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1818 H Street NW,
Washington DC 20433

Telephone: 202-473-1000;

Internet: www.worldbank.org

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LEARNING RECOVERY AFTER COVID-19 IN EUROPE AND CENTRAL ASIA: Policy and Practice

Gustavo Arcia

Rafael de Hoyos

Harry Patrinos

Alina Sava

Tigran Shmis

Janssen Teixeira

Produced under the supervision of Fadia Saadah, Director, Human Development, ECA; with inputs from the ECA Education Team.

The vision of the Europe and Central Asia (ECA) Education Team is for education systems to empower all people to reach their full potential. In line with this vision, the purpose of this guidance note is to provide decision-makers with some recommendations and policy advice on effective ways to respond to the education losses engendered by the COVID-19 crisis. These recommendations include specific measures for mitigating learning losses and preparing for school reopening. The note also discusses the opportunity to design and implement structural reforms to make education systems more resilient and, in the process, improve students' educational performance. Recommendations are also given for longer-term actions with the potential to transform education by strengthening learning and improving learning equity in the future.

Summary

The Europe and Central Asia education team's vision is for education systems to empower all to reach their full potential. The COVID-19 crisis presents an opportunity to restructure educational practices to incorporate valuable lessons from remote learning and develop new strategies for improving student learning and learning equity. This note presents design and implementation details for a *learning recovery plan* for the Europe and Central Asia (ECA) region. The learning recovery plan includes three stages: (i) *Coping* with the closing of schools through remote learning, instructional and psychosocial support, and compensatory programs for preventing learning losses; (ii) *Managing Continuity* where reopened schools focus on providing foundational skills in language, math, and science to reduce learning loss and to improve learning among minorities and the poor; and (iii) *Improving and Accelerating* learning, by making schools more resilient and equitable through educational innovations that include the lessons learned from remote instruction during the pandemic, and where the entire system is evaluated for results.

Coping with school closures means that governments should ensure access to digital learning by minorities and students in poverty, and that the reopening of schools should be pursued as soon as it is feasible. *Managing the continuity* of learning means that reopening of schools—a key step in recovering learning losses because distance education is less effective than in-person instruction—countries should adapt the curriculum to prioritize foundational skills in numeracy, and language, and test students frequently to monitor progress and place students at their right level of instruction. Reopening schools should also

include modifications to the classroom infrastructure, to reduce contagion and maintain student health, and provide equal access to digital and hybrid modes of instruction.

Improving and accelerating education results past the crisis stage requires monitoring learning recovery to continuously revise policies, programs, and infrastructure to improve learning outcomes. It also implies investing in technology infrastructure to improve access to digital instruction, and to ensure learning equity. To that end, this stage of the learning recovery plan should: (i) Identify and treat students with low learning and improve their access to quality education; (ii) Define clear equity goals and allocate budgets and personnel accordingly; (iii) Implement teacher support and innovations for hybrid instruction; (iv) invest in internet access and in digital infrastructure and pedagogy; (v) Promote a climate of educational innovation for improving hybrid/blended methods of education delivery and (vi) Continuously monitor and evaluate impacts to ensure the delivery of quality education and the improvement of learning equity.

The disruption brought by the COVID-19 crisis affected the entire education ecosystem, creating the need for a revolution requiring immediate policy shifts and innovations to develop a new hybrid model of learning and working. This new model would redesign the curriculum, change the educational infrastructure, and retool the modes of delivery of learning by relying on strong partnerships with key stakeholders beyond the boundaries of education. Learning should include all, should be accessible everywhere, and should be affordable and relevant.



LEARNING RECOVERY AFTER COVID-19 IN EUROPE AND CENTRAL ASIA: Policy and Practice

Introduction The COVID-19 crisis has had a negative impact on learning because of school closures. Distance education through video calls, TV, radio, and other media seems to be less effective than classroom teaching in terms of learning because of a lack of teachers with the right training and experience, the improvised adaptation of the curricula, and the difficulties in maintaining students' engagement with remote teaching. The release of COVID vaccines brings hope for an end to the crisis, allowing governments to plan for the normalization of education and the recovery of learning losses. The COVID-19 crisis has also become an opportunity to restructure educational practices to incorporate valuable lessons from remote learning and create new strategies for strengthening student learning

and increasing learning equity. This note is built on the design and implementation details in a learning recovery plan outlined by the World Bank¹ and updates the strategies and actions that are currently in place in the Europe and Central Asia (ECA) region.²

The World Bank's learning recovery plan has an overarching goal: to make education more inclusive, effective, and resilient and to enable education systems to recover, succeed, and undergo positive transformations in the face of adversity³ (Figure 1). Recovering learning losses will also depend on countries making structural improvements to their education systems that will require high-level leadership, long-term planning, and enough financial resources to implement the plan immediately.



