

/PERSPECTIVE

Resilience by design

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How COVID-19
has shaped
digitalization
in education

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Executive Summary

In March of 2020, teaching institutions across the world were faced with the challenge of educating youth, but in a global pandemic environment. This was no easy feat, and many countries struggled with the adjustment. Unfortunately, as the pandemic is still raging around the world, the disparate effects of access to digital technology have already created **gaps in learning** across the globe. In this paper, we assess the varying policies implemented across different OSCE countries to adapt education to the “new normal” of the pandemic. We found that **disparities among marginalized youth grew**, and as such, we provide pointed recommendations on how OSCE member countries can better address these inequalities. To start with, our main point is that as a human right, education should be granted to everyone. For this reason, we call all partici-

pating States and the OSCE at large, to encourage **national, regional and international collaboration** at all levels to make it possible. Secondly, it is understood that the pandemic is not over yet, and new challenges will continue to emerge as long as we do not **factor sustainability** in education as a core strategy. “**Resilience by design**” approach is strongly recommended in order to tackle any future crisis that might unfold. Furthermore, while we commend all the efforts made by OSCE so far in the education realm, we suggest further analysis and evaluation in cooperation with educational and academia experts for a more insightful approach and effective management **of a new digital education era**. Lastly, **prioritizing education** goes a long way to tackle whatever challenge the modern world faces.

Introduction

The COVID-19 pandemic has tested educational systems around the world, accelerating the digitalization of the educational processes. While in some countries the digitalization of education was already actively implemented in the educational practices as part of national strategies, others were completely unprepared for the new educational reality. In both cases, however, the transition to digital education required a deeper understanding of the challenges and problems in order to make adjustments for breaking down barriers to access educational services.

The term “digitalization of education” implies the transformation of the educational process using computers, mobile devices, the Internet, software applications, and other types of digital technology, **yet it is not only that.**¹ A more inclusive approach suggests that it is a complex and multi-dimensional process, requiring not solely technological implementation, but also pedagogical and organizational changes. It involves not only teachers and students, but technology experts, administrators, managers, and, of course, politicians as well.

Recent estimations prove that among all age groups, youth 15–24 years old, are the most connected. Therefore they are the ones who are the most affected by the inadequacy of the digital transformation. Consequently, in light of the need to minimize the negative impact of the pandemic on youth, building an accessible and sustainable (trans)national strategy for digital education, where everyone is provided with access to a device and is equipped to safely use digital tools to the fullest of their potential, should be one of the main priorities for the Youth and Education policymakers and stakeholders.

The purpose of this study is to analyze the implications and problems of the rapid transition to digital modalities of formal and informal education for youth aged from 13 to 25 and to offer recommendations to address them. This policy paper attempts to capture the daily reality of distance learning through the lens of the opinions of teachers, lecturers, social educators, and education experts from six countries (Albania, Belgium, Kazakhstan, Kyrgyzstan,

USA, and Ukraine) who reflected on their experiences during the COVID-19 lockdown when they had to offer their educational services online. The study is based on their perceptions expressed in semi-structured interviews conducted online in August 2021, as well as desk research.

The right to education and the digitalization process

The international community in numerous treaties as a human right has recognized the right to education² and its realization is one of the OSCE priorities. As a multi-dimensional concept, the right to education encompasses several core characteristics, including access to education, which is realized through a wide range of measures, such as the removal of legal barriers, the abolition of discriminatory policies, and the creation of an adequate educational infrastructure that facilitates equal and free access to educational opportunities.³

In line with the “Leave no one behind” (LNOB) approach, which is one of the six Guiding Principles of the United Nations Sustainable Development Cooperation Framework⁴, achieving accessibility to a wide range of educational services can not only improve the learning potential of people with fewer opportunities, but also the potential for socio-economic development of whole communities or countries.⁵ Moreover, Quality Education is also set as the UN Sustainable Development Goal (SDG4), since universal high-quality education is believed to be a catalyst for both local and global development that builds more sustainable and prosperous societies.

As we will describe in the next sections, barriers to digital education accessibility, for example poor infrastructure for distance learning, lack of proper

1 Digitalization should not be confused with digitization, which is the conversion of educational resources into digital form.

