu.cn). The Project Office for Improving the Information Technology Application Ability of Primary and Secondary Schools in China developed 25 online strategies for teachers. These included resources titled "Strategies for Teachers to Promote Home-school Coperation during the Epidemic Prevention and Control Period" and "Strategies for Teachers' Psychological Counselling during the Epidemic". Online teaching video seminars were held, based on various online simultaneous communication platforms. Four online teaching video seminars brought together local education administrative departments, university experts, the national training office and front-line principals and teachers.

Country: European Union

Title: Digital Education Action Plan

Short description: A first Digital Education Action Plan, adopted in 2018, addressed digitalization in education for 11 topics. As the digital transition now grows, and the public health crisis brings new challenges to the fore, a new Action Plan will focus on the longer-term digital changes in education and training.

Country: France

Title: Examples of constructive consultation methods from institutional gatherings, such as « the National convention for digital technologies», « the Grenelle de l'Education » or the scientific symposium "What teachers for the 21st Century?"
Implementer: Ministry of National Education, Youth and Sport
Beneficiaries: Teachers, school leaders, academic staff

Short description: In 2021, the French Ministry of National Education, Youth and Sport has committed to sweeping changes in the education system and in the careers of national education staff. Getting experts involved, feedback, consultation, workshops, the social agenda: the Grenelle Education Forum took place from October 2020 to February 2021, coupled with the National Convention for Digital Technologies meetings held on 4-5 November 2020. In total, 2,584 participants were recorded, covering all the regions, and 724 proposals were made. **More than 200 regional meetings were held and more than 380 article**s were written by the education authorities, who were thus able to contribute to the consultation platform. These resulted in 40 key measures, partially originating in proposals from civil society, classified around 5 themes:

- Ensuring equal access to digital technology for all/closing the digital divide
- Working together differently, promoting a common professional digital culture
- Promoting responsible and sovereign digital behavio
- Introducing new forms of governance and new forward-looking tool
- Teaching and learning digitally and with digital technology.

Country: Federal Republic of Germany

Title: International Programme Digital (IP Digital – English Site) at the German Academic Exchange Service (DAAD)

Short description: DAAD intends to use the IP Digital programme to make a central contribution to advancing the digitalization of already successful master's study programmes that are internationally oriented and assist higher education institutions to meet the huge increase in demand for digital courses. In addition, impetus and models for internationally compatible digitalization standards are to be created at German higher education institutions. Project staff and participating instructors may attend trainings conducted by third parties or conduct training sessions themselves. The majority of the 19 projects funded so far have set out corresponding measures for action.

Country: Federal Republic of Germany

Title: International Virtual Academic Collaboration

Short description: With the programme International Virtual Academic Collaboration (IVAC), the German Academic Exchange Service (DAAD) provides practical support to instructors and strategic support to universities with the aim of developing and expanding international higher education partnerships and worldwide mobility by tapping digital possibilities. To support the development and expansion of digital study programmes with international partners, project staff participate in training sessions or conduct these themselves. The content of these events varies according to the needs of the participants. The DAAD plans to support inter-project exchange within the framework of its community-building measures.

Country: Federal Republic of Germany

Title: Vhs-Lernportal "VHS Learning Portal"

Short description: The VHS learning portal is the free digital learning offer of the "Deutschen Volkshochschul-Verbands e.V." (DVV) for German as a second language, for literacy and basic education. In order to meet the requirements of the increasing numbers using the online courses offered by the VHS learning portal, BMBF has increased funding to train more online tutors. This will allow growing numbers of learners to be accompanied by tutors. There are, at present, around 22,000 tutors who have mainly been recruited since an increase in BMBF funding.

Country: Republic of India

Title: NISHTHA

Short description: This is a nationwide programme to enhance the capacity of school heads and teachers to improve the quality of school education through integrated teacher training. NISHTHA aims to build competencies among school teachers and school heads/principals by focusing on strategies for improving classroom processes and practices, subject-specific pedagogies, and systemic concerns. The NISHTHA resources online (on DIKSHA) contain 18 courses in 10 Indian languages and they attract over 2.4 million participants.

Country: Indonesia

Title: PembaTIK, the abbreviation of Pembelajaran Berbasis TIK (in Indonesian language) or ICT-based Learning Programme

Short description: This teacher programme ran before the pandemic in all provinces in Indonesia. When the pandemic struck, it was sped up. Selected teachers became ambassadors for the House of Learning (the portal created by the Ministry of Education, Culture, Research, and Technology). Their role was to disseminate interactive learning methods to other teachers in their areas through training and learning videos they produced themselves.

Country: Indonesia

Title: Programme Guru Belajar Seri Masa Pandemi COVID-19 or Teacher Learning in Pandemic COVID-19 Series Programme

Short description: Through this programme, teachers are expected to take on skills and knowledge in the management of learning activities, all the more so in times of crisis. Teachers learn to help students make decisions and manage risk. The specific objective of the programmes are: 1) Improve teachers' competences in designing distance learning based on a simplified curricular load; 2) Develop teachers' ability to manage distance learning environments; 3) Develop teachers' skills in using technology for effective distance learning; 4) Improve teachers' ability to conduct distance learning assessments that have a real impact on learning quality.

Country: Indonesia

Title: Guru Berbagi or Teacher Sharing Programme

Short description: The Teacher Sharing Programme is designed to enrich teachers' reference in creating learning innovation, especially in a time of crisis like the COVID-19 pandemic. This programme was made in order to give inspiration to teachers in creating innovation of learning methods and to give access to teachers to references on implementing an effective learning programme.

Country: Italy

Title: National Plan for Digital Education – Actions for blended and distance learning

Short description: In July 2020, the Ministry of Education launched the programme called "Formare al futuro" (Training for the future), a novel training programme provided for by the National Plan for Digital Education which aimed to train the school staff as a whole on blended learning and on the digital transition of school management. The "Formare il futuro" programme is carried out in synergy with the overall implementation of actions under the National Plan for Digital Education. This is with the active participation of the 28 training hubs called "Future Labs", with their local presence in all the Italian regions, as well as the collaboration of other training hubs, all carrying out in-service training actions for teachers and school staff.

Country: Japan

Title: GIGA School Programme

Short description: The National Institute for School Teachers and Staff Development is implementing and enhancing training for leaders in relation to the use of ICT in each region.

Country: Republic of Korea

Title: Teacher training system reform and capacity-building policy

Short description: To strengthen teachers' online class capacity, the Ministry selected 495 pilot schools for online education and shared best practices. The Ministry has been studying effective operating methods for online classes and the best practices of teacher communities. Teachers are exposed to distance learning environments even in their pre-service training stages. They can obtain skills needed to use educational platforms, including online teaching, online class management, content development, Artificial Intelligence (AI) and Big Data.

Country: Republic of Korea

Title: Support for Creating Primary and Secondary School Learning Content

Short description: Under public-private partnership, the Ministry of Education provided 50,000 online education materials, including the EBS (Educational Broadcaster) and middle and high school education content through the public learning management system. Teachers were able to get help in conducting online classes by using these online educational contents. In addition, the Ministry of Education is in the process of building an "ICT-integrated educational service platform" to help teachers create educational content that can be used in both online and offline education. The Ministry of Education plans to support teachers in producing their own teaching materials by using various OER (Open Education Resources) provided through the platform, and to distribute them through the public learning management system.

Country: Republic of Korea

Title: Improving Environmental Education and Green Smart Future School Project

Short description: Since 2018, the Ministry of Education has advised that environmental education (including climate change, sustainable development, carbon neutrality, plastic pollution issue) be reflected on the curricula of teacher training institutions. Since 2019, the Ministry has supported the development, implementation, and expansion of the curriculum for civic education, which includes environmental education, in teachers' colleges. In 2020, school principals and vice principals began to receive such training, and in 2021, the Ministry plans to develop and offer environmental education as part of online teacher training.
In addition, the Green Smart Future School project is under way to innovate school buildings and provide quality education in eco-friendly digital learning environment. Beginning in 2021, KRW 18.5 trillion will be invested to renovate 2,835 school buildings to transform them into the so-called "Future Schools" for the next five years. In consideration of the available budget and other circumstances, the second phase of school renovation will start in 2026, which is expected to create 150,000 new jobs and reduce 190,000 TCO2 of greenhouse gas emissions per year. The newly renovated schools will allow students to engage in digital learning whenever and wherever they want in a low-carbon, environmentally friendly and sustainable school environment.

Country: Republic of Korea

Title: Curriculum Reform for Future and Strengthening AI Education

Short description: The Ministry of Education plans to implement a systematic teacher training programme through curriculum reform and the implementation of the High School Credit System. In close cooperation, the Ministry of Education, the Provincial Office of Education, and the Graduate Schools of Education opened AI integrated specialized courses such as "Understanding AI Education" and "Education Method and Educational Engineering using AI" in 38 graduate schools of education in 2020, in which 1,046 in-service teachers participated. The Graduate School of Education for AI Convergence Education is a re-training course for in-service teachers, and aims to foster 5,000 teachers specialized in AI-integrated education in the next 5 years.

Country: Republic of Korea

Title: Promotion of Online Learning in Higher Education

Short description: In 2020, the Ministry of Education designated the Korea Education and Research Information Service (KERIS) as the University Distance Learning Center (UDLC), and created 10 regional centres across the country. The UDLC has hosted special lectures and workshops on video-conferencing tools and teaching/learning methods for faculty members, and created a website to provide distance learning guidelines (http://UDEC.kr) for them, which include issues related to copyrights. In February 2021, six rounds of online training sessions were organized, in which a total of 1,172 academic staffs participated. Training videos were also posted online to give all faculty members access to the training materials. Moreover, in order to prevent any copyrights disputes over the use of educational materials produced by private entities and the lack of storage space for online content, faculty members are allowed to have their content stored on the UDEC website. This website is being widely used by teaching staffs with 5,910 materials uploaded from April 2020 to February 2021.

Country: **United Mexican States**

Title: **Aprende en Casa**

Short description: We have conducted training seminars on digital skills, consisting of 28 webinars for basic education. As of today, the videos have more than 5 million views and 174,298 teachers have registered and are eligible for certification; our goal is to reach 250,000 teachers. 200,000 upper-secondary school teachers participated in activities and free training courses in digital skills, in partnership with technology companies. For instance, 31,442 teachers were certified after taking a course offered with Microsoft in management of remote work and virtual classrooms.

Country: **The Netherlands**

Title: **Digital platform for distance learning support**

Short description: On the platform, teachers and school leaders can find step-by-step plans and working methods for distance education. Webinars are being organized, for example, on lessons learned with regard to distance education and hybrid forms of learning. The platform offers different levels of support for each sector and school type.

Country: **Kingdom of Saudi Arabia**

Title: **Teachers' Capacity Building and Professional Development**

Short description: Several training programs have been offered to teachers, supervisors, and school leaders to improve their digital skills and familiarize them with various approaches to e-learning and blended learning. These programs started during the first few weeks of school closures and are still periodically held to ensure that all teachers, supervisors and principals are given the chance to benefit from them. The latest statistics indicate that over 1,800,000 training opportunities, and more than 24,390 workshops and webinars have been provided, covering:

1 - Training and Capacity Building on Blended Teaching/Learning during COVID-19
2 - Optional Summer training for enhancing digital skills and utilizing platform tools
3 - Online Alternative Assessment
4 - Training the crew of the Satellite Broadcasting School
5 - The live online training on Madrasati Platform

Country: **Kingdom of Saudi Arabia**

Title: **Madrasati Platform (Back to school portal)**

Short description: The back to school portal is part of Madrasati Platform which provides various guidelines and training packages for students, teachers, supervisors, school leaders and parents. These guidelines and training packages were developed to facilitate the shift to distance learning and enhance all stakeholders' readiness to adopt E-learning. Teaching methods, evaluation strategies, instructional design, technical support, and users manuals are examples of these guidelines and training packages available on this portal illustrated with infographics, motion graphics and videos. In addition, training packages are also available for self-paced training.

Country: Kingdom of Saudi Arabia

Title: Satellite Broadcasting Channels (IEN Channel and National Gate Training)

Short description: The ministry adopted an action plan to qualify teachers and train them to record lessons of curricula general review remotely from their place of residence. The Ministry provided teachers with all the necessary equipment, such as tablets, PCs, technical tools, and an electronic platform in order to execute the initiative. Teachers were trained intensively over the period of a week to film and record lessons and broadcast them in a live TV stream for all levels of education. The lessons were televised to students live from studios and covered all educational levels and courses. All educational Directorates contributed to this work where 276 teachers and 73 educational supervisors were intensively and urgently trained to work effectively with filming and recording crews. The lessons were televised to students live from the studios covering all educational levels and courses.

Country: Kingdom of Saudi Arabia

Title: Distance learning for persons with Disabilities

Short description: All Saudi universities developed e-learning portals to support the needs of their faculty members and students with disabilities. Faculty members and students with disabilities from all Saudi government universities have been trained on how to use the tools and features designed specifically for their needs. These programs included synchronous online sessions, asynchronous sessions and YouTube videos.

Country: Kingdom of Saudi Arabia

Title: Making Blended Learning a key feature of the schooling experience

Short description: The Ministry of Education will provide resources and guidance to teachers, including design considerations, guidelines for curriculum coverage and student-initiated learning. Under the Skills Future for Educators framework, which is a professional development roadmap, teachers will be provided with professional development opportunities (e.g. workshops, webinars and self-paced micro-learning units) in the area of e-Pedagogy to enhance their capacity to deliver technology-mediated blended learning effectively (while mitigating potential well-being issues that students might face online).

Country: South Africa

Title: Development of guidelines for teachers on working from home

Short description: The purpose of the guidelines was to provide guidance to teachers on how to rearrange their homes and create working spaces. Furthermore, the guidelines were aimed at assisting teachers to identify different online platforms that carry educational resources and how to access them as well as application of these platforms for teaching and learning. The guidelines further dealt with how to use platforms such as WhatsApp and Google Classroom for delivering lessons remotely.

Country: Spain

Title: Aprendo en casa

Short description: This is designed to support teachers, educational staff, students and families. Resources and tools are available for all. "Aprendo en casa" has different sections of resources for families, students and teachers. Digital resources and tools have been updated to respond to needs generated by the COVID-19 pandemic.

Country: Spain

Title: Etwinning programme (Erasmus + action)

Short description: Training can be carried out on INTEF courses (online tutored courses about eTwinning (https://formacion.intef.es/) and on open massive online courses, MOOC, NOOC, SPOOC (https://enlinea.intef.es/). More specific professional development is offered for registered teachers by the eTwinning Central Support Service.

Country: Spain

Title: Reference framework for digital Competence for educators

Short description: It is meant to cover all teachers and trainers, and is aimed at developing a level of digital competence.

Country: Spain

Title: Training offer

Short description: Different training modalities for continuous professional development deal with aspects relevant to the COVID-19 situation. These include the use of digital tools, planning lessons for distance learning, employing online platforms, creating digital materials. All teachers are offered training. So far, the results have meant (in the training offered by INTEF) that 1) for the in-service training of teachers, 36 online tutored courses offered with 10,537 teachers participating; 2) Initial training and open training: open massive online courses: 52,468 participants in 8 MOOC, 48 NOOC, 6 SPOOC and 28974 users in 15 Edu pills.

Country: Turkey

Title: Establishment of Distance Learning Platform for Lifelong Learning

Short description: Teachers who arrive at undergraduate level are required to receive training on hybrid learning, as well as communication in hybrid situations, classroom management, questioning skills, measurement and evaluation, teaching methods and techniques. This is so they can keep up with changing teaching approaches.

Country: Turkey

Title: Strengthening infrastructure of the online Ministry learning platform

Short description: The online learning platform of the Ministry has many modules. One of them is the Professional Development Module. Thanks to this module teacher training is carried out in a virtual environment.

Country: Turkey

Title: Teacher Trainings on the EBA Professional Development Platform to develop distance education competences of the teachers

Short description: Since the beginning of the COVID-19 pandemic, 11 distance training courses have been deployed for teachers and school principals on the EBA Professional Development Platform. Trainings have been as follows: 1) Interactive Classroom Management Training (which aims to teach the use of technology in education, as well as the use of EBA and EBA course materials); 2) Conscious and Safe Use of IT and Internet Training (which aims to increase the knowledge level of teachers about internet use in daily life and in education); 3) Dynamic Mathematics Software (Geogebra) Training (which aims to help math teachers use online/offline software, electronic materials and Android applications).

Country: Turkey

Title: TRT EBA TV channels

Short description: Teachers who take part in this initiative received specific in-service training on "body language", "diction", "script writing", "content creation" etc. Many programmes addressing teachers have been broadcast on EBA TV channels.

Country: United Kingdom of Great Britain and Northern Ireland (Scotland)

Title: National e-Learning Offer and associated professional development support to teachers

Short description: In June 2020, the Scottish Government, Education Scotland and local government partners launched the National e-Learning Offer. The offer was developed in order to complement the role of individual teachers as they supported remote learning, and to utilise the capabilities within Glow, Scotland's nationally available digital environment. The offer comprised three key aspects: live, recorded and supported. The live aspect was provided via e-Sgoil, an initiative launched initially in 2016 by Comhairle nan Eilean Siar (Western Isles Council) to improve equity and access to learning across the Western Isles, but developed subsequently across the wider region and nationally. E-Sgoil provided live lessons across Scotland's Broad General Education and Senior Phase, as well as live study support sessions for learners studying for national qualifications. The recorded aspect involved the development of a bank of recorded lessons, made available to local education authorities and designed to complement the activity by class teachers. The supported element involved the curation and presentation of online learning and teaching resources developed by teachers for teachers. In parallel, Education Scotland provided professional development support to help teachers in their approach to online and remote learning, available via its digilearn.scot Digital Learning Community. In September 2020, Education Scotland and its partners announced a package of accompanying workforce support to aid school staff through COVID-19. Supporting educators' professional learning and well-being is a crucial part of education recovery in Scotland.