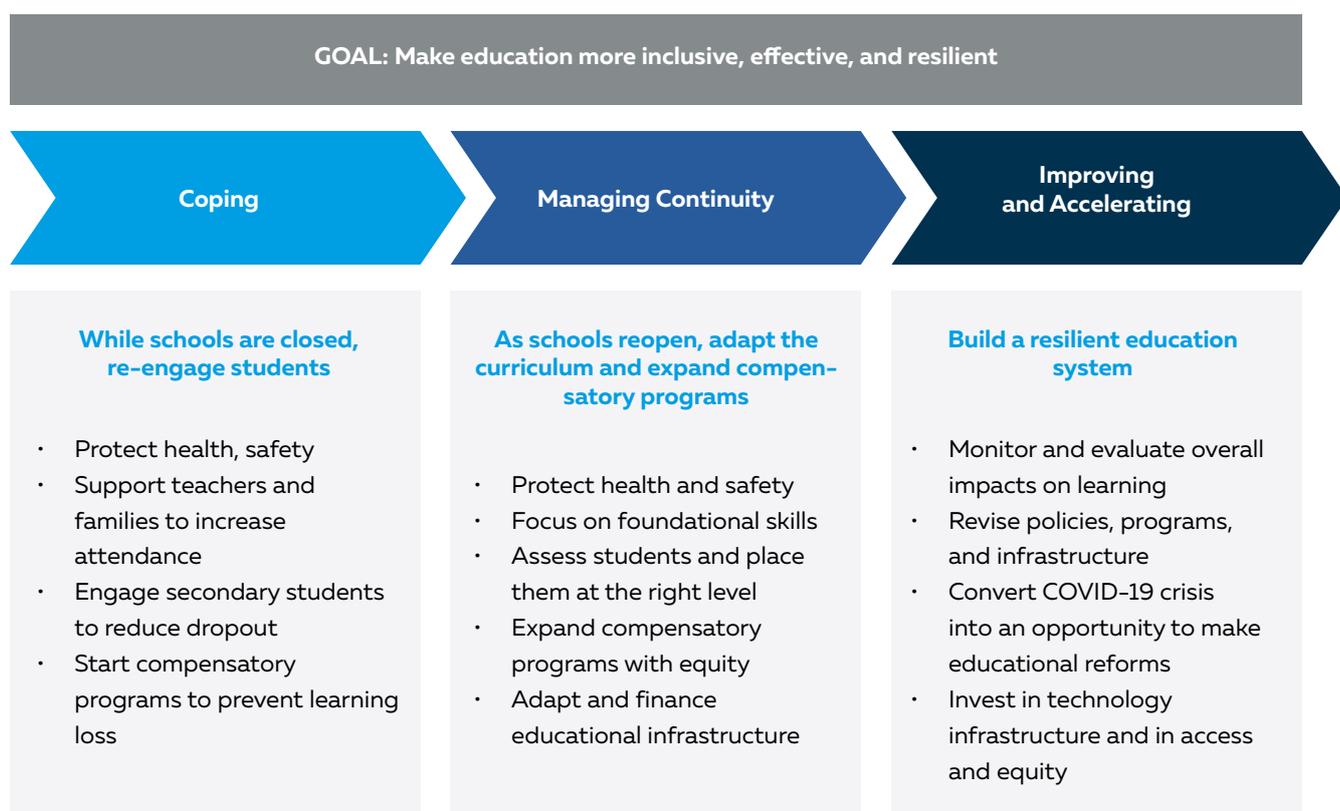


Figure 1: Learning Recovery Plan for ECA

The learning recovery plan in Figure 1 encompasses three stages: (i) a *Coping* stage, during which remote learning substitutes for in-person school, students and parents are given with instructional and psychosocial support, and compensatory programs are created aimed at preventing learning losses; (ii) a *Managing Continuity* stage, during which, as schools reopen, they focus on teaching foundational skills in language, math, and science, student assessment is continuous to ensure that they are placed at the right level of instruction, compensatory programs ensure that poor or disadvantaged students have the same access to education as everyone else, and the financing of education benefits all students; and (iii) an *Improving and Accelerating* learning stage, during which compensatory programs are tracked to ensure that they are equitable, the results of this tracking guide on-course adjustments to programs and policies, educational innovations are implemented to incorporate the lessons learned from remote instruction during the pandemic, and the entire system is evaluated to ensure that it is achieving the desired results.

This learning recovery plan can be implemented in three phases. In Phase 1, *re-engaging students and parents*, schools will identify students at risk of dropping out, students who are disengaged, students living in poverty, and students who belong to disadvantaged groups. The objective of this phase is to prevent learning loss by maintaining enrolment rates and minimizing dropouts, especially in secondary school where students may want to enter the labor force too early. In Phase 2, *implementing compensatory programs*, schools will use diagnostic testing to place students at the right level of learning, simplify the curriculum to prioritize foundational skills and prevent learning losses, and identify and select the most cost-effective programs and interventions. In Phase 3, *building back a resilient education system*, schools will invest in training teachers in online instruction, which requires different pedagogical methods and approaches, targeted to poor and disadvantaged students, make the best programs and interventions in Phase 2 permanent, and keep parents engaged through direct contact with teachers and through outreach programs.



1.

Coping with School Closures

Although all countries in ECA have reopened their schools in different modalities, the low rates of vaccination and the emergence of different variants of the coronavirus strongly suggest that countries will need to continue to manage learning within the framework of school closures.⁴ During most of 2020, schools were closed in all ECA countries but to different extents. As of March 2021, Albania reported 41 school days lost to closure, Hungary 73 school days, Romania 108 school days, and Turkey 129 school days, though these data change rapidly.⁵ This range reflects differences in school calendars, in the impact of surges in infection rates, and in strict country-wide quarantines. The latest survey data from the last quarter of 2020 indicates that, on average, ECA countries lost an average of 66 days, accounting for approximately 36 percent of the school year.⁶ Learning losses in ECA are estimated to amount to an average of 31 points in harmonized learning outcomes, while 16 percent more children than before the pandemic are estimated to have failed to meet their grade minimum proficiency of PISA level 2 test scores.⁷ Out of an expected 12.6 years of schooling, the region lost an average of 0.8 years as a result of the COVID crisis. Currently, all education systems in the region

are mixing in-person, remote, and hybrid modes of instruction to educate their students.⁸