2 See UDHR Article 26, ICESCR, Article 13, CRC Article 28, 5

3 UNESCO Convention against discrimination in Education Article 4

4 Universal Value. Principal Two: Leave no one behind.

5 <https://unsdg.un.org/resources/united-nations-sustainable-development-cooperation-framework-guidance>

management of digital education, economic issues and others, exist in both developed and developing countries. An unequal access to distance learning environments is one of such barriers that the current pandemic crisis has exacerbated. Because of the uneven opportunities provided and the inconsistent application of digital technologies in the pre-COVID era, we have witnessed a digital divide that is shaping the conditions of exercising the global right to education.

Pre-COVID situation

The level of digitalization in different countries varied to a great degree. Some countries had already initiated their transition to digital schooling prior to the Covid-19 outbreak and were able to benefit from the implementation of these initiatives in distance learning mode. For instance, Kazakhstan has adopted a national program “Digital Kazakhstan” for 2018-2022, which aims, among other things, to expand coverage of communication networks and ICT infrastructure, as well as to improve digital literacy among professional and technical personnel and the general population.⁶ From 2019, Belgium adopted the “Digital Wallonia Strategy 2019 -2024” covering diverse aspects of the digital transformation process through different projects.⁷ In Kyrgyzstan, there was a national strategy on digitalization “Digital Kyrgyzstan 2019-2023”⁸ which encompassed some aspects related to education. Additionally, in Ukraine, a major reform of education, under the name of “New Ukrainian School”⁹ was introduced and included digitalization. Finally, in Albania, the European Commission launched a similar initiative.¹⁰

Although the above national plans had very ambitious goals, their implementation did not prepare these countries for the conditions of distance learning that were forced upon them by the COVID-19 pandemic. School closures and the move to fully digital education had a tremendous impact on their education systems, requiring not only rapid and innovative responses but also a review of the timeframe and priorities of existing initiatives.

Covid-19 Reality

The disruptive effect of the COVID-19 lockdown in mid-March 2020 forced these governments to take urgent *ad hoc* measures, which included the closure of schools and universities and the subsequent switch to blended¹¹, hybrid¹² or completely online education modes affecting around 1,5 billion learners in more than 150 countries.¹³ Teachers, students, and parents found themselves in a situation of extreme uncertainty, pressured to learn how to use digital technology overnight in order to adapt to distance learning. Although many children and families have coped with the sudden change, the reliance on software and online learning platforms has revealed the shortcomings of pre-COVID-19 policies, highlighting existing social inequalities and weaknesses in the education system, leaving many children, as well as teachers, behind.¹⁴

According to the assessment made by UNESCO, “school closures carry high social and economic costs for people across communities. Their impact, however, is particularly severe for the most vulnerable and marginalized boys and girls, and their families. The resulting disruptions magnified existing

6 “Digital Kazakhstan” State Programme

7 Belgium-Digital Wallonia 2019-2024 Strategy <https://digital-skills-jobs.europa.eu/en/actions/national-initiatives/national-strategies/belgium-digital-wallonia-2019-2024-strategy>

8 National Digital Transformation Program ‘Digital Kyrgyzstan 2019 - 2023’

9 The New Ukrainian School: Conceptual Principles of Secondary School Reform, 2016

10 The Digital Agenda for the Western Balkans

11 Blended learning is a combination of face-to-face and online teaching and learning. Kintu, M.J., Zhu, C. & Kagambe, E. Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *Int J Educ Technol High Educ* 14, 7 (2017).

12 Hybrid Learning Model refers to the blending and mixing of the learning environments: face-to-face classroom instruction and online environment (Doering, 2006)

13 Global monitoring of school closures. UNESCO

14 In Kazakhstan, the COVID-19 pandemic is resulting in substantial learning losses and is pushing many more students into functional illiteracy. Marteau, J.-F. (2020, November). Post-covid education in Kazakhstan: Heavy losses and deepening inequality. World Bank Blogs.

disparities within the education system but also in other aspects of their lives".¹⁵

Despite the generalized lack of preparation, states have not been left alone, and multiple supranational and global institutions have supported national efforts in resolving pandemic-related problems, even to this day. On a regional level in order to tackle the aforementioned issue, the European Union (EU) and UNICEF announced the start of a €5 million program to alleviate the impact of COVID-19 on the most vulnerable children and families in the Western Balkans and in Turkey.¹⁶ Globally, there was an emergence of partnerships and coalitions in response to the new reality like the Global Education Coalition launched by UNESCO in 2020.¹⁷ Governments, international organizations, industry, civil society, and the wider community-initiated collaborations address urgent needs arising from technological infrastructure deficiencies, difficulties in affordability, regulatory and legislative shortcomings, and other technology-related challenges.