Country: United Kingdom of Great Britain and Northern Ireland (Wales)

Title: Accelerating Learning Programme

Short description: Wales invested GBP 29 million to grow capacity in its system, namely the equivalent of 600 teachers and 300 teaching assistants. The Welsh Government's priority is to ensure those most in need have access to support. The additional funding is being targeted at years 7,11,12 and 13 as well as disadvantaged and vulnerable learners of all ages. Since last July, the equivalent of 1,800 extra full-time school staff have been recruited in schools across Wales to provide new levels of support during the pandemic. That is double the original target of 900. In March 2021 further funding to support the programme was announced. An overall package of GBP 72 million was announced; this will fund a second year of the Accelerating Learning Programme Funding along with a range of other support including extra learning resources, support for foundation phase learners in schools and childcare settings, support targeted at learners in exam years to provide additional help with their transition into the next stage, and will also support 1,400 trainee teachers currently in Initial teacher education supporting their move into full-time teaching.

Country: United States of America

Title: ED COVID-19 Handbook: Roadmap to Reopening Safely and Meeting All Students' Needs (Volume 2)

Short description: This volume of the Handbook has several sections. The section most relevant to the topic of quality and effectiveness of blended education is part B of section 2: "Supporting equitable access and effective use of technology" (pp. 25-28). This section addresses equity implications of both the digital access divide and the digital use divide. It also provides links to resources and examples of effective ways to integrate technology into instruction, including as a method of recovering from the impacts of the COVID-19 pandemic.

The "Supporting equitable access and effective use of technology" section of Volume 2 of the Handbook provides a series of recommendations and examples that encourage schools and districts to do the following as they are reopening:

- Set clear goals and aggressive timelines for providing all students with access to high-speed broadband, devices, and accessible technology they can use when school is not in session.
- Set standards for digital learning that are integrated into the broader learning experience and create learning plans based on those standards.
- Provide extensive professional development opportunities for educators who support improvements in instructional design and empower them to effectively use technology to support student learning.
- Use technology in ways that support students who are performing at different levels — which may be an even more common occurrence when students return to in-person instruction — in part by leveraging technology to support one-on-one or small group work with students and by using student-centred learning models.
- Engage families in effectively using technology by providing support, such as tutorials, on the use of technology and platforms provided by the school.'

5) System-level interventions

Six countries reported 10 interventions at system level, which support the digital transition of education and training systems (**Table 12**). The use of digital tools in the learning process can facilitate cooperation between schools, for instance through eTwinning, whether at national or international level. Those tools can also facilitate interactions with families and educational communities.

Updated curricula (Argentina, Brazil) have emerged alongside new delivery modes. In Brazil, for instance, hybrid teaching (the mix of in-person and online teaching)

has grown, and teachers are now trained in its delivery. In Canada, the province of Québec has articulated a definition of digital competency to foster its development across the education system, with ethical citizenship in the digital age and technological skills as central dimensions. In Spain, teachers, students and educational authorities are being trained in teaching practices, including formative and summative assessments, based on artificial intelligence. This will enable teachers to follow up students' progress more effectively and provide them with a more individualized analysis of their progress.

Table 12: System-level interventions

Country: Argentina

Title: Plan Federal Juana Manso (Federal Plan Juana Manso)

Short description: Strengthens teachers' professional work through the updating of curricula and didactic materials; designs an open federal repository of educational resources which reflect national and regional government needs.

Country: Argentina

Title: Seguimos Educando

Short description: Guidelines and recommendations are shared to accompany teachers and principals in their task, to help maintain the vital link between teachers and students when schools are closed. Recommended materials such as video tutorials, articles, suggestions for working with technologies, virtual classrooms, and a space for sharing teaching experiences are included.

Country: Canada (Québec)

Title: Digital Competency Framework (a structural measure of the Digital Action Plan for Education and Higher Education)

Short description: The establishment of this framework and its operationalization constitute the first measure of the Digital Action Plan for Education and Higher Education which runs for a period of five years from 2018 to 2023. It is implemented in close collaboration with all stakeholders of the education system. It is expected that the operationalization of the Digital Competency Framework will continue beyond the period covered by the plan. With the aim of developing digital competencies, leveraging the use of technology in learning and teaching, and developing an environment that fosters digital learning, the framework defines digital competency by breaking it down into 12 key dimensions (each comprising several elements), with exercising ethical citizenship in the digital age and developing and mobilizing technological skills as foundational.

Country: Canada (Yukon)

Title: Yukon Learning Continuity Requirements for the 2020/21 school year

Short description: The Yukon Learning Continuity Requirements for the 2020/21 school year set the priorities and expectation for delivering learning and curriculum, including guiding the delivery of blended learning in Yukon schools, meeting students where they are in their learning, and adapting school programming and instruction. According to these requirements, school staff were encouraged to develop blended learning opportunities for students from the start of the school year. In that way, they could be ready to shift to teaching at a distance should circumstances require.

Country: Canada (Northwest Territories)

Title: Northern Distance Learning (NDL)

Short description: NDL is a distance learning programme hosted out of East Three Secondary School in Inuvik, Northwest Territories (NWT). An NDL student's school day is a blend of online classes and regular high school classes. NDL is an initiative within a larger framework known as Education Renewal and Innovation: Directions for Change. From 2014-18, the Department of Education, Culture & Employment (ECE) and the Beaufort Delta Education Council (BDEC) partnered to pilot and expand NDL. During this time, the Department entered into a comprehensive renewal process, initiating a number of new programs and services. In March 2016, ECE was mandated to expand NDL over the 2018-2021 school years. By 2020/21, NDL should be available to all 20 small high schools in the NWT.

Country: Republic of India

Title: The National Education Policy (NEP) 2020

Short description: The National Education Policy (NEP) 2020 envisages the use and integration of technology to improve multiple aspects of education. It calls for carefully designed and appropriately scaled pilot studies to determine how the benefits of online digital education can be reaped while addressing or mitigating its downsides. Existing digital platforms and ongoing ICT-based initiatives also have to be optimized and expanded. The Policy notes that the benefits of online/digital education cannot be leveraged unless the digital divide is eliminated. This is the aim of the Digital India campaign and the push for affordable computing devices for all — without which there will be no equitable access.

Country: Italy

Title: National Plan for Digital Education – Actions for blended and distance learning

Short description: The Ministry of Education has created a system for supporting and guiding the actions of the National Plan for Digital Education aimed at supporting blended learning in 2020 and 2021. The backbone of this system is represented by 8,200 "animatori digitali" (ICT coordinators), actively working in every Italian school, also by 24,000 teachers part of the digital team (3 teachers in every school), and 120 expert teachers, the Training Territorial Equipe. Other actions include: the availability of digital devices for the students to efficiently attend distant learning actions: schools have purchased over 600,000 portable computers and tablets, and have given them in use to those students in need; students were also provided with the necessary connectivity; the availability of digital tools in schools was enhanced: in order to allow blended education to be effective both connectivity and the number and quality of digital interactive devices has been enhanced; teacher training action specifically focused on digital teaching and learning and on innovative teaching methodology was also enhanced, as over 600,000 teachers benefited from those training actions.

Country: Republic of Korea

Title: Legislations to Promote Digital-based Online Education

Short description: In order to be prepared for the emergence of various natural and social disasters and to pre-emptively respond to the challenges of the 4th Industrial Revolution, ICT-integrated education should be promoted. In this regard, the relevant legislations have set a framework for online education, including the responsibilities of educational institutions in online education and government support, to assist educational institutions to offer high-quality online education, while laying the foundation for an innovative model of digital-based education to drive positive changes in the future. For example, the Primary and Secondary Education Act has been revised to make the curriculum more flexible to better facilitate the operation of online classes, whereas the Higher Education Act has been revised to ease restrictions on online lectures to improve the academic management and operation of higher education institutions. In addition, more legislations are underway to further promote online education.

Country: Kingdom of Saudi Arabia

Title: Advancing Resilience of Legislations and Educational Policies
Implementer: Ministry of Education
Beneficiary group/s: Learners, kindergarten children, teachers, parents, administrators

Short description: The Ministry of Education has introduced two important initiatives since the beginning of COVID-19 to overcome the digital divide and avoid the consequences on all involved stakeholders. The first concerns the launch of the Back to School portal, a website to support e-learning initiatives and enhance change management plans and activities through multiple educational guides and training packages related to the Madrasati (e-learning platform) to raise societal awareness about online education and provide free education and training to all relevant stakeholders. The second initiative concerns amendments to policies regulating education delivery during the pandemic, designed to ensure continuity in schooling and increase access to remote learning. These amendments touch on the day-to-day school process, including attendance controls, testing, student evaluation, teachers' evaluation and training. New regulations have also been adopted on privacy and cybersecurity in relation to the use of learning platforms. Alongside 283 newly introduced educational and teaching materials, centres and departments have also been created which are responsible for ensuring the quality of e-Learning systems.

4. Addressing educational poverty

G20 countries aim to implement the fundamental right to education, to achieve quality and equity in participation and learning outcomes, and to promote lifelong learning, as stated in Sustainable Development Goal 4 of the 2030 Agenda. Addressing factors behind education poverty is vital to reach those objectives.

Regardless of a country's average income, some marginalized population groups are more likely to be excluded from education opportunities. This in turn prevents them from accessing decent jobs – young people cannot fulfil their potential without this minimum qualification. Factors that lead to large disparities in the probability of completing secondary school include sex, location, socioeconomic status, migration, and ethnicity. These individual factors interact with structural factors related to both the education system (e.g. early tracking of stu-

dents to different education streams, grade retention) and the labour market (e.g. pulling some young people out of school into unskilled employment) to cut short the education trajectories of vulnerable youth.

Already before the pandemic began affecting social and economic life around the world, a significant part of the young population in G20 countries were leaving school without completing secondary education – the average completion rate was just 62 per cent, and wide disparities observed within countries, according to income, location or ethnicity (**Figure 12**). Gender disparities were a cause for concern in most G20 countries. While girls remained at a disadvantage in only a handful of countries, male under-achievement and dropout had become a key policy issue in upper-middle and high-income countries (**Figure 13**).

Figure 12: Disparities in secondary education completion rate, G20 countries, 2019 or most recent year
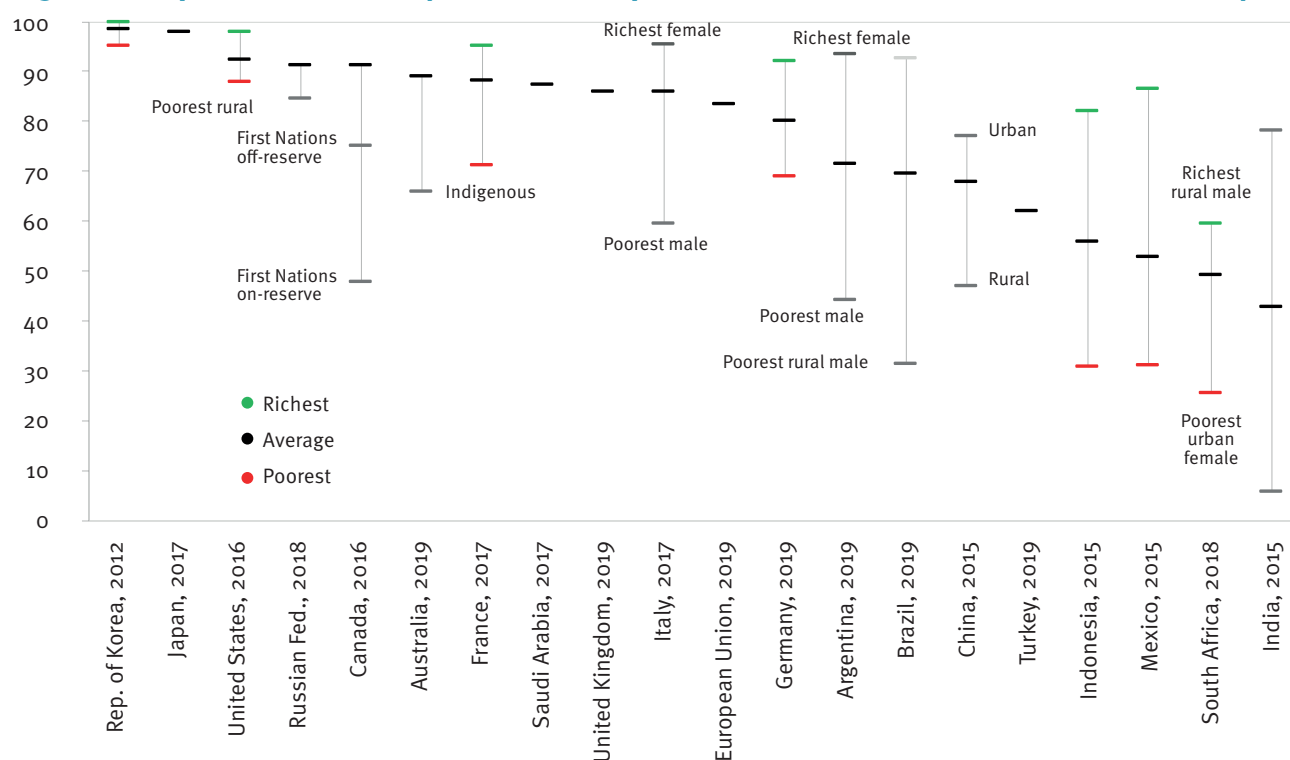
Note: In general, youth is defined as the age group 20 to 24 years with small variations by country.
Sources: Official reports and Global Education Monitoring Report team analysis of selected household surveys.

Figure 13: Gender disparities in secondary education completion rates, G20 countries, 2019 or most recent
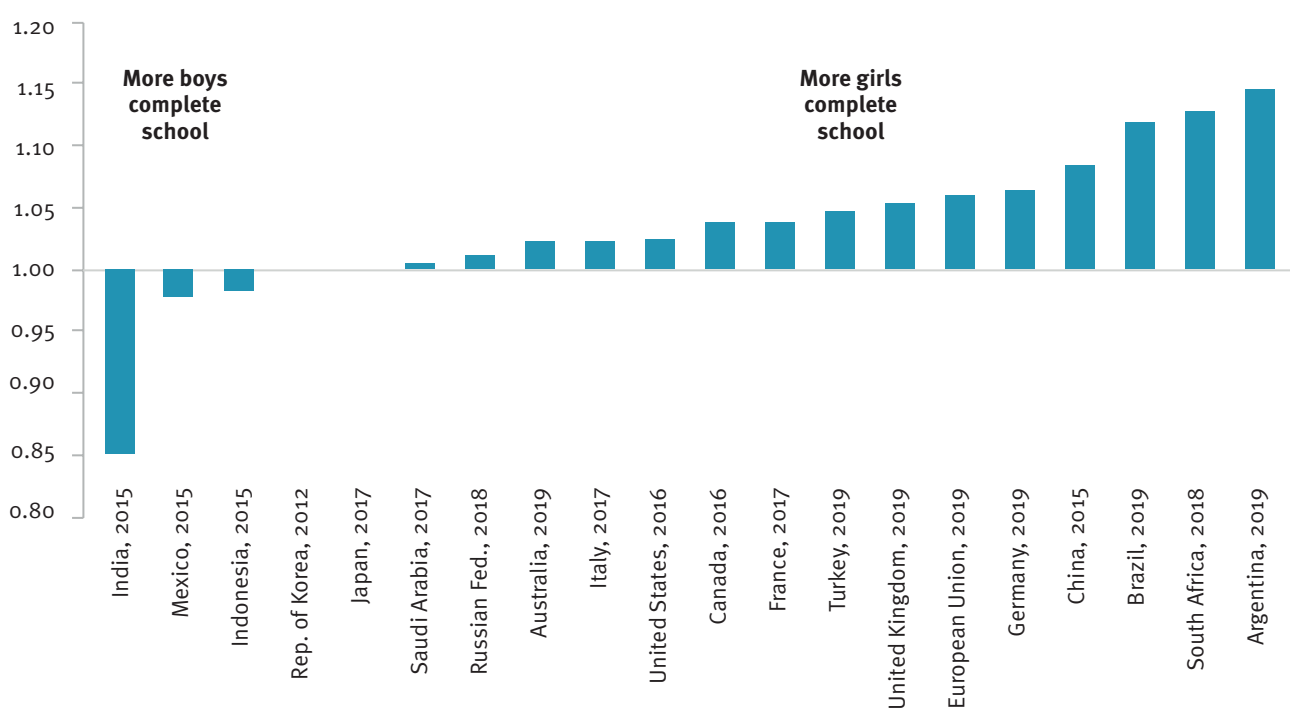
Note: In general, youth is defined as the age group 20 to 24 years with small variations by country.
Sources: Official reports and Global Education Monitoring Report team analysis of selected household surveys.