Parent engagement is a key starting point for coping with the crisis, especially for pre-school and primary education. Children's caregivers (parents, guardians, or other family members) have been crucial partners in remote learning, but there is plenty of evidence showing that they have felt overburdened and lacking in the proper skills to assist children in the process.⁹ A first step in fostering parental engagement is to discover their needs and priorities about remote learning and to find new ways to engage them during and after the pandemic. A survey of 25,000 caregivers (parents and guardians) in 10 countries and interviews with 50 education decision-makers in 15 countries showed that parents want educational innovations that foster their children's socio-emotional development and that support interactive teaching.¹⁰ Teachers have a large degree of influence over parents' belief in education, and parents' trust in their children's school is tied to the extent of their engagement with teachers and school principals. These findings are useful for designing policies aimed at engaging parents in remote learning and hybrid

models of instruction. Home visits by teachers, regular parent-teacher meetings, sharing beliefs about educational objectives, providing parents with psychosocial assistance, and helping them with digital skills can go a long way to reduce the feeling of burnout among parents. It is crucial to support parents to help children to learn at home, as is being done by *Read@Home*, a major initiative funded by the World Bank in North Macedonia that targets about 40,000 children between the ages 3 and 12 and aims to get reading, learning, and play materials into homes and to support parents to be involved in their children's learning.¹¹

Over the last few decades, there has not been enough progress in the region in terms of improving learning outcomes, and it is probable that the COVID-19 crisis has exacerbated this problem.¹² School closures and the difficulties involved in implementing remote learning are likely to have had a substantial negative impact on the economy, with some estimates of total learning losses amounting to 0.8 percent of GDP annually.¹³ Such large losses reflects the fact that the returns to education remain high, meaning that any loss in schooling will have a large impact on an individual's future earnings. Aside from the negative impact of school closures, learning losses also arise from the impact of the crisis on the economy. An economic slowdown has a negative cascade effect on employment, income, school enrollment, school attendance, educational attainment, and learning outcomes. The net effect is a compounded learning loss for society with long-term repercussions for productivity and wages.¹⁴

School closures also have a negative effect on children's health and psychosocial well-being, increasing the incidence of anxiety and depression. Moreover, recent evidence indicates that in-person instruction may not be as dangerous for the transmission of the coronavirus among children as initially thought, as data from Europe indicates that children under 12 years of age have lower transmission rates for the virus, while those who get it rarely present with the severe symptoms found among adults.¹⁵ Hence, reopening schools could actually mitigate the health impacts of the crisis on young children.

Measures of learning losses are available for a few countries, and the latest data indicate that they are substantial. For example, the losses experienced by

Grade 6 students in Belgium amount to 0.19 standard deviations (SD) in math and 0.29 SD in Dutch. Grade 5 students in Germany lost 0.07 SD in reading comprehension and 0.09 in math, while students in Grades 3 to 8 in the US lost between 5 and 10 percentage points in math.^{16/17} During the first quarter of 2021, ECA countries began implementing different instruction strategies to reduce the negative impact of the pandemic on learning. Of the 24 ECA countries, 21 are now mixing in-person attendance with remote learning and other hybrid arrangements, while the remaining three are still relying exclusively on remote learning. Data on each individual country are continuously being updated, including data on school status and mode of instruction, the prioritization of teachers for the COVID vaccine, modes of in-person support by education level, and modes of support for remote learning.¹⁸ As of mid-April 2021, most ECA countries use the internet, TV, or mobile phones as modes of instructions under remote learning. Radio is being used by only two of the 24 countries.

Reopening schools is a key step in recovering learning losses because distance education is less effective than in-person instruction. This is because teachers lack training in digital pedagogy and have no experience with virtual classroom practices, schools have had to improvise their adaptations to the curriculum, and keeping students engaged when they are at home can be very difficult. Furthermore, in many developing countries, students have limited access to the internet and to digital equipment, which aggravates the lack of in-person instruction.





2.

Managing the Continuity of Instruction

As schools reopen, countries should adapt the curriculum and expand compensatory programs in accordance with the second stage of the learning recovery plan. In many countries, the reopening of schools has been paired with remedial programs and interventions,¹⁹ targeted mostly to minorities and disadvantaged students. Based on experiences with extra tutoring in England²⁰ and Italy,²¹ with learning packages in India,²² and with on education finance equity in the United Kingdom²³ and several states in the US²⁴ and on recent survey data from ECA countries,²⁵ there are three critical actions in this second stage:

- (i) Simplify the curriculum to prioritize foundational skills such as numeracy, literacy, and socio-emotional resilience.
- (ii) Implement standardized tests to identify the learning level of each student.
- (iii) Implement compensatory policies.

To bolster the effects of these actions, countries could also consider complementary interventions to make the reopening of schools more effective:

- Implement tutoring programs.
- Use improved learning packages such as Teaching at the Right Level (TaRL), which can accelerate

learning recovery.

- Protect education funding after deferred fiscal payments are back on track.
- Redistribute education expenditures to fund compensatory programs.
- Use hybrid systems of instruction that incorporate relevant lessons from remote learning.

In the medium term, the process of reopening schools should also include investments in educational infrastructure to:²⁶

- Improve classroom ventilation to reduce airborne infections, including the use of high-efficiency particulate air filters (HEPA) in closed spaces.
- Provide/expand hand washing facilities and other sanitization measures, initiate promotion campaigns aimed at encouraging these practices, and provide clear guidance on the use of masks and personal protective equipment.
- Repurpose large school spaces, such as gyms, into learning spaces and food halls to allow for social distancing.
- Modify IT equipment to enable quick changes between in-person, remote, and hybrid modes of instruction.

Box 1: What Does It Mean to Reopen Schools?

ECA countries have reopened schools under the following modes:

- In-person, where schools are open, and students return to the classroom for in-person instruction.
- Hybrid/remote, where schools may combine remote learning with in-person instruction or schools provide only remote instruction.
- Mixed/multiple, where COVID-19 conditions force schools to alternate among different modes, including in-person, hybrid, remote, or complete closure.