During the pandemic, the lockdowns and closures of economic activities and services exacerbated existing economic hardships faced by some households. In addition, access to education has been constrained, especially for those from disadvantaged backgrounds who are less likely to have the resources in place at home to make the most of online learning compared with affluent peers. They are less likely to have access to relevant learning digital resources (e.g. a computer and good broadband access), a good home learning environment (e.g. a quiet place to study and less disruptions), and direct and indirect support from parents for learning. Even those not vulnerable have become increasingly isolated from their teachers and their peers due to distance, online or blended education. Those constraints have taken a toll on students' mental health and well-being, affecting their engagement with education. All these factors combined have increased the risk of educational poverty suffered by children, adolescents, and young adults, in particular those from the most vulnerable families.

Strategies, policies, and programmes to tackle early school leaving

Three broad types of interventions can be deployed to tackle early school leaving:[6]

1. Prevention measures, which tackle the root problems that eventually result in early leaving.

2. Intervention measures, which address emerging difficulties experienced by students, by improving the quality of education and training and providing targeted support.

3. Compensation measures, which create new opportunities for those who have left education and training prematurely to gain qualifications.

In addition, there are interventions related to system governance and monitoring.

Some countries described an integrated package of measures that cover all three types. For instance, China's plan to prevent dropout and ensure every child achieves nine years of compulsory education envisages five sets of measures including: monitoring of local governments by the central government; regulations to prohibit the substitution of compulsory education by other types of out-of-school education; surveys of the status of stu- dents and a platform for the management and control of early school leavers to strengthen communication and data sharing between departments; actions to encourage poor families to send students to school; and measures to strengthen assistance to students who have returned to school by adapting the content of teaching to their conditions, establishing a support system and offering psychological counselling and emotional assistance, helping them resolve difficulties in life and study, especially for children with disabilities. Additional measures have been taken in the context of COVID-19, including the programme Disrupted Classes, Undisrupted Learning that provides home learning services to children in the compulsory education age group.

India's National Education Policy 2020 aims to achieve universal enrolment from preschool to secondary education by 2030 and ultimately eliminate educational poverty, providing quality education to every child. It is based on the pillars of access, equity, quality, convenience, and accountability. The aim is to transform India into a vibrant knowledge society by making school and university education more holistic, flexible, multidisciplinary, adapted to the needs of the 21st century and bringing out the unique abilities of each student. The recently established Centrally Sponsored Integrated Scheme for School Education, Samagra Shiksha, is an overarching programme from preschool to secondary education which aims to improve school effectiveness in terms of equal opportunities and equitable learning outcomes. It includes interventions such as minimum standards support to states to implement the 2009 Right of Children to Free and Compulsory Education Act, the promotion of vocational education and training, and the strengthening of State Council of Educational Research and Training/State Institutes of Education and DIET as a nodal agency for teacher training.

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[6] European Commission/EACEA/Eurydice/Cedefop, 2014. *Tackling Early Leaving from Education and Training in Europe: Strategies, Policies and Measures*. Eurydice and Cedefop Report. Luxembourg.

Table 13: Integrated packages addressing educational poverty

Country: Federative Republic of Brazil

Title: Continuous Education of Teachers in Special Education

Implementer: Federal Institutions of Higher Education (IFES) in partnership with the State Education Departments at Federal District and Municipality level

Beneficiary group/s: Public system teachers and basic education professionals working with special needs learners

Short description: The initiative has been implemented during the pandemic period to better respond to pupils with special needs. It promotes continuous teacher training to improve teaching-learning processes for special needs students. The beneficiaries are most often blind, visually impaired, hearing impaired, autistic spectrum disorder and high capacity and/or gifted learners.

Country: Federative Republic of Brazil

Title: National Rural Education Program (Pronacampo): Escola da Terra Action; and PDDE Water

Implementer: Federal government   **Beneficiary group/s:** Teachers in rural areas

Short description: The National Rural Education Programme focuses on initial and continuous training of teachers, including the distribution of specific teaching materials, transition back into the classroom during all recovery phases and levels of education in rural areas. It is organized around the following actions: 1) Continuous training for teachers in *quilombola*s or rural communities within Municipalities who work at primary school level in multilevel classrooms (Escola da Terra Action); 2) Allocation of resources to municipal, state and district levels for basic education in public schools located in rural areas towards the improvement of school infrastructure (PDDE Rural); 3) Allocation of funds and financial resources to public schools for basic education in the countryside and *quilombolas* to ensure the provision of facilities and water for consumption and sanitation (PDDE Water).

Country: Federative Republic of Brazil

Title: Support Programme for Higher Education and Intercultural Undergraduate Courses (Prolind)

Implementer: Federal government   **Beneficiary group/s:** Indigenous teachers

Short description: The programme supports higher education and intercultural degree programmes (Prolind). Specifically, it provides qualification courses for indigenous teachers working in the last years of primary school and high school. In 2020 it supported the maintenance of classes of 1,788 teachers and 488 teachers in 3 institutions for an amount of 3.6 million.

Country: Federative Republic of Brazil

Title: Indigenous Knowledge at School Action

Implementer: Federal government   **Beneficiary group/s:** Indigenous teachers

Short description: The project offers specific continuing training courses for indigenous teachers who work in the early years of primary school.

Country: Federative Republic of Brazil

Title: National Plan for Indigenous School Education – PNEEI
Implementer: Federal government   **Beneficiary group/s:** Indigenous teachers and learners

Short description: The PNEEI (2020-23) is an intergovernmental plan for indigenous school education (EEI) aimed at implementing the proposals approved within the second National Conference on Indigenous School Education (CONEEI). The Plan ensures collaboration among federal entities and promotes social participation, transparency of actions and effective management. It also offers a framework for monitoring, evaluation and control of the EEI. There are seven strategic lines of action: 1) Organizing the EEI with the participation of indigenous peoples, taking into account their territories and respecting their needs and specificities; 2) Enhancing the cultures of indigenous peoples and their ethnic diversity; 3) Protecting sociocultural practices and the mother tongue of each indigenous community; 4) Implementing training programmes for education professionals working in indigenous communities; 5) Supporting curriculum development that gives value to the cultural content of indigenous peoples; 6) Supporting the elaboration, publication and distribution of specific, intercultural and bilingual teaching materials; 7) Supporting the development of ethnic identities and projects developed by all indigenous people. The plan involves the different levels of education of indigenous public schools and their students, teachers, principals and all school staff.

Country: Federative Republic of Brazil

Title: Training on issues related to self-mutilation and suicide   **Implementer:** Federal government
Beneficiary group/s: School leaders, teachers and members of the school community

Short description: Digital contents are being developed to facilitate training around issues related to self-mutilation and suicide. The training, which begins during the last years of primary school, contributes to promoting mental health awareness among students and teachers, preventing self-mutilation and addressing important issues around suicide with family members and people close to victims. The programme further promotes the continuous training of health managers and professionals at all levels of public health on issues related to self-harm.

Country: Federative Republic of Brazil

Title: Emergency construction of schools in the municipalities of São Gabriel da Cachoeira, Barcelos and Santa Izabel do Rio Negro, in Amazonas
Implementer: Federal government   **Beneficiary group/s:** School districts in indigenous areas

Short description: This is an emergency engineering and architectural project, lasting 4 years, to build schools and reinforce indigenous schooling in areas where schools are in poor condition, or a physical school does not actually exist. The main goal is to build 50 indigenous schools in the Ethno-Educational Territory (TEE) of the Rio Negro. The target area concerns the municipalities of São Gabriel da Cachoeira, Barcelos and Santa Izabel do Rio Negro in Amazonas. The construction of the first 18 schools began in 2019 but has since slowed due to the COVID-19 pandemic.

Country: Federative Republic of Brazil

Title: Development of actions to confront COVID-19
Implementer: Federal government   **Beneficiary group/s:** Higher education network

Short description: Activities have been introduced to combat the COVID-19 pandemic within the Federal Network for Professional, Scientific and Technological Education. The Federal government has provided masks, cleaning materials and alcohol gel, alongside 3D printers for the printing of personal protective equipment (PPE) for distribution at Federal level.

Country: Canada (Ontario)

Title: Guide to Reopening Ontario's Schools   **Implementer:** Provincial Government
Beneficiary group/s: Students, staff and families from kindergarten through to grade 12

Short description: The guide, issued in July 2020, is directed at school boards to support the safe reopening and functioning of public schools during the 2020/21 school year and to reduce barriers to educational services for all students, teachers and staff. It considers the need for health and safety measures to support the safety of students and staff, the impact of school closures on students' mental health and well-being, and the importance of communication to parents for a successful reopening. School boards were required to prepare for a variety of delivery methods, including conventional, adapted and complete distance learning. The guide also addresses potential learning gaps and the need for catch-up programmes in maths and reading, as well as the need to improve special education and mental health programming and supports for underserved students. Already in the summer of 2020, vulnerable students and their families benefited from the expanded summer learning programmes that will continue in the summer of 2021.

Country: Canada (Ontario)

Title: Policy/Program Memorandum No. 165: School Board Teacher Hiring Practices
Implementer: Schools and teachers
Beneficiary group/s: Employees of the school board involved in teacher hiring

Short description: The purpose of this memorandum is to provide direction to school boards on the development and implementation of fair, consistent, and transparent teacher recruitment policies and processes. It identifies the components of a teacher recruitment policy that school boards are expected to adopt, as well as recommended effective practices. As part of this memorandum, a number of components are noted including diversity, equity and human rights. The promotion of human rights and equity is vital to achieving a diverse and representative teacher workforce to meet the needs of a diverse student community.

Country: Canada (Quebec)

Title: Strategy for mutual educational assistance and well-being at school (*La Stratégie d'entraide educative et de bien-être à l'école*)   **Implementer:** Provincial government
Beneficiary group/s: Students and school actors at primary and secondary levels

Short description: In operation since January 2021, the strategy supports students experiencing academic and psychosocial difficulties related to the pandemic by supporting an improvement of existing tutoring services in the public school network, as well as offering new support services through partner organizations (Alloprof and Tel-jeunes). The Ministry of Education also supports well-being at school for all school stakeholders, in particular by offering grants to schools for the establishment of services or projects focused on well-being, as well as training and increased support for schools, focusing namely on social and emotional skills, the school climate, healthy lifestyles, and mental health. This strategy is a two-year initiative.

Country: Canada (Saskatchewan)

Title: Emergency funding allocated to the post-secondary sector to provide emergency financial assistance to students   **Implementer:** Provincial government

Beneficiary group/s: Students in higher education whose studies and employment are disrupted as a result of the COVID-19 pandemic and who do not qualify for the federal and provincial emergency funding programmes including many international students

Short description: This emergency funding, amounting to CAD 1.5 million over a one-year period, provides support for students' basic living costs such as rent, housing and food, as well as for computer hardware and internet access.

Country: Canada (Nunavut)

Title: 2020/21 Recovery Learning Framework for School Leaders
Implementer: Territorial government   **Beneficiary group/s:** Students and school leaders from kindergarten through to grade 12

Short description: The framework is a guide for school leaders and their staff in Nunavut to facilitate a smooth transition back to classroom teaching, and to ensure that supportive learning recovery can take place. Recovery learning is a responsive process that aims to identify learning needs in a coordinated, collaborative and inclusive way so that learning can take place. It includes Universal Design for Learning (UDL), which offers flexibility in the way that students access the material, engage with it and show what they know.

Country: People's Republic of China

Implementer: Governments on all levels   **Beneficiary group/s:** Children and young teenagers within the age group for compulsory education (generally 6-15 years old)

Short description: The Chinese government has introduced several measures to prevent school drop-out due to the COVID-19 epidemic. This includes various funding schemes, the "Disrupted Classes, Undisrupted Learning" programme and home learning services for students. Support is aimed at all children within the age group for compulsory education (primary and lower secondary, generally 6-15 years). Central government systematically verifies that local governments are carrying out checks on dropout and considers this a key task. It has also established a platform to monitor the number of early school leavers to ensure enrolment, and has strengthened communication and data sharing between departments. Actions are taken to persuade impoverished families to send students back to school by implementing emotional, economic, administrative and legal measures. Government also strengthens assistance to students who have returned to school by adapting the content of teaching to their situation, establishing a support system and offering psychological counselling and emotional assistance, helping them resolve difficulties in life and their studies. The right to learning of disabled children is guaranteed through home education and other means.

Country: Republic of India

Title: The National Education Policy (NEP) 2020
Implementer: Government

Short description: The National Education Policy 2020 aims at transforming the entire educational landscape by enhancing the use and integration of technology to improve multiple dimensions of education systems, while recognising its potential risks and dangers. The government recognizes that existing digital platforms and ongoing ICT-based educational initiatives need to be optimized and expanded to address current and future challenges in providing quality education for all. The benefits of online/digital education cannot be exploited unless the digital divide is eliminated through concerted efforts, such as through the Digital India campaign and the availability of affordable IT devices.

Country: Republic of India

Title: National Means-cum-Merit Scholarship Scheme

Short description: NMMSS is a Central Sector Scheme launched in May 2008 to provide scholarships for meritorious students of classes IX to XII.

Country: Republic of Indonesia

Title: Policy adjustment to support flexible use of School Operational Assistance
Implementer: Ministry of Education, Culture, Research, and Technology

Short description: To support distance learning, to reduce the impact of economic recession on schools and provide hygiene kits and facilities during the pandemic, the government has adjusted the policy of School Operational Assistance to enable funds to be disbursed to schools at primary and secondary levels.

Country: Italy

Title: Fund for the functioning of educational institutions.
Implementer: Government   **Beneficiary group/s:** Schools

Short description: The Department of Civil Protection has released funding amounting to EUR 6 million over a one-year period, earmarked for measures to ensure health safeguarding and educational continuity. One million euros supported the first emergency interventions mitigating the spread of the virus, while EUR 2 million were earmarked for national emergency health measures. Through these funds, the Ministry of Education has also been able to support educational institutions in progressively exiting from containment policies adopted across Italy through: 1) Extending ordinary school hours through collaboration with local authorities and education partners; 2) Establishing psychological support desks and other individualized forms of socio-educational help; 3) Supporting educational institutions at all levels, in particular in areas with the greatest learning gaps, high rates of school dropout, or areas impacted by natural disasters.

Country: Republic of Korea

Title: School-level Prevention Measures Against COVID-19 and Psychological Support
Implementer: Ministry of Education   **Beneficiary group/s:** Learners, teachers and parents

Short description: The Ministry of Education is mitigating against the pandemic through policy measures to: control the rate of infection in all educational facilities; ensure that everyone at school wears a mask and undergoes a health check with a thermal imaging camera or thermometer before entering the classroom; and guarantee the supply of adequate protection equipment to schools enabling them to fully comply with government recommendations relating to social distancing and sanitation. Before coming to school, all students and school staff are required to do a health check and upload the results on a mobile application developed and distributed by the Ministry of Education. Both on- and offline education programmes are offered to teachers and parents to raise the awareness of pandemic-induced depression and anxiety, and to support students' psychological stability. In order to prevent the stigma and prejudice that confirmed COVID-19 patients are attached to during and after their treatment, mental health experts offer in-person or non-face-to-face psychological consultations to those in need.

Country: Russian Federation

Title: Providing free hot meals to all primary school students (grades 1-4)
Implementer: Government of the Russian Federation
Beneficiary group/s: Primary school students throughout Russia

Short description: In his address to the Federal Assembly of the Russian Federation (on 15 January 2020), the President of the Russian Federation instructed all schools throughout Russia to provide free hot meals to all primary school students in grades 1-4. In pursuance of this, Federal Laws were adopted, including "Amendments to the Federal Law," "Quality and Safety of Food Products" and Article 37 of the Federal Law "On Education in the Russian Federation." These introduced provisions for students at primary level to receive at least one free hot meal per day and a hot drink. The funding is sourced through the Federal budget, the budgets of the constituent entities of the Russian Federation, local budgets and other sources of financing provided by legislation. Since 1 September 2020, around 7.3 million students in grades 1-4 in 39,194 general education institutes have received free hot meals.

Country: Kingdom of Saudi Arabia

Title: A COVID-19 Impact Study - The State of Online Learning in the Kingdom of Saudi Arabia
Implementer: Government   **Beneficiary group/s:** Teaching profession

Short description: The Ministry of Education of the Kingdom of Saudi Arabia has commissioned several studies in collaboration with leading international organizations. One of these studies investigates the state of online learning in the Kingdom of Saudi Arabia and consists of two phases. Phase 1 focuses on eight dimensions including leadership, curriculum design and planning, online teaching and learning, assessment, technology, student support, training and support, and evaluation and continuous improvement. Phase 2 focuses on the creation of a report on stakeholder satisfaction mapped to the dimensions of the National E-learning Center (NELC) evaluation framework through a mixed approach employing a combination of quantitative and qualitative data collection. The main objective of the study is to analyze and evaluate the readiness of the domain pre and during COVID-19 school suspension, analyze the response of shifting to online education for education continuity during the pandemic, evaluate and investigate the challenges of each domain's journey, assess future challenges, identify opportunities, measure effectiveness and impact, and measure stakeholder satisfaction. The study resulted in several recommendations (71 for K-12 and 78 for higher education) to effectively build infrastructure and capacity and deliver high-quality online learning. This being said, the study has resulted in enhancing understanding of the changes taking place in K-12 education post-pandemic, providing evidence of the progression of institutional and instructional practices with strategic forethought to provide access and support and instruction to students remotely. The recommendations resulting from this study are designed to support both long-term and immediate needs to develop and deliver effective online teaching and learning in both scenarios. The Online Learning Consortium (OLC) was asked to lead this project with the assistance of several key partners/experts including the international Council for Open and Distance Education, UNESCO IITE, ISTE, Quality Matters, the University of Wisconsin-Milwaukee Center for Distance Education and Technological advancement (DETA), Michigan Virtual, Illinois Virtual School and the Association of Public and Land-Grant Universities (APLU).

Country: Kingdom of Saudi Arabia

Title: Financial Support Services   **Implementer:** Government
Beneficiary group/s: Teachers and students across public and private systems

Short description: Financial support to students and teachers is offered through a collaborative effort between government entities to enhance teachers and students access to educational resources and ensure the continuity of institutional educational services. The financial support included the following:

1 - Providing free laptops and tablets with data SIM cards for unprivileged students.

2 - Waiving internet fees for educational platforms and websites to combat digital divide.

4 -Supporting the wages of Saudi teachers in a wage subsidy programme by the Saudi Human Resources Development Fund (HRDF) to retain them in the sector and decreasing the turnover of employees and contract termination, hence reducing unemployment rates and offering new job opportunities in the private sector.

5 - Supporting the wages of teachers working in private schools through including private education schools among entities that can receive financial support from the social insurance Law (SANED programme).

6 - Soft loan initiative to the private education sector aiming at offering soft loans to small, medium and large institutions in the private sector to help sustain the quality of education offering enough liquidity to avoid the cessation or suspension of delivering remote education.

Country: South Africa

Title: National School Nutrition Programme (NSNP)
Implementer: Government
Beneficiary group/s: Learners from low-income families

Short description: The NSNP was introduced in 1994 to tackle poverty and support children's rights to basic education and healthy nutrition. The Department of Basic Education manages and implements the NSNP within the Care and Support for Teaching and Learning (CSTL) Framework, which is designed to address barriers to learning. The NSNP has made a significant contribution to the Department of Basic Education's aims to improve attendance, student performance and access to education, especially for students from disadvantaged families. The programme currently provides nutritious daily meals to more than 9.1 million students across the country. Many beneficiaries come from single-parent families or live with members of their extended family. Some students come from families headed by children who are beneficiaries of government social protection schemes such as the Child Care Grants.

Country: Spain

Title: Educa en Digital   **Implementer:** Government
Beneficiary group/s: Teachers, students and educational authorities

Short description: "Educa en Digital" is a four-year programme supporting teachers, students and educational authorities based on artificial intelligence. It addresses three kinds of gaps: accessibility, quality in the use of digital tools and the skills that enable them to be used correctly. The programme will enable teachers to follow up students' progress more effectively and provide them with a more individualized analysis of their progress. The provision of equipment (500,000 devices) is accompanied by additional skills support for teachers, with professional development and training from the INTEF (National Institute of Educational Technologies and Teacher Training), alongside an introduction to digital resources, materials and tools for digital education and maintaining close relationships with students. It is estimated that the digital divide currently affects 1 million students at pre-university levels. "Educa en Digital" aims at reducing the digital divide by 40%. Similar actions, aimed at providing equipment, were previously carried out by regional governments and national government, such as "Escuelas Conectadas".

Country: The Netherlands

Title: National Programme Education   **Implementer:** Government
Beneficiary group/s: All education levels from primary education up to higher education

Short description: The programme covers two core levels: 1) Early childhood and school education with funding for a range of tailor-made support services for pupils, including psychological well-being. For primary and secondary education, schools can choose from a range of evidence-based interventions such as mentoring in small groups to collaboration with libraries to boost reading. Schools with a higher proportion of disadvantaged pupils receive slightly more funding. 2) For technical and vocational education and training (TVET) and higher education, a range of interventions are available, including reduction in tuition fees to compensate for study delay. Grants for practical placements in TVET are increased to improve their appeal and help companies in periods of economic hardship. Extra funding is available for student counselling and strengthening personal development. To bridge the digital divide, support is provided for TVET students who do not have access to ICT devices or services. The programme ensures EUR 8.5 billion in additional funding for all levels of education with the overarching aim of improving equity. The overall goal is to make sure that students affected by the pandemic (over the years 2021-2023) have the same opportunities as students who went before them. A similar strategy and raft of measures are being envisaged for the Dutch Caribbean in partnership with local stakeholders.

Country: United Kingdom of Great Britain and Northern Ireland (Northern Ireland)

Title: The Engage Programme   **Implementer:** Government
Beneficiary group/s: Public school system

Short description: The Engage Programme accompanies students in their return to school thanks to high-quality teaching and support services including individual lessons, or teaching in small groups and teams. The programme in its first year (2020/21) covered pupils aged 4 to 18 in every primary and post-primary school in Northern Ireland. All pupils (around 330,000) are eligible for support under the programme and individual schools identify those who need the support most. The ultimate goal is to boost confidence, commitment, and motivation to learn as well as develop the skills pupils require to become independent and resilient learners. The programme encourages knowledge and understanding in cross-cutting key areas such as mathematics, communication, the use of ICT, as well as thinking skills, creativity and innovation. It complements existing programmes such as Extended Schools. The programme will be extended to a second year (2021/22) and will be expanded to cover early years settings (with around 23,000 pupils).

Country: United Kingdom of Great Britain and Northern Ireland (Northern Ireland)

Title: SUMMER SCHOOL – Support for children's learning during the Summer to address COVID
Implementer: Government   **Beneficiary group/s:** Students at risk of falling behind

Short description: The programme financed summer schools for two weeks in July/ August 2020 for pupils who would most benefit from extra support. Participating schools were provided with a range of quality materials including the Education and Training Inspectorate (ETI). The summer sessions were designed to ease re-entry into school from September 2020 onwards. After the March to June 2020 lockdown, the programme offered children, aged 5 to 7 years old, the chance to engage in learning and play by getting used to the school environment again, prior to starting the new term. The summer schooling sessions were a success in the schools that adopted the programme and used ETI's resources. Pupils and families also deemed the programme to be relevant and useful. All 800 primary schools in Northern Ireland were invited to join, although only 50 did so because of logistics and late notice. Anecdotal evidence suggests a positive difference was observed in those pupils who attended summer school compared with those who didn't.

Country: United Kingdom of Great Britain and Northern Ireland (Wales)

Title: Higher Education COVID-19 support   **Implementer:** Government
Beneficiary group/s: Higher education students facing financial hardship/addressing digital poverty among students

Short description: To support the national response to the pandemic, the Welsh Government has provided over GBP 70 million for universities to support students facing financial hardship, helping the students most affected by the pandemic. This funding will also help tackle inequality, by ensuring the most vulnerable students and those most affected by the pandemic can complete their studies. Universities have been asked to prioritise funding towards the most vulnerable students, as well as strengthening advice and support services for students. The funding will also be used to address digital poverty among students, to enable better access to online learning. Qualifying students receive funding to support the installation of broadband and/or are provided with a devices suitable to access learning and teaching.

Country: **United States of America**

Title: **Coronavirus Aid, Relief and Economic Security (CARES ACT)**
Implementer: **Government** **Beneficiary group/s:** **Public education system**

Short description: The CARES Act was enacted on 27 March 2020. It includes a package of assistance measures worth US$2 trillion, including US$30.75 billion for an education stabilization fund. Four grant programmes were created through the CARES Act: 1) Education Stabilization Fund Discretionary Grants; 2) Governor's Emergency Education Relief Fund; 3) Elementary and Secondary School Emergency Relief Fund; 4) Higher Education Emergency Relief Fund. The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSA Act), was passed into law on 27 December 2020 and provides an additional US$81.9 billion to the Education Stabilization Fund. The Department of Education awards these grants to state educational agencies (SEA) and local educational agencies (LEA). In general, these funds will be available until 30 September 2022. To further transparency and accountability in the use of funds, an ESF Transparency Portal has been created (covid-relief-data.ed.gov).

Country: **United States of America**

Title: **Executive Order on Supporting the Reopening and Continuing Operation of Schools and Early Childhood Education Providers**
Implementer: **Government** **Beneficiary group/s:** **Public school system**

Short description: On 21 January 2021, the Biden administration issued an executive order supporting the reopening and continuation of learning activities in schools, early childhood centres and other education institutions. A National Safe School Reopening Summit was convened covering a wide range of topics including distance learning, in-presence education, mental health and psychosocial wel-lbeing, as well as dialogue with families and parents. The Department of Education is now developing a Safer Schools and Campuses Best Practices Clearinghouse to share lessons learned and demonstrate ongoing best practice. Concurrently to this, the Department of Civil Rights Education will deliver a report on the specific impact of COVID-19 on all levels of education. The Secretary of Education is working with the Institute of Educational Sciences to facilitate the collection of data, with a breakdown by race, ethnicity, disability and more. Alongside this, the Department of Education published a handbook to assist schools in the implementation of the Centres for Disease Control and Prevention guidelines. Emphasis was placed on evidence-based strategies that worked.

4.1. Preventive measures that tackle the root problems

Many structural measures in education systems contribute to preventing early leaving, tackling its root causes, even though some of them might not have that as one of their primary objectives.

Many countries identified interventions in **early childhood care and education** that ultimately build strong foundations for many learners at risk, enabling them to complete their education trajectory. *Australia's* Universal Access National Partnership Agreement has been financing States and territories since 2008 to ensure that every child, especially those most disadvantaged, including indigenous children, has access to quality pre-school education for 15 hours a week, or 600 hours a year, during the year preceding the beginning of school. In Brazil, the National Programme of Recovery and Acquisition of Equipment for Early Childhood Education institutions (Proinfância), operating since 2007, finances (i) the construction of crèches and kindergartens via the National Fund for the Development of Education or other projects and (ii) the acquisition of appropriate furniture and equipment for them. The Support Programme for the Development of Early Childhood Education finances municipalities to expand early childhood education (making it universal enrolment among 4- to 5-year-olds and serving at least half of children up to 3 years), especially schools that have not yet been allocated resources from the National Fund of Basic Education.

In *Singapore*, the Early Childhood Development Agency's KidSTART programme is for children aged 0 to 6 years

from low-income families. It supports parents in raising their children, coordinates and strengthens holistic support for families where needed, and monitors progress in child development from birth onwards. Multidisciplinary professionals and the community work together with parents to meet the needs of more than 1,000 children in pilot areas, with the aim of reaching an additional 5,000 children by 2023. In addition, all families with Singaporean children enrolled in childcare and infant care are provided universal preschool grants by the government, and the low- and middle-income families among them, receive additional means-tested preschool subsidies. After the subsidies, low-income families can pay S\$3 per month for full-day childcare or S\$1 per month for half-day kindergarten programmes at government-supported/managed preschools. Families that suffered a loss of income due to the pandemic may request a reassessment of the support they receive.

Some countries identified **measures to expand and/or improve schools.** In *Brazil*, the Full-Time Secondary Schools Promotion Programme and the New High School Support Programme support the expansion of full-time education to guarantee quality in education. The programme promotes the reformed high school that increases the number of hours from 800 to 1,000 and provides for a new curricular organization. In Ontario, Canada, the Building Schools for the Future programme is investing about CAD\$14 billion over 10 years to build more schools, upgrade existing facilities, and support education projects. In 2020/21, CAD\$550 million was spent to build 20 new schools and 8 permanent additions to existing schools. In 2021/22, CAD\$1.4 billion will be spent on school renewal to ensure excellent, secure, digitally connected and accessible learning environments. These new projects will create nearly 16,000 new learning spaces.

A few countries also identified **curriculum** reforms. A core curriculum may be a helpful basis to ensure that all students learn necessary skills; at the same time, a flexible curriculum that responds to students' multiple interests and needs may also be a factor making school more attractive. *Brazil's* Support Programme for the National Common Curricular Base was established in 2018 to support states, districts and municipalities to review or prepare their programmes. It is implemented through

scholarships to state curriculum teams; funds to education departments to train teachers and other school staff; and monitoring of curriculum implementation. These actions aim to overcome education policy fragmentation, strengthen cooperation among the three levels of government and provide a guideline on education quality.

An important structural measure intervention is **flexibility of education trajectories**: students should be not forced to make choices between educational pathways too early, as this can be demotivating, especially for those from a disadvantaged background who are most likely to be streamed to less ambitious education tracks. Moreover, students should be able to transition between education levels without rigid obstacles that can increase the risk of early leaving. In *Ontario*, Canada, the government introduced changes to the education system in 2020 to help break down barriers for Black, Indigenous and racialized students and provide all students with equal opportunities for success. As part of this action, the province will end the streaming of grade 9 into applied and academic courses, eliminate discretionary suspensions for students, strengthen sanctions for teachers who engage in behaviour of a racist nature, and provide teachers with additional training against racism and discrimination.

As the above example suggests, **teacher education** and professional development that focuses attention on understanding the reasons for early leaving, its triggers and early warning signs, as well as the role teachers have in preventing it is of critical importance. But one important component is also teacher recruitment policy. The government of Ontario is also improving its School Board Teacher Hiring Practices so that they are based on fair, consistent and transparent procedures that will meet the needs of a diverse student community. Ultimately, the policy will support diversity, equity, human rights and the opportunity for all students to reach their full potential, regardless of their background or social identity.

Other preventive, structural policies not mentioned in submitted examples, which are typically part of packages to reduce early school leaving, include policies to reduce or abolish the application of grade retention; efforts to desegregate schools, widening their social composition and preventing ghettoization; investment in extra-curricular activities; and education and career guidance.

Table 14: Preventive measures that tackle the root problems

Country: Australia

Title: Universal Access National Partnership Agreement (UANP)

Short description: This is a Commonwealth financing, provided through the UANP, to which all States and territories of the Federation participate. It is intended to ensure that every child has access to quality pre-school education for 15 hours a week, or 600 hours a year, in the run-up to starting school. The funding, in force since 2008, is aimed at all children, with particular emphasis on vulnerable/disadvantaged and Indigenous children. Equitable access to early childhood education school is facilitated in this way.

Country: Federative Republic of Brazil

Title: Proinfância

Short description: This is a National Programme of Recovery and Acquisition of Equipment for Early Childhood Education institutions. It has been in operation since 2007. It works on two axes: 1) Construction of crèches and kindergartens through the technical and financial assistance of the National Fund for the Development of Education (FNDE); and 2) Acquisition of furniture and equipment for early childhood education school networks, for example tables, chairs, cradles, refrigerators, stoves and drinking fountains. The programme works with municipalities and the Federal District to scale up early childhood education throughout Brazil.

Country: Federative Republic of Brazil

Title: Support Programme for the Development of Early Childhood Education

Short description: This programme provides financial support to municipalities and the Federal District to expand early childhood provision and ensure sustainable levels of enrolment for schools yet to be allocated resources by the National Fund of Basic Education. The aim is to make early childhood education universal for children aged 3 to 4, and to expand current provision so that at least 50 per cent of children aged 3 or under are being reached.

Country: Federative Republic of Brazil

Title: New High School Support Programme (under construction)

Short description: The Ministry of Education is developing a new national schedule in light of the pandemic as well as innovative pedagogical arrangements for classroom practices, such as a hybrid teaching model which combines classroom and distance learning modalities. Curricula and teaching materials will be transposed to digital platforms (based on what is already done by the National Programme of Textbooks and Connected Education). This will require training for network managers, directors and teachers so they can offer full-time enrolments in hybrid formats (for example: five hours in schools and two hours with distance education).

Country: Federative Republic of Brazil

Title: Full-Time Secondary Schools Promotion Programme (EMTI) and New High School Support Programme   **Implementer:** Federal government
Beneficiary group/s: High school students in Federal States and Districts

Short description: The aim of the EMTI is to support quality education for all young Brazilians in their communities in light of the complexity of the current working world and social environment. The programme has a 10-year duration. With financial and technical support, it has supported the reorganization of the national curriculum and expansion of teaching hours from 800 to 1,000. The programme benefits students in public high schools (15 to 17 years), Secretariats of State and district education and public schools all over the country.

Country: Federative Republic of Brazil

Title: Support Programme for the National Common Curricular Base (ProBNCC)
Implementer: Federal government
Beneficiary group/s: Learners from early childhood to high school level

Short description: ProBNCC was established in 2018 to support Secretariats of Education at the State, District and Municipality levels in reviewing or preparing their education programmes. Different actions aim at overcoming the fragmentation of educational policies, strengthening cooperation between three areas of government and providing guidelines to enhance the quality of education and ensure common learning standards for all students, while strengthening the role of teachers and managers. The three main lines of action include: 1) Award of scholarships to the ProBNCC State teams concerned with early childhood and primary education (2018/2019/2020) and high school (2020/2021); 2) Transfer of funds from the Articulated Action Plan (PAR) to the Education Departments (Seducs) to facilitate support and technical assistance to the training of teachers and other school staff; 3) Monitoring the implementation of the BNCC, including a pilot study during the first phase focused on early childhood education/primary education and a project to expand early childhood/primary/high sample schools during the second phase.