Source: <https://www.covideducationrecovery.global/methodology/>

These three critical actions and the associated policies and practices need to be planned and implemented over the medium and long terms.

Protect the health and safety of students and focus on foundational skills. In countries where significant segments of the population live in dire economic conditions, access to income subsidies and school meals can promote participation in both remote learning — where parents/guardians may have to be at home during class time—and in-person attendance as recommended in the US.²⁷ In addition, schools should be points of access for mental health services and psychosocial assistance, especially for the poor as well as for teachers and parents, given the high levels of stress produced by the pandemic.

Romania is a case in point. All schools in the country are open with the mandatory use of masks by all teachers and students. In-person instruction is governed by different rules categorized by geographical risk zones. In *green* zones, where the average rate of infection is lower than 1 in 1,000 people, all students can return to school in person. In *yellow* zones, with a rate of infection between 1 and 3 in 1,000 people, only children in grades 1 to 4 and in grades 8 to 12 can return to school. In *red* zones, with a rate of infection higher than 3 in 1,000 people, only kindergarteners and students in grades 1 to 4 can return to school, and all other students continue under distance learning. The school calendar for the year follows revised guidelines but is as close to normal as possible.²⁸ Other ECA countries have in-person instruction in a variety of different modes.²⁹ For example, in Denmark, students in grades 1 to 4 cannot mingle with students from other classrooms, and there are staggered free times between classes. Austria allows all students to return to class but at staggered times, and all students are

required to wear masks at all times and to undergo frequent testing. Hungary has opened its primary schools but has delayed in-person instruction for secondary students until early May. Kosovo used a phased opening of schools in October 2020, starting with the earliest grades in each level of education. Sanitary supplies and COVID-19 protocols were put in place in advance. Classes shift to remote learning temporarily if a case of COVID is reported.

Reduce education inequality enhanced by the pandemic. Before COVID-19, 50 percent of children in middle-income countries and 30 percent of children in high-income countries failed to master secondary-level skills necessary for work and life. In USA, 10 percent of poor children had no access to digital technology for remote learning. Globally, UNICEF estimates that 463 million children have no access to remote learning. Technical and educational innovations are key to reducing inequality. To that end, some quick action is possible in several areas:³⁰

- Maintain the engagement of students and families from disadvantaged groups with the school.
- Modify the curriculum to focus on foundational skills to prevent learning loss.
- Focus on the instructional core—on the mode of instruction most appropriate to the school context.
- Deploy education technology for the long term (curricula, teacher training, instructional core, and infrastructure) and ensure equitable access to digital learning.
- Evaluate, course-correct, and scale-up good innovations.

Assess students and place them at the right level.

Schools are recommended to use rapid standardized testing to identify students that have experienced the largest learning losses and assign them to the most

appropriate compensatory or remedial program. Pedagogical models such as *Teaching at the Right Level* can be used assign students to different groups after testing.³¹ As schools reopen, more than 60 percent of countries have indicated that they will use school-based assessments to track learning, while 30 percent plan to use national assessments for primary schools, and 50 percent plan to use national assessments for secondary school.³² Out of the 26 countries in ECA that receive World Bank financing, only four do not track student learning. Testing children one-on-one helps instructors to understand the specific learning needs of each child, to create manageable groups of children with similar learning needs, and to use level-appropriate activities to help children to learn. The assessment process also allows instructors and mentors to track academic improvements and keeps the whole system focused on the child's learning progress.

Expand compensatory programs with equity.

Tutoring works well in recovering learning losses. For instance, a three-month tutoring program can help to restore the loss of up to five months of normal schooling³³ and can improve math and language performance by almost 5 percent.³⁴ Tutoring programs yield consistent and substantial positive impacts on learning outcomes, with an overall pooled effect of 0.37 SD. The impact of tutoring is greater when it is provided by teachers and paraprofessionals as opposed to parents and non-professionals. Available evidence shows that tutoring in reading has a larger impact on students in the earlier grades, while math tutoring tends to have a larger impact on students in later grades. Tutoring programs conducted during the school day tend to lead to greater improvements than those conducted after school hours.³⁵

Target low-income and remote households and engage non-poor households. To make real progress in improving learning, education sector leaders need to prioritize a few key goals, (such as increasing foundational literacy and numeracy rates), monitor progress towards achieving them, and foster collective accountability for improving results.³⁶ There is also overwhelming evidence that teaching at the right level is a good policy that takes students' initial knowledge into consideration.³⁷ As school systems reopen, it is important to monitor changes in the learning distribution among the poor, track within-group inequality, and benchmark learning poverty. Such monitoring

would support the timely implementation of remedial actions aimed at learning recovery.

Expand access to digital pedagogy. Expanding access to the internet and to laptops helps to improve students' educational performance by enhancing equity and inclusion. In Moldova and in Romania, thousands of laptops are being distributed to students for online learning. The Ministry of Education, Culture, and Research in Moldova is distributing 10,000 laptops purchased with funds from the World Bank-financed Moldova Education Reform Project.³⁸ The laptops will be assigned mostly to secondary school and lyceum students who do not have a computer at home. It is estimated that about 9,500 5th- to 12th-grade students need a laptop in order to be able to study online. The total cost of the purchase is US\$2.9 million. In Romania, the government has begun distributing 60,000 laptops through the ROSE project, with financing from the World Bank. The laptops will be distributed to Roma students, students in poor rural areas, and students with special education needs. Laptop distribution is transparent and can be tracked on the websites of beneficiary high schools and in local news outlets where the policy has received wide coverage.³⁹