Country: Canada

Title: Supports for Student Learning Programme (SSLP) COVID-19 Funding
Implementer: Government of Canada   **Beneficiary group/s:** Students from low-income households, Indigenous and ethnic minority communities, students with disabilities and students living in rural or remote communities

Short description: The SSLP COVID-19 Funding aims to support youth that are under-represented in post-secondary education to ensure that youth do not face greater educational inequalities as a result of the pandemic. The Government of Canada made a significant investment of CAD 15 million to enable organizations working in after-school spaces to shift programming such as tutoring and mentoring services online, and increase connectivity for vulnerable children and youth.

Country: Canada (Ontario)

Title: Building Schools for the Future   **Implementer:** Provincial Government
Beneficiary group/s: Students from kindergarten through to grade 12

Short description: Ontario is investing around CAD 14 billion over 10 years to build more schools, upgrade existing facilities across the province, and support education projects. This includes $1.4 billion on school renewal for the school year 2020/21 to ensure learning environments that are secure, digitally connected and accessible. Ontario is also investing CAD 550 million in the school year 2020/21 to build 20 new schools and 8 permanent extensions to existing schools. These new projects will create nearly 16,000 new learning spaces and ensure that students and staff have access to the best classrooms and learning environments. They will also create job opportunities and contribute significantly to Ontario's economic recovery.

Country: France

Title: Boarding school of excellence   Implementer: Ministry of National Education Youth and Sport
Beneficiary group: Students from disadvantaged areas

Short description: An ambitious policy serving pupils and territories, a boarding school of excellence is a lower- or upper-secondary school where students and the adults who supervise them live throughout the week. In boarding schools of excellence, all the conditions are met so that young people can better achieve academically, develop as a group and prepare for their future. In addition to classes, boarders benefit from personalized pedagogical support: course reviews, personal work support. They are also offered sports and cultural activities to be enjoyed collectively. The French National Recovery Plan will allow the Boarding Schools of Excellence to benefit from a fund of EUR 50 million aimed at creating or rehabilitating 1,500 places (200 places delivered in 2021/1,300 in 2022) in 54 selected boarding schools. These funds will be used to carry out renovation and embellishment work: refurbishment of rooms, sanitary facilities, communal living areas, purchase of furniture, etc.

Country: Federal Republic of Germany

Title: "Securing Apprenticeships"   Implementer: Federal Government
Beneficiary group/s: Young people hoping to successfully complete their apprenticeships within host businesses

Short description: Together with the Ministry of Labor (BMAS) and the Ministry for Economy (BMWi), BMBF launched the federal programme "Securing Apprenticeships". SMEs affected by the COVID-19 crisis can receive temporary support so that they can maintain their apprenticeships and young people can continue and successfully complete their apprenticeships. The measures of the programme include:
Apprenticeship bonus: SMEs that maintain their apprenticeship performance compared to the previous three years are supported with an apprenticeship bonus (EUR 2,000).
Apprenticeship bonus "plus": SMEs that increase their apprenticeship performance compared to the previous three years receive a one-off payment of EUR 3,000 for each additional apprenticeship contract.
Avoidance of short-time work: SMEs that continue their apprenticeship activities despite considerable loss of work receive 75 per cent of the gross apprenticeship allowance for each month.
Contract and joint apprenticeship: If SMEs cannot temporarily continue their apprenticeship, other SMEs, inter-company vocational training centers or other established apprenticeship service providers can take on the apprenticeship for a limited period and receive funding for it (EUR 4,000).
Takeover bonus: Companies which take over apprentices from Corona-insolvent SMEs and carry the apprenticeship until completion receive a bonus of EUR 3,000.

Country: Republic of Korea

Title: Emergency Childcare Service   Implementer: Government
Beneficiary group/s: Parents, children, lower grade elementary school students

Short description: The Ministry of Education tried to relieve parents' burden of childcare by offering emergency care when school opening was delayed due to COVID-19. Under the basic principle of putting the health of students and faculty first and in consideration of infection trends, a class size of around 10 students was advised, and childcare service was provided from 9 am to 7 pm, during which lunch was offered. In order to resolve the gap in childcare, the service prioritized students with urgent needs, such as those from dual-income and single-parent families. In the first half of 2020 when the emergency care was offered, over 90% of all kindergartens(240,000 children) benefitted from this service. Likewise, the emergency care for primary school students was provided to 250,000 children in the same period. In the second half of 2020, even more people benefitted from the service, including 500,000 kindergarteners and 240,000 primary school students. In addition, various ministries including the Ministry of Employment and Labor, the Ministry of Health and Welfare, and the Ministry of Gender Equality and Family worked closely together to promote student welfare. The government has allowed workers with young children to use "Family Care Leave," which allows parents of children under the age of 8 to stay with their children for 10 days. To secure enough physical spaces for online learning and prevent crowded classrooms during COVID-19, libraries and computer labs were also used to accommodate children. To this end, after-school facilitators and instructors were hired as assistants to help with online learning.

Country: Kingdom of Saudi Arabia

Title: E-Counselling Services   **Implementer:** Ministry of Education
Beneficiary group/s: Students and parents

Short description: The Ministry of Education has optimized the use of existing tools and infrastructure to support education continuity during the COVID-19 pandemic such as (Noor and Tawasul) platforms supporting students and parents by providing psychological and social counseling. Noor generates reports on student attendance and absence with reasons of absenteeism so that the administration can communicate with students and their guardians. Through Tawasul and e-counselling, the Ministry provides support to students and their families based on the statistics offered by Noor to ensure the continuity of education. Training and workshops are organized for advisers and supervisors to support virtual psychological, social, emotional and career counselling/e-counselling through different media, such as the Madrasati platform, or by phone. In higher education, psychosocial therapists from the Medicine Colleges of Saudi universities have been made available to provide e-counselling for both students and parents, establishing more than 20 virtual clinics specializing in psychological and social counselling, reaching more than 5,000 students and their parents.

Country: Singapore

Title: KidSTART   **Implementer:** Government
Beneficiary group/s: Pre-schoolers from low-income backgrounds

Short description: KidSTART is a programme designed for children from low-income backgrounds in the 0 to 6 year age bracket. It is overseen by the Early Childhood Development Agency (ECDA), which serves as the regulatory and development agency for early childhood sector in Singapore. More than 1,000 children have benefitted from KidSTART so far in Singapore. The aim is to scale up the programme to reach 5,000 children by 2023. The criteria for selection onto the programme are as follows: The child is a Singapore citizen aged up to 6 years of age, from a low-income household (gross monthly household income of S$2500 and below or a monthly per capita income of S$650 and below) and is residing in a region served by the KidSTART programme. The programme was introduced in pilot regions which were selected because they had a higher proportion of low-income households meeting the criteria. The programme started in 2016 and will continue to be expanded so that more children from low-income families can benefit from it.

Country: Singapore

Title: Pre-school subsidies   **Implementer:** Government   **Beneficiary group/s:** Pre-schoolers

Short description: The Government provides universal preschool subsidies for all families with Singaporean children enrolled in childcare and infant care and additional means-tested preschool subsidies for the low- and middle-income families among them. The Government also provides means-tested subsidies for low- and middle-income families with Singaporean children enrolled in kindergarten programmes run by appointed preschool operators and the Ministry of Education. Such subsidies help to improve access to affordable and quality preschools. After preschool subsidies, low-income families only have to pay S$3 per month for full-day childcare or S$1 per month for half-day kindergarten programmes at government-supported or managed preschools. Overall, about 78,000 children receive means-tested preschool subsidies. Families who have experienced a fall in income due to the COVID-19 pandemic can apply for income/subsidy re-assessment at any point in time. Additional financial assistance is also available for families who face difficulties paying for preschool even after subsidies.

Country: Singapore

Title: Financial Assistance Scheme   Implementer: Government
Beneficiary group/s: Primary to pre-university level students

Short description: Education in Singapore is highly subsidised at all levels, and the Government provides a range of Financial Assistance Schemes (FAS) to Singaporean students who are in need. Beneficiaries of the FAS from Government, Government-aided and Specialised schools do not have to pay school fees and standard miscellaneous fees, and receive a subsidy for transport. In addition, those at primary and secondary level benefit from free textbooks, uniforms and subsidies for school meals, while those at pre-university level receive an annual cash bursary. Singaporean students from low-income families studying in the Independent Schools/Specialised Independent Schools can apply for the Ministry of Education Independent School Bursary (ISB) which provides up to 100 per cent support for students whose family income falls into the lower income bracket. They also benefit from school meal subsidy, free textbooks, public transport subsidy, free school attire (for secondary level) and bursary (for pre-university level). Additional MOE funds are also provided to all schools to provide school-based assistance to FAS and ISB students from lower income families who require further assistance beyond what the scheme covers. Schools can also use these funds to help students who do not qualify for financial assistance but still require support. During the full home-based learning period from 8 April to 4 May 2020 and the rescheduled May school holidays from 5 May to 1 June 2020, the Ministry of Education continued to extend meal grants and gave additional school bus subsidies to the primary and secondary students on FAS and ISB. The Government has maintained the school fees for Singapore Citizen, Permanent Resident and ASEAN students in 2021.

Country: South Africa

Title: The Presidential Youth Employment Initiative

Short description: This Programme was implemented as the Basic Education Employment Initiative across all nine provinces and has succeeded in reducing youth unemployment in the country. The initiative ensured that teachers were supported in the classrooms by way of maintaining discipline and preparing classes for lessons. The ZAR 4.5 billion initiative was planned as a four-month contract and was officially implemented from 1 December 2020 to 30 March 2021. It was extended for one month. The initiative saw more than 320,000 young men and women securing job opportunities in an estimated 23,000 public schools. The youth placed in the initiative were appointed as Education Assistants and General School Assistants and they provided support before school starts, during school time and after school.

Country: Turkey

Title: MEBÍM 632 (A psychosocial call centre)   Implementer: Government
Beneficiary group/s: Learners in the public school system

Short description: MEBÍM 632 is a call centre designed to support the psychological well-being of students and parents during the pandemic. It addresses social and emotional development issues as well as academic and career-related ones. It aims to reach at all students, including those with special educational needs. The initiative will run for two years (2020/2021) and so far 1,400 guidance and special education teachers have taken part in it. MEBÍM 632 was established as a public communication centre of the Ministry in 2018, but with the outbreak of the COVID-19 pandemic it was transformed into a call centre catering for the psychological well-being of students.

4.2 Intervention measures that address emerging difficulties experienced by students

Intervention measures identify and target students at risk of early school leaving for individual support.

Policies and programmes **targeting schools** are a common approach. In *Germany, Schule macht stark* (School makes strong) is a joint initiative launched by the federal and state governments in January 2021, whose aim is to improve the education opportunities of socially disadvantaged students and the removal of the education barriers they face. In the first phase, lasting five years, researchers are expected to work with 200 schools nationwide to develop and test strategies and concepts for school and class development and for improving the network between schools and their social environment. In the second phase, during the following five years, the instruments which have proved particularly suitable in practice will be transferred to other schools.

In *Korea*, the Ministry of Education has built a tight safety net to guarantee basic education for students both inside and outside the school. At the beginning of the school year, students' level of basic academic ability is diagnosed to offer guidance to students who fall short of meeting the basic academic ability through a close-knit three-step measure that covers the classroom, inside school and outside the school. First, 42 leading (pilot) schools in 2018 were expanded to 75 in 2020 to prevent learning deficits and to focus on basic education. In these schools, if a student with low academic learning outcome is observed during class, teaching assistants promptly offer remedial instruction to make up for any learning loss. Second, the Do-dream School programme provides tailored educational support to low-performing students. The number of schools covered by the programme increased from 2,720 in 2018 to 4,801 in 2020. A multi-support team consisting of homeroom teachers, subject teachers, special education teachers, and counseling teachers provides tailored support to tackle the root cause of students' low performance. Lastly, for students whose learning cannot be sufficiently supported at the school level, the government has started a learning clinic at the level of the provincial office of education. As of 2020, 130 comprehensive learning clinic centres were in operation. The centre provides learning guidance, psychological and emotional counselling, etc. through in-depth diagnosis of students, and also provides guidance and counselling services by visiting the school to meet students at the school's request.

In the *Netherlands*, the National Programme Education provides funding to each school for tailor-made support to students. For primary and secondary education, schools can choose from a catalogue of evidence-based interventions, such as targeted mentoring in small groups or cooperation with libraries for reading. Schools with many disadvantaged pupils receive relatively more funding.

Saudi Arabia has studied early school leaving over a period of five years (2015-2019). It showed that the dropout rate fell from 1.4% to 1.2% among boys and from 2.1% to 1.5% for girls in the period considered for children at all levels. In upper secondary education, the dropout rates for boys and girls were about 3%. The study will focus on those regions with above-average school drop-out rates, in order to develop programmes that can help further reduce them.

The Ministry of Education has optimized the use of the Tawasul system to support students and parents with psychological counselling and social advice. Advisers and supervisors are trained to support virtual counselling/e-counselling (psychological, social, emotional and career) through different media, such as the Madrasati platform, or by phone. More than 20 virtual clinics specializing in psychological and social counselling have also been created since the pandemic began, reaching more than 5,000 students and their parents.

In *Scotland*, United Kingdom, the Scottish Attainment Challenge aims to bridge the poverty-related performance gap. Supported by The National Improvement Framework, the Curriculum for Excellence and Getting It Right for Every Child, it focuses on nine local education authorities with the highest levels of deprivation. Initially the programme focused on primary schools but has expanded to secondary schools. Since the pandemic, it has also covered the provision of tablets to support digital learning at home and support for home-school liaison officers in order to ensure regular contact with children. It also supported summer learning and support programmes, free food and additional teaching materials.

In *Singapore*, the inter-agency Uplifting Pupils in Life and Inspiring Families Taskforce (UPLIFT) was established in 2018 to bring together community agencies and partners to support students from low-income families through educational or motivational programmes, including after-school care or engagement activities and community programmes and services. UPLIFT builds on existing programmes and initiatives that support disadvantaged students (e.g. financial assistance, learning support and after-school care), with particular focus on enhancing

collaboration across government agencies, as well as strengthening partnerships with the community. The initiatives are aimed at preschool, primary, secondary and pre-university students from low-income families, in particular those with irregular school attendance. More than 45,000 students have benefited from various support and programmes coordinated by UPLIFT, and delivered by schools and community partners.

In *Mexico*, the La Escuela Es Nuestra (The School Is Ours) programme aims to improve public school infrastructure and equipment, establish catering services through grants to the School Boards of Participatory Administration, gradually and progressively establish a full timetable of between six and eight hours a day in basic schools through grants to staff to promote better use of school time, improve school performance and integral development and strengthen students' food security. The aim is to improve the teaching-learning process and reduce inequalities between schools. It therefore prioritizes schools with a high percentage of indigenous students, which have high rates of poverty and marginalization.

As the above example suggests, **school meals** are an important intervention aimed to support poor students. In *Brazil*, the National School Feeding Program offers healthy, high-quality school meals and food education to students of all levels of basic public education. The programme reaches more than 40 million students and about 150,000 basic schools. During the pandemic, in order to continue to guarantee meals to all students, the programme received exceptional authorization to distribute meal kits directly to students' families. In collaboration with the Ministry of Agriculture, it has developed basic guidelines on the safe distribution of meal kits to minimise the risk of transmission of the coronavirus.

The *Russian Federation* also provides free hot meals to all primary school students in grades 1-4. Following a Presidential address in January 2020, a federal law was passed in March 2020, according to which general education students in state and municipal primary schools would be provided with a free hot meal at least once a day, at the expense of the budgets of the federation, the constituent entities, local government and other sources. As of September 2020, about 7.3 million students in more than 39,000 schools have been benefiting.

In *South Africa*, the National School Nutrition Programme, introduced in 1994 to tackle poverty, supports children's right to basic education and good nutrition. The Department of Basic Education has the mandate to manage and implement the programme within the Care and Support

for Teaching and Learning framework that aims to address the barriers to learning. The programme provides nutritious daily meals to more than 9.1 million students in 20,000 out of the country's 21,000 primary and secondary schools. Many of the targeted students come from single-parent families or do not stay with their biological parents, while some come from families with child heads who are beneficiaries of government social protection such as Child Care Grants.

Several other interventions are **targeting poor students** with financial support. In *Argentina*, PROGRESAR supports young students from low-income families to stay and graduate in compulsory, vocational and higher education through scholarships, with a focus on women heads of families with children, members of Indigenous communities and/or members of Indigenous peoples, transgender students, and learners with disabilities.

In *Japan*, a new learning support system and scholarship loans benefit students whose families experience sudden changes in their finances due to various reasons (e.g. unemployment, natural disaster) so that they do not have to abandon their studies. Applications are accepted at any time. The new learning support system was announced before the pandemic and started in April 2020. COVID-19 effects were added thereafter as an eligibility criterion. Scholarship loans as well had been introduced before the pandemic.

In *Singapore*, the government provides a range of financial assistance schemes to students who are in need. The Ministry of Education Financial Assistance Scheme (FAS) supports students from lower income families studying in government/ government-aided and or specialised schools. Beneficiaries do not have to pay school fees and standard miscellaneous fees, and receive a subsidy for transport. In addition, those at primary and secondary levels benefit from free textbooks, uniforms and subsidies for school meals, while those at pre-university level receive an annual cash bursary. The Ministry of Education Independent School Bursary (ISB) provides up to 100% fee subsidy for students from lower- and middle-income income families studying in independent schools. These students also benefit from a subsidy for school meals, free textbooks, public transport subsidy, free school attire (for secondary level) and bursary (for pre-university level). Additional funds are provided to all schools to provide school-based assistance to FAS and ISB students who need assistance in addition to that already covered. Schools can also draw on these funds to help students who do not qualify but need financial assistance.

The Benito Juarez Basic Education Scholarships in *Mexico* encourages enrolled children and adolescents from poor families, live in priority locations or attend schools in these locations, to stay and continue studies. The Federal Government supports 3.6 million families living in poverty or marginalization and that have children enrolled in nursery, pre-school, primary or secondary school. To this end, a budget of MXN 30.5 billion (or US$ 1.5 billion) was allocated in 2020. A further MXN 47 million (or US$ 2.4 million) supported pregnant adolescents attending basic education under the Elisa Acuña scholarship programme.

Other measures target students with **special educational needs**, aiming to create a supportive environment and equal access to education. In Brazil, the programme of Continuous Education of Teachers in Special Education, involves teachers and basic education professionals of the public education system that work with students who are blind or visually impaired, hearing impaired, have an autism spectrum disorder, or are high capacity and/ or gifted. It aims to improve the effectiveness of teaching-learning processes in special education. It has been implemented during the pandemic period to respond to new needs.

In *Canada*, a number of interventions also focus on stu- dents with special education needs. In Alberta, as outlined in their 2020-21 School Re-Entry Plan, school authorities should consider and enable the full participation and inclusion of students with disabilities. This includes developing plans to ensure their inclusion if they are not able to follow the health guidelines and require support and adaptation to public health measures. Under its Safe Schools Plan, the government of Saskatchewan allocated CAD 40 million for one year to provide school divisions with access to pandemic-related activities such as staffing and sanitation supplies, and learning supports (including online options) for immunocompromised students and those with special needs. In Manitoba, a policy takes into account the unique challenges experienced by students with special learning needs during the pandemic and additional supports that may be required, including adaptations for distance learning, reviewing individual education plans, and considering alternate attendance options based on their needs. The project allows students with special needs to attend school full-time in accordance with their specific plan, whether in class or at a distance, to support their learning needs.

In Turkey, the "I am special and I am in education" application allows easy access on the national EBA platform, to relevant learning resources designed or appropriate for students with special needs; provides access to specific support resources for parents and carers supporting children with special needs; has technical facilities and services providing access to resources adapted to different types of disability; allows interoperability with the main external devices that support children with special needs; incorporates a social network for users (students, parents, teachers), and allows them to upload home-made work (pictures, videos and learning activities) and share them publicly with the community. The Ministry began developing the app a week before schools closed due to the pandemic and was made available on Google Play and Apple Store three weeks later. By September 2020, the app had been downloaded over 350,000 times across Turkey and had 117,000 active users.

Two programmes in *Brazil* focus on students from **rural and indigenous communities**. The National Rural Education Programme (Pronacampo) includes three components: initial and continuous training of teachers in rural areas and Afro-descendant *quilombola* rural communities (Escola da Terra Action); resources to municipal, district and state public schools located in rural areas to improve school infrastructure (PDDE Rural); and resources to public schools in rural areas to ensure the provision of water and sanitation (PDDE Water). The National Plan for Indigenous School Education (2020-23) is an intergovernmental plan that aims to ensure collaboration between federated entities, social participation, transparency of actions and effective management, as well as to become a tool for monitoring and evaluation. It has seven strategic lines of action: participation of indigenous peoples, respecting their territoriality, needs and specificities; enhancement of indigenous peoples' cultures; strengthening of sociocultural practices and languages; training programmes for education professionals working in indigenous communities; curricula that give value to indigenous peoples cultures; publication and distribution of specific, intercultural and bilingual teaching materials; and support of ethnic identities.

Other interventionist policies not mentioned in submitted examples, which are typically part of packages to reduce early school leaving, include support for students, often of migrant background, who speak a language other than the language of instruction at home; measures to combat violence in school; absenteeism management to serve as early warning system; and, especially, collaboration with parents and communities to identify signs of disengagement, exchange information, and motivate young people.

Table 15: Intervention measures that address emerging difficulties experienced by students

Country: Argentina

Title: PROGRESAR   **Implementer:** Government
Beneficiary group/s: Young girls and women from low-income families

Short description: The Programme aims at ensuring the right to education, opening up opportunities of young students from low-income families to stay and graduate in compulsory and higher education (university and non-university) and vocational education and training thanks to scholarships. It prioritizes vulnerable groups such as single-parent households with dependent children, members of indigenous communities and/or belonging to indigenous peoples, people with disabilities or those who are discriminated because of their gender or sexual orientation.

Country: Federative Republic of Brazil

Title: Adult literacy programmes (EJA - Projovem Campo / Urbano; PEJA; EJA Integrada)
Implementer: Government   **Beneficiary group/s:** Adults who have not entered or completed their basic schooling and youth adults aged 18 to 29 who did not complete primary school

Short description: Adult literacy programmes (EJA - Projovem Campo / Urbano; PEJA; EJA Integrada) have been designed to boost professional skills and competencies. The Adult Literacy Programme (PEJA) targets adults who have not entered or completed their basic school and/or who have left school early. The National Youth Inclusion Programme (Projovem) is designed to increase levels of education and TVET qualifications for young adults aged 18 to 29 who did not complete primary school. The EJA Integrada Programme contributes to the achievement of Objective 10 of the National Education Plan by promoting teacher training, the provision of TVET courses, the production of pedagogical material, student monitoring, research and innovation. It is an alternative for every adult citizen who has not had the opportunity to attend school regularly and who intends to complete education at basic level. In 2019, 3.2 million students in Brazil attended adult literacy courses. About 30 per cent were young adults aged between 15 and 19.

Country: Federative Republic of Brazil

Title: National Programme for Civic-Military Schools-Pecim   **Implementer:** Government
Beneficiary group/s: Students in vulnerable situations with low attainment in basic education

Short description: The National Programme for Civic Military Schools implements the Civic-Military School (ECIM) model of the Ministry of Education. The objective is to ensure excellence in education, harnessing the educational standards adopted by military schools, the Military Police and the Fire Brigade to improve teaching and learning processes in public schools and contribute to the reduction of grade repetition and early school leaving rates.

Country: Federative Republic of Brazil

Title: Programme Tell me a Story
Implementer: Government   **Beneficiary group/s:** Learners from vulnerable families

Short description: The programme is consistent with the National Literacy Plan launched by the government of Brazil. It promotes literacy for the most vulnerable families, enabling them to assist the development of children's basic skills and learning processes. Free online materials (audiobooks, fairy tales, songs, etc.) are available to encourage and guide parents, different family members and community stakeholders interested in applying literacy skills at home.

Country: Federative Republic of Brazil

Title: Time to Learn

Implementer: Government **Beneficiary group/s:** Pre-primary pupils, students years 1-2 of primary school, teachers, school leaders and other professionals working in the public system and literacy cycle, key members of the school community.

Short description: The Programme promotes effective reading, writing and learning to mitigate the effects of the COVID-19 pandemic. It is organized into four main areas of intervention: 1. Continuous training for literacy professionals; 2. Pedagogical support for literacy; 3. Improvement of literacy ratings; 4. Enhancement of literacy professionals.

Country: Federative Republic of Brazil

Title: P&D: Artificial Intelligence to reduce Higher Education dropout

Implementer: **Beneficiary group/s:**

Short description: This initiative is a national pilot project looking at research, experimentation and solutions based on artificial intelligence to predict early school leaving and support pedagogical interventions in higher education. It includes three innovative phases: 1) Development of a predictive dropout system; 2) Development of actions to support students and prevent dropout; 3) Development of an intelligent assistant (Chatbot). It primarily involves students enrolled in higher education in public universities.

Country: European Union

Title: Council recommendations

Implementer: Member States **Beneficiary group/s:** Early school leavers

Short description: A 2011 Council recommendation on early school leaving was evaluated in 2019, examining implementation in all Member States of policy initiatives implemented by Member States. One of these, the School Working Group, created a European Toolkit for Schools that promotes inclusive education and addresses early school leaving and since 2015 it has been collecting a large number of strong case studies and other resources. The Toolkit is constantly fed with new materials thanks to an editorial board that identifies and selects relevant resources. More recently, the Committee has organized a series of webinars on inclusive education and early school leaving, with several experts from the academic world.

The European Union's roadmap will include a number of new initiatives with a view to increasing the inclusiveness of European education systems and organizations. One of these is the Pathways to School Success, an initiative that will help all pupils to acquire basic skills and complete upper secondary education, as well as ensure the well-being of pupils at school. The initiative will be appraised during 2021 and formally proposed in 2022.

In addition, the European Cooperation Framework pursuing the achievement of the European Education Area 2025 will have a strand dedicated to inclusion in education, including children of migrant families, third-country nationals and those with special educational needs (SEN). This will be supported through a number of EU support and recovery programmes: the Erasmus+ programme, the InvestEU programme for post-COVID recovery, the European Social Fund+ and the European Regional Development Fund.

Country: France

Title: Innovation and artificial intelligence partnership (P2IA)
Implementer: Ministry of national Education Youth and Sport   **Beneficiary:** Teachers

Short description: In line with the priorities set in the EU new Digital Education Action Plan, this partnership aims at developing teacher assistance solutions and recommendations based on artificial intelligence techniques for cycle 2 primary school teachers so they can better support their pupils (6 - 8 year olds) when learning French and math:

- supply teachers with services / tools / teaching assistance resources via advice and decision-support tools to help them individualize and differentiate their teaching through innovative solutions based on artificial intelligence (AI).
- adapt the content the pupils work with so that it best meets their needs, such as for example improving and strengthening their capacities to understand and progressively master the skills studied, developing their memorization skills (knowledge, procedures and techniques) through the use of differentiated memorization techniques, and boosting their engagement in, and attention to, the activity.

In order to ensure transparency and information sharing, the project holders will make available and facilitate a **"companion website"** for each solution implemented to provide information, support and training for the users.

Country: France

Title: « Cordées de la réussite »   **Implementer:** Ministry of national Education Youth and Sport & Ministry of Higher education, research and innovation   **Beneficiary:** Students

Short description: The « Cordées de la réussite » aims to make guidance support a real lever for equal opportunities. They aim to combat self-censorship and encourage students' academic ambitions through a continuum of support from the fourth grade (from the age of 13) through high school and on to higher education. A "Cordée de la réussite" is based on a partnership between: a "cordée head", usually a higher education institution ; and so-called "roped-off" schools: general, technological or vocational track in disadvantages' areas or rural areas. The new "Cordées de la réussite" have been allocated €10 million as part of the French government's "Recovery Plan" in order to support the increase of number of students supported, as it will be more than doubled to reach a total of 200,000 students throughout the country by the 2020/2021 school year.

Country: Republic of India

Title: Alternative Academic Calendar and Bridge Course
Implementer: Government   **Beneficiary group/s:** Out-of-school children and youth

Short description: The Bridge Course and Alternate Academic Calendar are aimed at supporting students during the pandemic to prevent school dropout. The Bridge Course is designed for children who have never been enrolled or who are deemed to be out of school for a variety of reasons. As its name suggests, the Bridge Course addresses gaps by attempting to close the digital divide and cut dropout. Its content is aligned with expected learning outcomes.

Country: Republic of Indonesia

Title: Simplification Curriculum in Special Condition   **Implementer:** Ministry of Education   **Beneficiary group/s:** Early-childhood-, primary-, and secondary-level learners

Short description: To address critical learning issues and potential learning loss caused by the pandemic, the Ministry of Education, Culture, Research, and Technology decided to adapt the curriculum. The aim is to inject flexibility to better suit the learning needs of students. For the school year 2020/2021, teachers were encouraged to concentrate on essential skills to reduce the learning gap generated by COVID-19 school closures.

Country: Japan

Title: Japan Emergency student financial support enabling students to continue with their studies
Implementer: Government   **Beneficiary group/s:** Learners from low income and vulnerable families

Short description: This initiative channels financial support for the continuation of studies particularly for students in families having experienced a significant loss or reduction of family income. Up to 430,000 students from universities, graduate schools, junior colleges, technology colleges and vocational schools are covered by this support.

Country: Japan

Title: New learning support system and scholarship loans   **Implementer:** Government
Beneficiary group/s: Students from families with reduced financial means

Short description: The new learning support system was announced before the pandemic and started in April 2020. COVID-19 effects were added thereafter as an eligilbility criterion. Scholarship loans were available before the pandemic for students whose family finances had undergone sudden change due (because of unemployment, natural disasters, etc.). These programmes provide scholarships so that students do not have to abandon their studies. Applications are accepted at any time.

Country: United Mexican States

Title: Mexico Becas de Educación Básica para el Bienestar Benito Juárez
(Benito Juarez Basic Education Scholarships)
Implementer: Government   **Beneficiary group/s:** Learners living in situations of poverty

Short description: The programme provides scholarships to encourage children and adolescents enrolled in Basic Education Institutions of the National Educational System to stay in school. Federal Government of Mexico provides support to 3.6 million families living in poverty or marginalization and allows them to keep their children and/or adolescents enrolled in nursery, preschool, primary and secondary school. A budget of 30,475.1 million pesos was allocated to this goal in 2020; in addition, a further 47.4 million pesos were made available for 2020 to fund scholarships for pregnant adolescents attending basic education (Elisa Acuña scholarship programme).

Country: Kingdom of Saudi Arabia

Title: Saudi Research Study on School Leaving
Implementer: Government   **Beneficiary group/s:** School drop-outs

Short description: The study aimed to collect useful information for the development of programmes that can help further reduce the rate of drop-out at different levels of education delivery for a period of 5 years (2015-2019). It showed that there was a reduction in the overall percentage of school drop-outs among students at all levels, from 1.4% for boys to 1.2%, and from 2.1% to 1.5% for girls. In primary school the percentage of drop-out for boys in 2015 was 0.9% and that declined to 0.7% in 2019, for girls it fell from 1.4% to 0.8% for the same period. In the lower secondary level the percentages fell from 1.1% to 0.8% for boys, and from 2.7% to 1.9% for girls. In upper secondary education, the drop-out rates for boys changed from 3.1% to 2.8% and for girls from 3.1% to 3%. The data reveals a generally very low percentage of early school leaving among all students in Saudi Arabia.

Country: Republic of Korea

Title: Policy to Gurantee Basic Academic Achievement for All Students
Implementer: Ministry of Education   **Beneficiary group/s:** Primary and secondary school students

Short description: The Ministry of Education is building a tight safety-net to guarantee basic education both inside and outside the school. At the beginning of the school year, students are tested for their basic academic ability to see if they have reached the minimum requirement in learning skills as outlined in the curriculum. Those who do not reach it are accompanied through a 'catch-up' process composed of three closely connected levels, the so-called "In the classroom - inside the school - outside the school" system. Leading (pilot) schools that focus on the prevention of learning deficits and intensive guidance on basic education were expanded from 42 schools in 2018 to 75 schools in 2020. In addition, with a multisupport team composed of homeroom teachers, special education teachers, and counseling teachers, the "Do-dream School" program is implemented to provide tailored learning for students with insufficient basic academic skills. The number of participating schools increased from 2,720 in 2018 to 4,801 in 2020. Finally, to help students who cannot be sufficiently supported at the school level, the government has opened learning clinics at the level of provincial education office. As of 2020, 130 comprehensive learning clinic centers were in operation.

Country: Singapore

Title: Uplifting Pupils in Life and Inspiring Families Taskforce (UPLIFT)
Implementer: Government   **Beneficiary group/s:** Students from low-income families

Short description: In Singapore, the inter-agency Uplifting Pupils in Life and Inspiring Families Taskforce (UPLIFT) was established in 2018 to bring together community agencies and partners to support students from low-income families through educational or motivational programmes, including after-school care or engagement activities, and community programmes and services. It builds on existing programmes and initiatives that support disadvantaged students (e.g. financial assistance, learning support and after-school care), with particular focus on enhancing collaboration across government agencies, as well as strengthening partnerships with the community. The initiatives are aimed at preschool, primary, secondary and pre-university students from low-income families, in particular those with irregular school attendance. More than 45,000 students have benefitted from various support and programmes coordinated by UPLIFT and delivered by schools and community partners.

Country: South Africa

Title: Three-Year Curriculum Recovery Framework
Implementer: Government   **Beneficiary group/s:** Teachers

Short description: The revision of the school calendar and intermittent closure of many schools due to the Covid-19 pandemic negatively impacted the ability of teachers to implement Annual Teaching Plans for the year 2020, leading to learning losses across phases and grades. The Three-Year Curriculum Recovery Framework outlines the development of three-year recovery Annual Teaching Plans to manage learning loss over a period of three years, 2021-2023. The Three-Year Curriculum Recovery Framework is envisioned to culminate into the conceptualisation of a curriculum strengthening process that encompasses competencies required for the changing world. It is believed that it will lead to the development of revised strengthened Curriculum Policy Statements with a strengthened focus on Assessment for Learning. Furthermore, the framework includes development of educator mediation programmes with potential to enhance the autonomy of educators to act as curriculum designers.

4.3 Compensation measures that create new opportunities for those who left education early

Countries also reported on initiatives focusing on youth who have left education and training early, helping them re-enter the system, complete their basic education and/or acquire necessary competences through second chance or vocational education.