Protect education funding. Two-thirds of low- and lower-middle-income countries have cut their education budgets because of the COVID-19 pandemic, while only a third of upper-middle- and high-income countries have reduced their budgets. However, not all countries have reduced their education budgets, and some high-income countries even increased theirs in 2020 to finance their pandemic-related interventions.⁴⁰ European policies on COVID-19 have tended to be oriented towards increasing health expenditures, providing household subsidies and services, and implementing employment programs. Fiscally, policies are in place to defer taxes and other fiscal obligations such as social security contributions, producing a fiscal deficit that affects other sectors, such as education.⁴¹ Such contractions in social expenditures will have negative long-term effects on human capital and productivity, which suggests that protecting education is a strategy with significant positive implications for long-term economic recovery.⁴²

Protecting education budgets after the COVID-19 crisis will require taking deliberate steps to increase expenditures on compensatory programs targeted to the poor and minorities, on the training of teachers in

digital pedagogy, and on the adaptation and expansion of digital infrastructure. Economic activity in almost all the countries in the region contracted by 2 percent in 2020 as a direct result of the economic contraction induced by COVID-19, especially those countries with economic links to the Euro area. Fortunately, growth in the great majority of the countries in ECA is projected to be positive in 2022.⁴³ Hence, there will be opportunities to protect and expand education budgets in the region.

Expand the education budget. In order to reopen schools, it will be necessary to spend additional funds to minimize the risk of infection and to fund learning recovery programs as existing government budget reallocations may not be enough to ensure that these programs are fully funded. The World Bank has adjusted some of its project funding for ECA and assigned new funds to the project pipeline. It has allocated about US\$467 million for COVID-related activities in education in ECA for fiscal years 2020 and 2021, an amount representing almost 10 percent of total World Bank commitments.⁴⁴

Increase the efficiency of education expenditures. In the meantime, there are some practical short-run activities that can be implemented quickly, such as: (i) identifying and training local community volunteers to help children with distance learning and to communicate crucial COVID-19 health messages to children and their parents; (ii) using community-based organizations to distribute new education materials related to distance education in the language that students know best; (iii) using off-line, low-tech, and no-tech solutions in areas with no internet access, such as translating and downloading books onto memory drives for easy access on devices not connected to the internet; (iv) testing ethnolinguistic minority children in the language in which they studied each subject; and (v) after schools reopen, engaging students in sports to bring enjoyment and normalcy to their lives, to reduce stress, and to foster their mental health.⁴⁵

Redistribute education expenditures for quick action. Funds need to be found in the short run for tutoring, teacher training in digital pedagogy, non-digital delivery of remote learning, and preschool funding under COVID-defensive and prevention measures by redistributing the education budget while additional funding is being sought. Albania's Gender Equality in Access to Economic Opportunities

Project⁴⁶ ensured short-term funding by amending the budget transfer rule for municipal preschool budgets to shift funding from teacher-based to student-based financing. This quick action enabled the launch of a pilot after-school enrichment program for students in grades 1 to 9, thus creating opportunities for women with children to join the labor market.

Provide academic and technical support. Preschools should have their own programs that provide teachers with pedagogical support, guidance on child cognitive stimulation, positive parent-child interactions, and continuation of learning. The positive experience with mobile creches in India, where temporary childcare centers are set up near the workplaces of mothers, may be worth replicating. Successful adaptations of early childhood education programs for vulnerable families during COVID have been developed in Bangladesh (the *Beside You* program for mothers of pre-school children), in Greece (the Refugee Trauma Initiative *Baytna* for Arabic-speaking children), in Rwanda (*Sugira Muryango* virtual home-visit program), the US (the *Parents as Teachers* program, now serving 200,000 families worldwide), and in Brazil (the *Criança Feliz* program).⁴⁷ In the European Union, an early childhood education program is beginning to take shape focusing on inclusion and on staff professionalization,⁴⁸ and in Turkey, the EBA (*Eğitim Bilişim Ağı*) e-learning platform is offering a comprehensive array of support services to increase digital access and improve the quality of digital pedagogy (see Box 3).

Prepare for the continuation of some aspects of remote learning. Data from US school districts shows that students and parents have various reasons to favor the continuation of different forms of remote learning in the future. These tend to be related to three issues: (i) disparities in students' opportunities to learn during school closures; (ii) students' social and emotional needs; and (iii) insufficient funding to cover staff.⁴⁹ The leaders of these school districts have indicated that some aspects of remote learning will outlast the COVID-19 pandemic. They are considering, or have already adopted, different types of hybrid forms of instruction to give students more flexibility, work to satisfy the demands from parents, and maintain student enrollment.

The COVID-19 pandemic has led to a drop in school attendance, which will affect school budgets in countries that allocate funds on the basis of student

enrollment rates. Although there are no published data yet about net changes in school enrollment for ECA, as a point of comparison, the average drop in enrollment in the US during 2020 was between 2 and 4 percent, which will reduce schools' budgets going forward.⁵⁰ Anticipating this drop in funding is important for budget planning. It also underscores the need to continue those components of remote learning that can bring economies of scale to instruction costs. Hence, education policymakers must expressly address the composition of the education budgets and ensure

that key components of the learning recovery process are protected. This includes teacher salaries, the cost of implementing compensatory programs, and the analysis of potential economies of scale produced by the adoption of hybrid modes of instruction.

The World Bank is supporting a wide range of projects in the region to help countries to deal with the educational consequences of the COVID-19 pandemic, as shown below.



Photo: Unknown author, License: CC BY

 **Kazakhstan.** *The Education Modernization Project*⁵¹ is implementing a US\$67 million Distance Learning Survey to strengthen school improvement plans. The survey covers 12,000 students and 6,000 teachers in a sample of 10 percent of all schools. The survey will yield information on student participation in different modalities of emergency remote instruction, student completion of courses within each modality, and the learning outcomes from assessments that were conducted before schools closed for COVID-19.