A few countries described **second chance programmes**. In *Argentina*, the Acompañar: Puentes de igualdad (Accompany: Bridges of equality) programme aims to reintegrate students who have left the school system, in particular at secondary level, into the educational environment and to encourage the continuity of studies at all levels. It coordinates with different actors in the educational community and local representatives, and uses different pedagogical strategies to facilitate the return to school. The Programme targets 50,000 youth all over the country who, for socio-economic reasons, exacerbated by the pandemic, have left school, aiming to get them back to school by 2021.

In *Brazil*, the Adult Literacy Programme (PEJA) is aimed at adults who have not entered or completed their basic school. The National Youth Inclusion Programme (Projovem) promotes actions to increase education, including vocational education and training, qualification levels of young adults from 18 to 29 years who have not completed primary school. The EJA Integrada Programme contributes to the achievement of Objective 10 of the National Education Plan by promoting integrated actions of teacher training, provision of vocational education and training courses, production of pedagogical material, student monitoring, research and innovation. In 2019, Brazil recorded 3.2 million students attending adult literacy courses, of which about 30% were young adults between the ages of 15 and 19.

In *India*, the Bridge Course is aimed at providing support to students during the pandemic to prevent school leaving. It focuses on children who have either been never enrolled or are out of school. It can be used to bridge the gaps occurring due to the pandemic and can prevent early school leaving and reduce the digital divide. The content is aligned to the learning outcomes.

Some countries focused on **vocational education** interventions. In Germany, the Securing Apprenticeships federal programme supports small and medium enterprises affected by the pandemic through actions that provide continuity for their young apprentices. Five measures were considered: an apprenticeship bonus of EUR 2,000 for enterprises maintaining the same apprenticeship performance as in the previous three years; a "plus" apprenticeship bonus of EUR 3,000 per additional apprenticeship contract for those enterprises which increase their apprenticeship performance; bonuses (75% of the gross apprenticeship allowance) for avoiding part-time work to those enterprises continuing their apprenticeship activities, despite a significant loss of employment; a EUR 4,000 bonus when enterprises cannot temporarily continue their apprenticeship and other providers take up the apprenticeship for a limited period; and an acquisition bonus of EUR 3,000 for companies which take on apprentices from bankrupt enterprises. The ultimate objective is to support companies and young people so that they continue and successfully complete their apprenticeships. The two-year programme involves about 500,000 new apprentices a year.

In *England*, United Kingdom, the Further Education White Paper – Skills for Jobs: Lifelong Learning for Opportunity and Growth, published in January 2021, establishes the levelling of post-16 education through technical pathways by bringing together existing policies and supporting new initiatives to improve opportunities for retraining and upgrading skills at different times of life through a Life-time Skills Guarantee. This includes a lifetime loan entitlement from 2025, funding for people for their first advanced level course, and short and flexible ways to train through employer-led bootcamps. Among the different offers, all adults not qualified at Level 3 (upper secondary) are eligible to attend a free course equivalent to that level. The apprenticeship system will improve so that more employers and individuals can benefit from it, while the quality of traineeships will also improve to support young people transition to apprenticeships.

Table 16: Compensation measures that create new opportunities for those who left education early

Country: Argentina

Title: Programa "Acompañar: Puentes de igualdad" (Programme "Accompany: Bridges of equality")
Implementer: Government
Beneficiary group/s: Boys and girls, adolescents from all over the country who, for socio-economic reasons (exacerbated by the pandemic), have left the school system

Short description: The programme promotes the reintegration of students who have left the school system, particularly at secondary level, as well as encouraging continuing studies at all levels of the education system. It plans to reach students who have lost contact with school through the establishment of so-called "coordination tables", connecting different actors in the educational community as well as local representatives. A range of different pedagogical strategies are employed to facilitate learning once the return to school is complete. It is hoped that 50,000 of them will reintegrate school in 2021.

Country: Australia

Title: Women in STEM Cadetships and Advanced Apprenticeships Programmes
Implementer: Government   **Beneficiary group/s:** Women in STEM

Short description: The programme aims at supporting women in higher education pathways, particularly STEM disciplines which are considered to be vital to Australia's productivity. The programme defines STEM as fields including science, technology, engineering, mathematics, and agriculture. The programme targets increasing the number of women with STEM qualifications in the workforce, helping them to improve their STEM skills or acquire relevant skills to build a STEM career. The Programme will last 4 years (2021-2024) and is aimed at 500 women in various levels of upper secondary education.

Country: Federative Republic of Brazil

Title: The National School Nutrition Programme (PNAE)
Implementer: Government   **Beneficiary group/s:** Students at all levels of public basic education

Short description: The National School Nutrition Programme (PNAE) offers healthy, high-quality school meals and food education to students at all levels of public basic education. It reaches more than 40 million Brazilian students in basic education and around 150,000 schools, including Federally funded, philanthropic and community schools. During the pandemic, the PNAE exceptionally authorized the distribution of meal kits directly to student's families to guarantee meals to all students. In collaboration with the Ministry of Agriculture, basic guidelines for the safe distribution of meal kits have also been developed to minimise the risk of transmission of the new coronavirus within the school community.

Country: Canada (Alberta)

Title: Supporting children and students who require specialized supports and services during the 2020-2021 school year
Implementer: Provincial Government   **Beneficiary group/s:** Students in Kindergarten through to Grade 12 who require specialized supports and services

Short description: As part of Alberta's Return to School Plan 2020-2021, it is expected that education authorities allow for the full participation and inclusion of students with disabilities. And in the case where students who require specialized supports and services are note able to follow guidelines and require support and adaptation to public health measures, plans must be developed to ensure their inclusion.

Country: Canada (Manitoba)

Title: Supporting students with special needs and students at risk and ensuring they obtain an inclusive education during COVID-19
Implementer: Provincial Government   **Beneficiary group/s:** Students with special learning needs

Short description: The policy aims to address COVID-related challenges experienced by students with special learning needs and considers additional supports that may be required, ranging from taking into account changes to the learning environment when reviewing and updating individual education plans, to adaptations for distance learning, to the temporary creation of congregated classes, to the need to develop additional planning to support a safe and smoother transition to school based on their needs. It allows students with special needs to attend school full-time in accordance with their specific plan whether their learning takes place in class or at a distance.

Country: Canada (Ontario)

Title: Addressing Racism and Inequity in Schools   **Implementer:** Provincial Government
Beneficiary group/s: Students in Kindergarten through to Grade 12

Short description: Through this intervention, in July 2020, the Ontario government announced changes to the education system to help break down barriers for Black, Indigenous and racialized students and to ensure all students have equal opportunities for success. As part of the action, the province decided to end the streaming of Grade 9 into applied and academic courses, proposing to eliminate discretionary suspensions for students, strengthening sanctions for teachers who engage in racist behaviour, and providing teachers with additional training against racism and discrimination.

Country: Canada (Saskatchewan)

Title: Allocated funding to school divisions to support Saskatchewan's Safe Schools Plan
Implementer: Provincial Government   **Beneficiary group/s:** Students in the public school system

Short description: The Government of Saskatchewan has allocated $40 million Canadian dollars to support its Safe Schools Plan. This application-based funding provides school divisions with access to personal protective equipment, learning supports (including online options) for immune-compromised students and students with special needs, and other pandemic-related activities like staffing and sanitation supplies.

Country: Canada (Yukon)

Title: Learning Continuity Requirements for the 2020-21 school year
Implementer: Territorial Government   **Beneficiary group/s:** Students in the public school system, including students with disabilities or who need additional supports

Short description: The need to ensure continuity of learning influenced the delivery of learning and curriculum for the school year 2020-2021, requiring guidelines for the delivery of blended learning in Yukon schools, meeting students where they are in their learning, and adapting school programming and instruction. The requirements expect students with disabilities, as well as those in need of additional support, will continue to receive supports at school all day, every day through specific programmes. School principals will work with their staff to ensure that these students are supported in a way that their needs and those of their families are met. School staff are expected to communicate regularly with parents to provide updates on student learning plans and their progress.

Country: France

Title: The obligation of training for 16-18 year olds
Implementer: Ministry of national Education Youth and Sport
Beneficiary: Students from 16 to 18

Short description: Nearly 80,000 young French people leave the school system each year without any qualifications and 60,000 under 18 years old are neither in school, nor in training, nor in employment. They encounter great difficulties in entering the labour market and are the first victims of poverty. Therefore, since the beginning of the 2020 school year, in order to ensure that no young person is left in a situation where he or she is neither in employment nor in education or training, the obligation to train has been extended until the age of 18. The system concerns approximately 60,000 young people between the ages of 16 and 18. The training obligation makes it possible to identify and lead young people at risk of exclusion to a support and training program. An online platform as well as a toll-free number have been made available to families, and guidance and support professionals direct them according to the region (in which the young person lives).

Country: Republic of India

Title: Samagra Shiksha Abhiyan   **Implementer:** Government
Beneficiary group/s: Pre-school to class 12

Short description: Samagra Shiksha is an overarching programme for the public school sector extending from pre-school to class 12. The objectives are to: bridge social and gender gaps in school education; ensure equity and inclusion at all levels; ensure minimum standards in education services; promote vocational education; support States in the implementation of the Right of Children to Free and Compulsory Education (RTE) Act, 2009; and strengthen and upgrade SCERTs/State Institutes of Education as nodal agencies for teacher training. The programme has a broad goal of improving school effectiveness, as measured by equal opportunities for schooling and equitable learning outcomes. The main outcomes are envisaged as universal access, equity and quality, promoting vocational education and strengthening Teacher Education Institutions.

Country: The Republic of Korea

Title: Initiative to Support Career Exploration and Employment   **Implementer:** Government
Beneficiary group/s: Students of vocational high schools and universities

Short description: In order to improve the employment prospect of vocational high school graduates, the Ministry of Education established the Central Employment Support Center in June 2020 to find jobs and link them with job-seeking students. Also, by using public databases such as health and employment insurance, the employment survey method was improved to produce reliable statistical data to lay the foundation for tailored career support for vocational high school graduates. In addition, in response to changes in the industrial structure, the Ministry of Education supported the restructuring of 153 departments in schools in 2020 by reorganizing the curriculum to focus on emerging industries and technologies such as AI and Smart Factory. For more practical vocational education, the apprenticeship schools, in which students shuttle between the school and work sites, are also in operation. Currently, 67 apprenticeship schools offer 181 programs. In 2020, "University Credit System for Career Exploration" was introduced to allow students to acquire some of their credits by turning career-related activities into academic credits. The Ministry of Education is building a youth career information system to provide information using the statistical data collected from the employment survey to better serve the graduates of higher education institutions.

Country: The Republic of Korea

Title: Initiative to Prevent School Drop-out   **Implementer:** Ministry of Education, local education authorities **Beneficiary group/s:** Students at risk of dropping out

Short description: The Ministry of Education implements various policies such as a drop-out deliberation scheme, alternative education classes and out-of-school learning support for students who are at risk of discontinuing their studies. First, a deliberation period (1-7 weeks) is given to students who express their intention to drop out, so they can fully think it over before making the decision. Students are also supported with tailored programs to tackle the root cause of their difficulties, including counseling on school life, coaching on learning and career guidance to prevent school drop-out in advance. For students who decide to return to school after receiving counseling, in case of necessity, they are allowed to study in alternative education classes or at designated alternative education schools to help their adjustment in school life. In addition, an alternative education classroom, a separate class within a school designed to offer alternative education matching the aptitudes and needs of students, helps their adjustment. As of 2020, 1,258 alternative classes were in operation, and it is planned to increase to 1,500 classes by 2024 to enhance access to alternative education in schools. Moreover, in connection with the out-of-school youth support center, which is a subsidiary agency of the Ministry of Gender Equality and Family, tailored education is offered to drop-out students in accordance with their needs, such as counseling, job training, and employment support, to encourage them to continue their learning.

Country: Russian Federation

Title: Certification of students in secondary vocational education
Implementer: Government   **Beneficiary group/s:** Secondary vocational students

Short description: Russia undertakes certification of students in secondary vocational education in the form of a demonstration exam. Students pass intermediate and final certification under real production conditions for solving practical problems linked to professional activities. At least 30% of students pass the demonstration exam as part of a state final certification. In future, it is foreseen that there will be an increase in the number of professions and specialties for which a demonstration exam.

Country: Russian Federation

Title: "Young Professionals" National Project
Implementer: Government   **Beneficiary group/s:** Vocational education students

Short description: Through its Advanced Training Centres (ATC), the Russian Federation identifies training needs in the regional economy and coordinates the development of resources with potential employers to advance vocational training, vocational guidance, secondary vocational education, and vocational retraining in the most sought-after professions and skills. ATCs house a catalogue of modules for basic training programmes and basic and additional vocational education programmes, as well as a register of digital educational resources. The training is designed to meet the best international standards and practices, including the international standards of "World Skills".

ATCs are also charged with the development of additional professional programmes (advanced training programmes) for industrial training teachers and support advanced vocational training networks in regions; including recommendations and roadmaps to improve the effectiveness of vocational education through digital technologies. By the end of 2024, a 100 ATCs are planned in all regions of the Russian Federation, which will enable an effective vocational training system. The number of ATCs is projected to be 44 in 2021; 59 in in 2022; 74 in 2023; 100 in 2024. ATCs welcome citizens of the Russian Federation who have been trained in all types of educational programmes or who have taken part in vocational guidance activities or been involved in other professional areas. ATCs help prepare the choice of profession (taking into account the characteristics of the individual and the needs of the economy), via professional tests and a personal training plan.

Country: Russian Federation

Title: Updating vocational and technical education contents and sites
Implementer: Government   **Beneficiary group/s:** Vocational education students

Short description: This updating is taking place within the framework of the Federal National Education Project "Young Professionals". Each year a selection of laboratories, production sites and workshops all receive support enabling them to reach modern standards and use advanced technologies in line with "World Skills Russia" standards. Subsidies provide them with materials and technical resources. The laboratories cover the following areas: industrial and engineering technologies (management of complex technical systems, materials processing); information and communication technologies; construction; transport and logistics services; art, design and services; agriculture. In the period September - November 2019, 160 applications from 70 regions of the Russian Federation were recognized as - recipients of grants. In 2020, they received a total amount of funding from the federal budget of 4.4 billion Rubles.

Country: Turkey

Title: "I am special and I am in education" App   **Implementer:** Government
Beneficiary group/s: Specific support resources for parents and carers of children with special needs

Short description: The App allows easy access to the subset of learning resources available on the national EBA platform and has been designed with technical facilities and services to access resources adapted to different types of disability. It includes inter-operability with existing technological devices supporting children with special needs and incorporates a social network for users (students, parents, teachers), allowing them to upload home-made content (pictures, videos and learning activities) and share them publicly with the application community. The Ministry began developing the App one week before schools closed in Turkey and it was made available on Google Play and Apple Store three weeks later. By September 2020, the App had been downloaded over 350,000 times across Turkey and had 117,000 active users.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: Further Education White Paper - Skills for Jobs: Lifelong Learning for Opportunity and Growth
Implementer: Government   **Beneficiary group/s:** Youth and adults aged 16 upwards with specific criteria: Level 3 (upper secondary) for adults aged 24 and over without L3 qualifications; Bootcamps for adults aged 19 and over who are seeking to upskill or reskill; Lifetime Loan Entitlement for Pupils aged 19 and over; T levels for students leaving school between the ages of 16 and 19.

Short description: The Further Education White Paper - Skills for Jobs: Lifelong Learning for Opportunity and Growth, published in January 2021, has generated a road map for post-16 education through technical pathways. It gives young adults the opportunity of upskilling and reskilling at different stages of life through the government Lifetime Skills Guarantee. This includes a lifetime loan for people for their first advanced level course (upper secondary), and short and flexible ways to train through employer-led sessions. From 2025 onwards, a Lifelong Loan Entitlement, equivalent to four years of post-18 education will be available. The first sessions started in September 2020 with a focus on digital skills. They were be extended to other sectors, including the nuclear industry, from January 2021. A further 20 sectors are being rolled out from April 2021 onwards.

Education and training is also available for people who are presently unemployed and in need of additional support, including students with special educational needs and disabilities. Improving and growing the apprenticeship system is a key consideration so that more employers and individuals can benefit from it. This entails: 1) Boosting the quality of traineeships to support young people in their transition to apprenticeships and other occupations. 2) Training in English, mathematics and digitalization to meet the needs of employers is also offered. 3) Preparation of students for entry into qualified employment or higher levels of technical study, including apprenticeship. 4) Improving the way in which teaching is provided is also a key consideration so that it becomes more accessible with the use of digital and blended learning. Some of these interventions were already existing policies, but the current strategy should bring about long-term change to the Further Education system and offer people the means to recover economically from the pandemic.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: The National Tutoring Programme (NTP)   **Implementer:** Government

Beneficiary group/s: Primary and secondary aged pupils in state maintained schools (including Special and Alternative Provision) in England

Short description: Educational reforms in recent years have helped to address the gap in results, but there is still a substantial gap in results between pupils from disadvantaged backgrounds and their peers. Launched in November 2020, the NTP aims to extend the benefits of small group and individual tuition to disadvantaged pupils who would not otherwise have access to tuition, and provide a long-term contribution to bridging the attainment gap. The programme is targeted towards disadvantaged 5–16-year-olds eligible for Pupil Premium funding, however, school leaders and teachers are able to determine which pupils are most in need of tuition support. The programme will run for at least school years 2020/2021 and 2021/2022 and has two pillars: 1) Approved Tuition Partners offer schools high quality subsidised tuition; 2) Academic Mentors are placed in schools to provide additional academic support to pupils.

In addition to the 5–16-year-olds programme, NTP has also provided funding to support small group tuition for 16-19-year-olds through the 16-19 Tuition Fund, and the improvement of early language skills in reception classes this school year.

It is estimated that over the course of this school year (2020/2021), the programme will offer support to 250,000 pupils. Since the launch of the programme in November 2020, over 220,000 pupils have enrolled in the NTP and over 141,000 have started receiving tutoring. There are more than 25,000 tutors working as part of the NTP offering tuition; this is in addition to over 1,000 Academic Mentors placed in the most disadvantaged schools.

Country: United Kingdom of Great Britain and Northern Ireland (Scotland)

Title: Scottish Attainment Challenge   **Implementer:** Government

Beneficiary group/s: Learners from low-income families and experiencing vulnerability

Short description: The Scottish Attainment Challenge promotes equity in education by ensuring that every child has the same opportunities for success, with a particular focus on bridging the poverty-related performance gap. The Challenge is supported by The National Improvement Framework, the Curriculum for Excellence and Getting it Right for Every Child. It comes with financial commitment of £182 million in 2021/2022, distributed to 9 challenge authorities and to 93% of schools though a pupil equity fund. Since March 2020, these funds have provided tablets to support digital learning at home and helped home-school liaison officers ensure regular contact with children. It also provides summer learning and support programmes, free food and additional teaching materials for pupils residing in local authorities in Scotland with the highest levels of deprivation. The nine "Challenge Authorities" are Glasgow, Dundee, Inverclyde, West Dunbartonshire, North Ayrshire, Clackmannanshire, North Lanarkshire, East Ayrshire and Renfrewshire. Initially the programme focused on primary schools and then also took on secondary schools. An additional £20 million has been provided to schools in 2021/2022 to support learning recovery for the most disadvantaged children and young people.

4.4 Governance interventions to improve system monitoring and peer learning

Cross-sector cooperation and involvement of agencies from national to school level are needed to prevent early school leaving. Monitoring and evaluation is also needed to inform policy development, not least through the exchange of information on good practice.

The *European Union* has a range of initiatives that help promote a "joined-up" policy approach. First of all, it has a Strategic Framework for cooperation in education and training, which helps member states align national policy, share practice and monitor progress to agreed objectives. The strategic framework pursues five priorities, of which the first focuses on improving quality, equity, inclusion and success for all in education and training. The framework also supports the achievement of a set of benchmarks at European level to motivate the achievement of certain objectives. Three of these address inequalities in education, preventing early school leaving: at least 95% of children should participate in early childhood education; less than 15% of 15-year-olds should be under-achievers in reading, mathematics and science; and the rate of early dropout from education and training among

18- to 24-year-olds should be less than 10%. Progress against these benchmarks is reported through the EU Education and Training Monitor.

Early school leaving has been a long-standing policy concern. A 2011 Council of Education Ministers recommendation on early school leaving was evaluated in 2019, examining implementation in all member states. While overall progress was good, particular aspects of this problem required more attention and new approaches. The School Working Group has created a European Toolkit for Schools that promotes inclusive education and addresses early school leaving. Since 2015, it is collecting and curating a large number of good examples, studies and other resources.

As part of the effort to create a European Education Area by 2025, a roadmap will include new initiatives. One of these, the Pathways to School Success, will help all pupils to acquire basic skills and complete upper secondary education, as well as ensure their well-being at school. The initiative will take the form of a Commission proposal for a Council recommendation, following the structure of the 2011 Recommendation on Early School Leavers reduction policies which introduced four main pillars: monitoring, prevention, intervention and compensation measures.

Table 17: Governance interventions to improve system monitoring and peer learning

Country: Argentina

Title: Federal Council of Education   **Implementer:** National and provincial ministries of education
Beneficiary group/s: National public education system

Short description: The National Ministry of Education and the ministries of the 23 provinces and the City of Buenos Aires share responsibility for the planning, organization, supervision and financing of national education in a joint, concurrent and agreed manner. The Federal Council of Education sets overall guidelines for all educational levels, while the provincial governments retain formal jurisdiction over different areas, including curricula and administrative policies. During the Covid-19 pandemic, the Council acted as a key space for policy agreement.

Country: European Union

Title: ERASMUS +   **Implementer:** Member States
Beneficiary group/s:

Short description: Erasmus + is a bottom-up programme to support education, training, youth and sport. A wide body of education and training staff and learners can benefit from courses and techniques from funded projects which are based on the principle of strategic partnership, networking and cooperation between schools in European countries, mainly in the field of higher education. The new phase of the 2021-2027 programme is based on the success of 2014-2020, with the aim of extending its reach to more people, and make it more inclusive, greener and more digital. All strategic partnerships must meet a number of general objectives, such as supporting individuals in acquiring skills, promoting social inclusion and addressing open education and innovative practices in the digital age. In school areas, priority is given to the selection of projects which strengthen the profile of teaching professions, address early school dropout and disadvantage, increase access to education and early childhood care, the ability to organize periods of study abroad. These projects therefore address the EU's wider priorities and objectives for education, and many cooperate on the three themes identified by this year's G20 Working Group.

Country: European Union

Title: The EU's Strategic Framework for European cooperation in education and training
Implementer: Member States   **Beneficiary group/s:** National public school systems

Short description: This is an example of the way the EU helps align national policy and practice, shares practice and monitors progress to commonly agreed objectives. The framework recognizes the important role education plays in helping to achieve common European objectives such as upskilling, combating unemployment and exclusion, in particular among young people, promoting industrial policies and new green initiatives The EU's strategic framework pursues a number of priorities, and it is significant that the first priority includes a strong focus on equity and inclusion: Strategic priority 1: Improving quality, equity, inclusion and success for all in education and training; Strategic priority 2: Making lifelong learning and mobility a reality for all; Strategic priority 3: Improving skills and motivation in the teaching profession; Strategic priority 4: Strengthening European higher education; Strategic priority 5: Supporting green and digital transitions in and through education and training. The strategic framework specifically supports a set of benchmarks at European level to motivate the achievement of objectives. Some of these address inequalities in education, prevent early school leaving, and stipulate that at least 95% of children should participate in early childhood education; less than 15% of 15-year-olds should be underachievers in reading, mathematics and science; the rate of early drop-out of education and training between 18 and 24 years of age should be less than 10%. EU progress and impact are measured through an Education and Training Monitor, which provides a comprehensive annual assessment of education and training systems across Europe and beyond.

Country: European Union

Title: EU Education and Training Monitor
Implementer: Member States   **Beneficiary group/s:** National public education systems

Short description: The EU Education and Training Monitor provides a comprehensive annual assessment of education and training systems across Europe and beyond. It measures countries' progress towards the objectives of the strategic framework for education and training 2030 (ET 2030) and includes performance, statistics and examples; https://ec.europa.eu/education/policy/strategic-framework/et-monitor_en. It further includes EU-level analysis and 27 in-depth country reports making suggestions for policy reform that will make national education and training systems more responsive to the needs of society and the labour market. The 2020 edition, launched in November 2020, is the latest in the current strategic framework, and provides a cumulative overview of progress made, as well as identifying where EU funding for education, training and skills should be addressed through the next long-term EU budget 2021-2027.

The Eurydice is a network of 38 countries that publishes information on national education policies and systems related to EU Member States, as well as comparative reports on specific topics, indicators and statistics. https://eacea.ec.europa.eu/national-policies/eurydice/publications_en As an example, a Eurydice brief from December 2020 examined equity in school education. The brief noted the characteristics of educational systems in different countries and the role they play in segregation and equity levels. Different areas are identified where educational authorities can intervene to improve equity levels such as- increase public spending on primary education; foster interaction between social groups as much as possible; minimise differences in the choice of schools and admission policies; lower the rate of repetition of grades. The ET 2020 strategy ended in 2020. It has been replaced by a strategic framework for cooperation in education and training in the European Education Area and beyond (2021-2030).

Country: Federal Republic of Germany

Title: "Schule macht stark" (School makes you strong)   **Implementer:** Federal Government
Beneficiary group/s: Schools and pupils from low income families in both urban and rural areas

Short description: The initiative of the Federal and State (Länder) governments, launched in January 2021, aims to provide support to schools in socially difficult situations in both urban and rural areas to better meet their challenges. Children and young people with major learning deficits in particular are disproportionately represented at these schools. The objectives are also to improve the educational opportunities of socially disadvantaged pupils and their integration and to reduce educational barriers. It has two phases: During the first five years, researchers from 13 research institutes and universities will develop strategies and approaches for teaching and improving everyday school life, adapted to local needs. They will work with 200 schools nationwide to test strategies and concepts for school and classroom development, as well as strategies for improving linkages between schools and their social environment. During this stage, schools will exchange information and network with each other. The second phase, also lasting five years, is intended to transfer good practices to other schools.

Country: The Republic of Korea

Title: Support for the academic acquisition of drop-out students
Implementer: Ministry of Education, local education authorities
Beneficiary group/s: Drop-out students

Short description: The Ministry of Education implements a variety of policies to support students who have dropped out of school. First, for students who have stopped studying at the compulsory education stage, the Ministry implements "pilot program for drop-out students of compulsory education." It provides an opportunity to out-of-school youth to have their primary and secondary education qualification recognized by using various tailored learning support programs and EBS (educational broadcaster) content. Second, for those who have dropped out of school due to family or health-related issues, there are 66 middle and high schools providing remote learning to offer them a chance to continue their learning and have their qualifications recognized. Third, the Ministry of Education has established a collaboration system with related ministries such as the Ministry of Gender Equality and Family to support drop-out students with the acquisition of academic qualifications. Through this system, students are supported by linking the information on drop-out students to the youth support center. Also, the programs offered by the youth support center are recognizable as qualifications.

Country: United Mexican States

Title: La Escuela Es Nuestra (The School Is Ours)   **Implementer:** Government
Beneficiary group/s: Indigenous populations and learners living in areas with a high index of poverty and social marginalization

Short description: The programme aims at improving infrastructure and equipment within the public basic education system, giving priority to schools located in areas inhabited by indigenous populations. Activities include: allocating grants to the School Boards of Participatory Administration (CEAP) to establish catering services; gradually and progressively establishing a full teaching timetable in schools (between 6 and 8 hours a day) through grants to educational staff; improving school performance, and; strengthening food security for all students. These interventions are expected to impact on the teaching-learning process, reduce the incidence of drop-out and help to overcome inequalities between schools. Priority will also be given to the 79 municipalities that make up the Isthmus of Tehuantepec.

Country: United Kingdom of Great Britain and Northern Ireland (England)

Title: The Catch-up Premium ~**Implementer:** Government
Beneficiary group/s: Public schools, including special needs education

Short description: The Catch-up Premium is a one-off, universal initiative for the 2020/2021 school year. It has a budget of £650 million to helps schools support their pupils in recovering from lost learning during COVID-19. The allocation of funds varies according to the type of school. Schools with special needs pupils receive more funding. To make best use of these funds, the Education Endowment Foundation (EEF) has published a guide to assist schools. It details specific evidence-based approaches schools can draw on when planning to support their pupils. A new one-off premium is planned for the school year 2021-2022 to support schools to deliver evidence-based approaches to supporting the educational chances of their disadvantaged and vulnerable pupils.

5. Orientations for future cooperation among G20 countries in the field of education and training

The COVID-19 pandemic, lockdown measures and the resulting socio-economic crisis are threatening to reverse progress made over the past 20 years towards universal enrolment in basic education and stronger learning outcomes. The impact on G20 countries differs according to the pre-COVID-19 condition of their education and training systems, and on the timing and severity of the pandemic waves they have had to confront. However, countries share common concerns regarding the short-term response to the sanitary situation and the long-term fight against educational poverty. These concerns are revealed by the dozens of policies and programmes covered by the surveys of blended education and educational poverty on which the present report is based.

First, when blended education emerged as the key short-term response to school and workplace closures, all G20 countries took measures to ensure that teaching and learning could continue. Priorities included ensuring access to digital tools such as smartphones, tablets and personal computers, and bringing connectivity to as many children and young people as rapidly as possible. G20 countries sought to give all children the same opportunities by bridging pre-existing digital divides and reaching out to girls and women, students with special learning needs, and those living in poor, urban or remote rural areas. Countries invested in dedicated educational platforms and online teaching and learning materials. They also had to adapt assessment and final examinations to the health situation and new teaching and learning modalities.

The COVID-19 pandemic accelerated earlier trends which saw an increase in the use of digital technologies in education and training. These technologies were vital to preserving the access and quality of education. Most G20 countries are reverting to face-to-face teaching and learning, yet a new model of education may emerge, with a redefined role for teachers and trainers, in which blended teaching and learning facilitates educational expansion. At any rate, policies and programmes reported on by G20 countries will provide a wealth of experience that can be used to identify the potential and limitations of remote education in a post-COVID-19 world.

Second, G20 countries have sought to address educational poverty, which pre-existed the COVID-19 pandemic but was exacerbated by the crisis. The extent of educational poverty can be gauged by the fact that in 2019, a significant share of young people failed to complete secondary education, with wide disparities within and between countries. Three kinds of policies and programmes have been used to confront this phenomenon:

- prevention measures tackling root problems that can lead to early school leaving
- intervention measures boosting the quality of education and providing targeted support to students
- compensation measures allowing school dropouts to re-enter education or training and gain qualifications.

Several G20 countries reported comprehensive educational policies encompassing all three. Here as well, interventions documented by G20 countries will provide rich evidence on policy effectiveness provided they are monitored and evaluated rigorously.

The key challenge for these interventions is to put G20 countries back on their previous trajectories. It is especially important to re-enrol students who dropped out in 2020 or 2021 and remedy the loss of school or training exposure over the same period. The aim should be to achieve the targets of Sustainable Development Goal 4 and, more generally, reaffirm education as a fundamental human right of intrinsic value and as an instrument for achieving better and more equitable standards of living, social cohesion, national stability and democracy.

Three orientations for future cooperation among G20 countries in the field of education and training emerge from the information received for the present report:

1. Strengthen collaboration to accelerate progress on blended education and reduce educational poverty

Different levels of government should share promising practices and strengthen collaboration to support policies designed to reduce education poverty and bridge the digital divide within and among G20 countries. Sharing tools and outcomes of different monitoring and evaluation systems is crucial to support evidence-based decision-making and policy choices.

2. Collaborate to reimagine and transform education

By obliging us to adjust to blended teaching and learning, the pandemic has offered an opportunity to reimagine pedagogical approaches, assessment and curriculum. By continuing dialogue and collaboration, we can seize this opportunity to collectively rethink educational models and ways of tackling education poverty.

3. Contribute to international cooperation and the Education 2030 agenda

Progress in the G20 countries can offer a knowledge base for coping with the impact of COVID-19. This can enable progress to be scaled up and accelerated in many countries across the world – helping them to better adapt their education systems to fast-changing, interconnected, digitalized economies, while contributing to a green and smart recovery. This collaboration could also contribute to get SDG 4 back on track with the objective of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. It would also be important to ensuring that all learners acquire knowledge and skills needed to promote global citizenship and sustainable development, including among others through education for sustainable development.

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Annex

Template for the collection of the national programmes of the G20 countries related to the introduction of teaching and learning models in presence and sometimes at distance (blended teaching and learning) after the COVID-19 emergency

1. Country

2. Contact person

3. Title of policy programme/initiative to support the quality and effectiveness of blended education/learning made necessary by the pandemic emergency

4. Brief description of the objectives, content, outcomes or expected outcomes of the policy programme/initiative with reference to the strategy to implement blended education/learning

4.1 With reference to the dissemination of new teaching approaches and methodologies in presence and at a distance, specify whether the programme includes and describe any associated initial and continuing training actions for teachers and educational personnel

5. Please indicate the characteristics and number of educational staff that has been reached, or is meant to be reached, through the policy programme/initiative and eventual related training

6. Territorial scope of programme implementation

7. With reference to the duration, indicate whether the policy programme/initiative is:

|_| a well established programme/reform

|_| an initiative with a duration of |_|_| years on average

8. Indicate any other ministries or government agencies involved in the implementation of the policy programme/initiative

9. Please indicate whether:

|_| the programme/initiative strengthens policies/initiatives already implemented before COVID-19 pandemic

Comments:

|_| the programme/initiative is innovative compared to what was achieved before the COVID-19 pandemic

Comments:

10. Any other information

Template for the collection of the national programmes of the G20 countries to combat educational poverty, with a particular reference to addressing educational inequalities, early school leaving and/or the digital divide

Use the following template for each policy programme/initiative that the country is implementing or is in the process of implementing

1. Country	
2. Contact person	
Position Department	
Organization Email	
Phone Website(s)	
3. Title of policy programme/ initiative combating educational poverty implemented in this period of pandemic emergency, with particular reference to one of the following themes: addressing educational inequalities, prevention of early school leaving, reduction of digital divide	
4. Brief description of the objectives, content, outcomes or expected outcomes of the policy programme/initiative	
5. Please indicate the characteristics of the target group(s), level of education, number of people (broken down by gender, if available) that is meant to be reached through the policy programme/initiative.	