 **Kosovo.** The Education Systems Improvement Project⁵² is providing school development grants to support school improvement plans. The current round of grants (US\$1.2 million) was made flexible to allow schools to procure goods and training to meet immediate needs brought on by COVID-19. About 100,000 students will benefit. Additionally, an Emergency COVID-19 Grant for Early Childhood Development (ECD)⁵³ has supported disadvantage and minority young children aged 0-7 and families through provision of 1,500 kits with storybooks and didactic materials. It also supported development of animated and expert videos for the ECD online platform and SMS messages directed to caregivers and teachers across 5 broad themes.

 **North Macedonia.** *The Primary Education Improvement Project*,⁵⁴ with funding of US\$25 million from the World Bank, will redesign the curriculum to promote critical thinking and socioemotional skills and include subject areas that will help students to apply their knowledge in real-life situations. It will also: (i) increase public investment in primary education (the education budget's share of the total budget increased from 47 percent to 57 percent in 2020); (ii) develop a new funding formula for primary education to include capital investments that prioritize the most vulnerable students in the system; (iii) define career advancement opportunities for teachers and career incentives tied to performance; (iv) define standards for student achievement; (v) apply a national assessment in primary education; and (vi) improve physical infrastructure and the learning environment in selected schools.

 **Romania.**

The Safer, Inclusive, and Sustainable Schools Project aims to improve the education system by investing in infrastructure. It is described in detail in Box 2.

Box 2: Supporting the Safe Reopening of Schools in Romania

The Romania Safer, Inclusive and Sustainable Schools Project is a US\$118 million World Bank project that will: (i) increase the resilience of the education system; (ii) increase energy efficiency in schools; (iii) improve the learning environment in selected schools; and (iv) increase institutional capacity to make integrated investments in schools in the country. Its components consist of: (i) investment in the infrastructure of 55 of the highest-risk primary and lower secondary schools and (ii) investment in modern classroom furniture and equipment to improve the learning environment through innovative teaching approaches, reduced class sizes, and multiple school shifts. Investments in digital classrooms and training will also allow students to learn from home. The project will support the transformation of approximately 1,000 classrooms into modern and digital learning environments to meet the differentiated needs of approximately 16,000 students. Moreover, The project will also provide teacher training in digital skills to 1,500 teachers (25 percent of the total), provide daily internet access to the 64 percent of students that currently do not have this access, improve the infrastructure in the 30 percent of schools that are operating double and triple shifts, and improve the 14 percent of school buildings with no sanitary permits, the 22 percent that have no adequate water source, and the 30 percent that have no indoor toilets. Through a joint education and governance team, the World Bank has helped the government to use scenario planning for their school reopenings and to develop robust strategies for immediate responses and mid-term recovery during the COVID crisis. The main goal is to prepare schools for new waves of COVID-19. During the 2020/21 school year, schools have been using a traffic light signaling system to govern in-person attendance under different infection rates. When an area is designated as green, all students attend school in-person. A yellow designation means hybrid instruction, in which primary school students attend in person, but secondary students rotate in-person attendance to keep class sizes down. A red designation means that all schools are operating only online.

Source: World Bank, 2021⁶⁰

 **Serbia.** The *Inclusive Early Childhood Education and Care project*⁵⁵ (US\$50 million) is being modified to adjust to COVID conditions. It aims to implement a new Preschool Curriculum Framework, provide mentoring support for preschool teachers, provide teacher training, and support the preschool system during the COVID-19 pandemic. The project will also help the government to implement a communication campaign aimed at showing parents how to support the holistic development of their children. The Ministry of Education, with assistance from the World Bank and other donors, is developing parenting workshops and communication materials to promote the use of early childhood stimulation activities at home.

 **Tajikistan.** The *Early Childhood Development to Build Tajikistan's Human Capital Project*⁵⁶ (US\$70 million) will develop and support a basic package of integrated services to tackle the most pressing educational needs, while building a sustainable foundation for the cross-sectoral delivery of services aimed at improving ECD outcomes for all children. It will support multisectoral provision of quality ECD services, integrating a range of basic, differentiated, and specialized services. Components of the project cover strengthening the country's capacity to deliver the basic package, implementing the basic package nationwide, and increasing access to the basic package in targeted districts.


Turkey.

The *Safe Schooling and Distance Education Project* (US\$160 million) is one of ECA's largest project, as described in Box 3 in more detail.

Box 3: Turkey's Digital Platform

The Safe Schooling and Distance Education Project finances: (i) the expansion of Turkey's EBA (*Eğitim Bilişim Ağı*) e-learning platform from 300,000 users to 1 million users; (ii) the development of IT infrastructure for the New Digital Education System that will increase capacity from 1 million to 5 million concurrent users; (iii) the development of distance education content; and (iv) the development of an education technology ecosystem to promote innovative technologies and pedagogical tools to support the transition towards blended learning. Currently, about 57 percent of poor households with two school-age children have no access to internet, and 66 percent of poor households with three or more school-age children have no access to the internet. The project will expand EBA coverage among the poor and, in the process, fix any technical issues and increase school resilience. The EBA will also provide teachers with better guidance on remote teaching and pedagogy, will improve education quality assurance mechanisms, and clarify the roles of school principals, teachers, parents, and students in the provision of learning support within a digital environment. The project's components are as follows:

1. Emergency Connectivity and IT Infrastructure for Education in Emergencies:
 - a. Target low-income and remote households, but also include non-poor households.
 - b. Promote blended learning by increasing digital system capacity.
2. Digital Content for Safety and Quality:
 - a. Innovative delivery of new digital content and pedagogical tools and wider participation of parents, teachers, universities, and communities.
 - b. TV programming for poor households with no digital access.
 - c. TV and written materials for students with special needs.
 - d. Educational material compatible with distance education.
3. Institutional Capacity for Education Technology Resilience
 - a. Strengthen the Ministry of Education's capacity for coordination, management, and monitoring

The main project indicators are as follows:

Use of distance education: Baseline 2020: 26 percent of students. Goals: 45 percent by 2022, and 70 percent by the end of 2023.

Concurrent users: Baseline 2020: 300,000 students. Goals: 1 million by 2022, and 5 million by the end of 2023.

Students in lowest quintile: Baseline 2020: 14 percent % of students. Goals: 20 percent % by 2022, and 30 percent % by the end of 2023.

Teachers trained: Baseline 2020: 80,600. Goals: 500,000 by 2022, and 900,000 by the end of 2023.

Source: World Bank, 2020⁵⁷



 **Ukraine.** The Government of Ukraine is implementing learning continuity programs using the All-Ukrainian Online School platform for distance and blended learning for students in grades 5 to 11. The project, managed by the Ministry of Education and Science (MOES) and the Ministry of Digital Transformation, provides teachers and students with access to more educational materials and helps schooling to continue during quarantine.⁵⁸ The platform allows students to track their learning progress. As for education funding, the government is protecting education spending in 2021 by increasing transfers to local governments for teaching aids and equipment, providing additional financial support to teachers, and helping local governments with measures to ensure school safety from the spread of the coronavirus. In addition, with World Bank funding, the MOES is preparing the Ukraine Improving Higher Education for Results Project (P171050, US\$200 million) to support learning continuity and operational resilience in higher education through initiatives to expand digitalization in the education sector.⁵⁹ These efforts will help higher education institutions to recover from the impact of COVID-19 while also adapting to more resilient and flexible approaches going forward. The goal of this project is to improve the quality and increase the relevance of higher education to meet labor market demands.

 **Uzbekistan.** The *Promoting Early Childhood Development Project* (US\$ 73.8 million), implemented by the Ministry of Preschool Education, aims to increase access to early childhood education, improve the quality of learning environments in selected public preschools, and devise a systematic way to measure education quality to inform decision-making.⁶¹ Also, the *Modernizing Higher Education Project* (US\$73.8 million)⁶² supports the online platforms for the admission of students to graduate programs and for managing student transfers and readmissions. This intervention has expanded the Ministry of Higher and Secondary-Specialized Education's capacity to manage graduate admissions and transfers fully online in the midst of the lockdown.



3.

Improving and Accelerating – Building a Resilient Education System

What do education systems need to do to make some of the policies under the *managing* phase a permanent part of the system? The COVID-19 crisis has generated a sense of urgency about the need for the structural transformation of education delivery as well as an explicit recognition that some of the changes being made now may become permanent. Hence, moving forward past the crisis stage will require:

- Monitoring and evaluating the impacts of the crisis-led changes on learning recovery.
- Revising policies, programs, and infrastructure.
- Converting the COVID-19 crisis into an opportunity to make structural educational reforms.
- Investing in technology infrastructure and in increasing access and equity.

Monitoring and evaluating learning recovery. For the best results, the following areas of educational performance should be prioritized in monitoring and evaluation learning recovery:⁶³

1. *Student learning and wellbeing:*

- All children and adolescents back in school receive the compensatory services needed to meet their learning, health, psycho-social, and other needs.

- All children receive remedial support to recover lost learning.
 - All schools use a streamlined curriculum that focuses on foundational skills.
 - Children in poverty or in remote areas have increased access to the internet.
 - Digital infrastructure is being expanded to increase access and the efficient use of distance education.
- ### 2. *Teacher welfare, training, and performance:*
- Teachers are on the priority list for COVID-19 vaccinations and are vaccinated before moving to in-person instruction.
 - All teachers are prepared and supported to participate in learning recovery programs and to incorporate digital technology into their teaching.
 - All teachers have access to ongoing training in remote pedagogy and digital skills.
 - Educational innovations are evaluated for their support of teaching and for cost-effectiveness.⁶⁴

Carefully monitoring these areas and goals will require the use of relatively straightforward indicators as outlined in Table 1.

Table 1: Recommended Indicators for Tracking Educational Performance under COVID Conditions

Learning Recovery Goal	Indicator
All schools provide remedial education.	Percentage of schools offering remedial education, by level of education
All schools incorporate social-emotional learning into their teaching.	Percentage of schools with instruction methods that incorporate the development of social-emotional skills
All schools use digital technology to improve foundational skills.	Percentage of schools using digital technology to teach foundational language and math, by level of education
Enrollment rates are back to pre-COVID levels.	Gross and net enrollment rates, by gender.
All schools provide services to recover learning losses and to promote wellbeing.	Percentage of schools providing health and psychosocial services, by level of education
Teachers are prioritized for vaccination.	Teachers are on priority list for vaccination.
All teachers receive training and support to incorporate remedial education and social-emotional learning into their pedagogy.	Percentage of teachers that have receive training and support for remedial education and social emotional learning, by level of education.
All teachers receive training or other support to deliver remote instruction.	Proportion of teachers by level of education trained to deliver remote instruction delivery.

Source: Authors' compilation.

The COVID-19 crisis has also become an opportunity to make education systems more resilient, that is, to enable them to “recover, succeed, and undergo positive transformations in the face of adversity.”⁶⁵ Using resilience as a framework, there are three building blocks that need to be in place for this to happen:⁶⁶

1. Ensure that material and financial resources reach schools by:

- (i) Sustaining education budgets and investing where returns are greatest. Ensuring that critical expenditures are maintained in order to keep children enrolled (and minimize dropouts) and to protect the most vulnerable and more disadvantaged students.
- (ii) Using targeted block grants to ensure that funds reach disadvantaged/vulnerable schools.
- (iii) Making sure that levels of teacher salaries are maintained and that teachers are paid on time.

2. Increase school accountability by:

- (i) Measuring and monitoring learning to use positive accountability, that is, with training and support; not punitive.
- (ii) Monitoring and enforcing student attendance.

- (iii) Using data systems to design and monitor school expenditures and the effects of policy decisions implemented at the school level.

3. Improve teacher performance by encouraging them to upgrade their skills and by implementing performance assessments, while also attracting better entrants to the teaching profession.

The COVID-19 crisis provides lessons on how to build a transformational and resilient education system through forward-looking policies that will produce the skills needed in the future. This transformation will be achieved by making structural changes in education delivery aimed at improving quality and equity. Within the three building blocks described above, some specific areas that will require reform are:

- *Time assigned to schooling and the use of hybrid models of student attendance.* The impact of social distancing and staggered attendance has generated new models of instruction where content and learning become more important than the time

spent in school and the length of lessons units, leading to streamlined school days and/or the use of year-round schooling under more individualized instruction.⁶⁷

- *Student-centered instruction.* Under an individualized approach based on student-centered instruction, teachers have to become proficient in digital pedagogy so they can serve as facilitators of digital content suited to student needs, and to use such content to foster a student's analytical and critical thinking. The experience during the periods of remote instruction in 2020 showed that students learned to be more actively engaged in their own learning, and that students also used their own judgement and self-determination to explore those areas in the curriculum that interested them the most, fostering critical and analytical thinking in the process.⁶⁸
- *A new curriculum.* Post-COVID-19 education should reexamine what is worth teaching and what is worth learning. It should enable students to develop their non-cognitive and socio-emotional skills in order to compete in an increasingly automated world. Hence, creativity, curiosity, critical thinking, entrepreneurship, collaboration, and communication are traits that need to be nurtured by the new curriculum in which digital content will replace school-based materials to a large extent.⁶⁹

One key issue that can be addressed during this period of opportunity is the challenge posed by children who are enrolled in school but are not learning enough. This is an opportunity to install some learning recovery policies as permanent elements into education systems to improve learning equity and reduce learning poverty.⁷⁰ The emerging consensus on education quality and learning poverty suggests that policies on educational equity should:

- *Identify the issues associated with disparities in learning outcomes between mainstream and disadvantaged groups in the population,* such as access to quality teachers, pedagogical resources, and compensatory programs and the need for educational materials in the student's main language. Global evidence shows that the poor, immigrants, and other disadvantaged groups can perform very well when they have access to a quality education.⁷¹
- *Define clear equity goals and the resources needed to improve learning equity.* Identify the country's target groups, and outline a framework for the education policies to be pursued related to teacher quality, school management, financing, and monitoring for accountability. Such a framework would signal the government's commitment to improving learning equity and reducing learning poverty.⁷²
- *Implement policies and innovations for hybrid instruction.* Specific policies and actions to be implemented at the school level should adhere to the principle that they should make the system more efficient. Hybrid instruction should not unduly increase the workload on teachers, nor should they increase the workload on parents. Teachers' support for policies and actions on hybrid learning will be crucial for their success, while it is not helpful if parents perceive that the work that should be done by the school is simply being transferred to them. Hence, the overarching managerial principle should be to ensure education efficiency and quality.
- *Monitor learning outcomes.* By tracking learning progress in real time, testing students often, within the context of instructional change, serves two purposes: (i) it reveals the percentage of students who are not meeting the minimum requirements for their grade, what kinds of support they need and what is the right grade for them and (ii) helps policymakers to refine policies if necessary.
- *Promote a climate of innovation for improving hybrid/blended methods of education delivery.* The education market already has plenty of innovations in the use of technology for early grade reading, but decision-makers have limited information to inform which innovations to select, how best to assign resources, and how to scale up effective innovations to the regional or national levels. Hence, schools can be crucial sources of pilot experience to see what works and how an innovation can maintain its integrity as it is scaled up.
- *Invest in digital pedagogy.* This will require the provision of training to upgrade teachers' digital skills and the participation of trained teachers in the development of a new digital pedagogy. In parallel, governments should invest in digital platforms that can ensure the delivery of education during emer-

gencies and that can also help to bring instructional efficiency during normal school years.

- *Use impact monitoring and evaluation to track progress in learning, learning equity, and learning performance under the hybrid methods of instruction.* This will ensure the efficiency and accountability of the education system at a large scale. This type of monitoring is crucial for the long-term transformation of education.

Turkey is a good example of a country where a plan is being implemented for the transformation of education after COVID-19.⁷³ The plan took into account

the lessons learned during the COVID-19 crisis in its outline of the education system of the future, of which digital pedagogy and ICT will be crucial components. The restructuring of education in Turkey will involve structural reforms to the curriculum and to modes of instruction, a reduction in achievement gaps between population groups, and an increasing reliance on innovation to meet current and future skill needs.

Conclusions

The COVID-19 crisis has affected the educational structures of most countries of the world. In Europe and Central Asia, countries have coped with the pandemic by rapidly adapting their education delivery to prevent learning loss and retain students in school, by implementing remedial and compensatory programs aimed at recovering learning, by ensuring learning equity by protecting minorities and students at risk, and by protecting the health and ensuring the safety of students and teachers. However, the pandemic is lasting longer than predicted, and in the process, the crisis has become an opportunity to introduce structural reforms to education systems to make them more resilient and, in the process, improve their performance. The list of recommendations in the previous section can serve as a guide to the kind of policies and actions that can transform education and improve learning and learning equity in the long term.

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