The next section presents some challenges in which solutions can help reduce inequalities in education and ensure universal access to education services by building sustainable educational infrastructures.

Challenges

The analysis of the distance learning in secondary and higher education institutions, as well as NGOs offering educational services during COVID-19 lockdown revealed 6 critical aspects where the main problems are concentrated: distance learning infrastructure, distance learning management, economic issues, teaching and learning process, teachers' and students' welfare and issues associated with vulnerable groups.

Distance Learning Infrastructure

The education process, whether in hybrid mode or in complete isolation, demands a reliable and non-interruptive distance learning infrastructure built on appropriate information and communications technologies (ICT) both in students' and teaching staff's dislocation.

- For all the countries, poor **Internet coverage** in schools and universities remains the main obstacle for the transition to distance mode.¹⁸ The situation is aggravated in rural areas, where digital inequality left students in the most disadvantaged positions.¹⁹ **Lack of appropriate ICT equipment** in working and living areas, e.g. unsatisfactory Wi-Fi speed or outdated devices²⁰ did not ensure active participation in the educational process.²¹ **The absence of online platforms** or software did not allow posting educational materials and course recordings for offline access. The budget for the educational programmes did not include the purchase of a full package of licensed software. This, in turn, also led to **the problem of security of the educational process** and its interruption by hack-attacks and unauthorized access to online lessons.

Management of Distance Learning

The management of the educational process in the new environment determines the successful transition to distance learning

- Ministries of education and other relevant governing institutions did not provide **clear guidance** at the earliest stages of the transition to distance learning.²² The use of online plat-

¹⁵ COVID-19 and education dilemma: Children as collateral damages | Cryptopolitan

¹⁶ The European Union and UNICEF launch a programme in the Western Balkans and Turkey to mitigate the impact of COVID-19 on the lives of children and families)

¹⁷ Global Education Coalition

¹⁸ KZ: It has been reported during the interviews that in Kazakhstan students had to climb trees or drive many kilometers away from the village to have Internet access.

¹⁹ UA: In Ukraine about 65% of villages are not covered by high-quality broadband and 16,040 educational institutions are not connected to fiber-optic networks (40% of schools).

²⁰ KG: The Ministry of Education and Science announced that 30,000 students did not have smartphones to study online.

²¹ KG: According to March 2021 data from Ookla's Speedtest, the average download speed on mobile internet connections was just 20.60 megabits per second (Mbps) in Kyrgyzstan.

²² KG: 70% of teachers in schools were not trained to transition to online education and did not receive the consultations and training from The Ministry of education.

forms and software was unclear and chaotic. The majority of educational institutions organized their academic processes themselves. Although there was an experience in using digital learning resources and ICT-based teaching, even today neither teachers nor students are able to use them effectively due to **low levels of digital literacy and computer skills**. Teachers and students were not provided with **timely technical support**.²³

Economic issues

During the lockdown, not only students stayed at home, but also parents and teachers. It was the first time when the working processes blended with household routines.

- The transition to a fully distance format has actualized the impact of socio-economic difficulties on the educational process. In particular, the **harsh housing conditions**, notably limited living space and low family income, have undermined the working process. Public schools, heavily dependent on national funds, **lacked budget flexibility** to provide technical equipment and technical support to teachers and students. Universities (both public and private), on the other hand, showed higher levels of flexibility and sustainability. However, in many cases, teachers **used personal devices and home internet without any compensation**, which had a negative impact on their economic well-being.

Teaching and learning process

The pandemic forced everyone to adapt to online classes without the pre-existing guidelines on how to teach and study online. This led to the **decline in the quality of education**, namely:

- The lack of objectivity in measuring/validating knowledge of students, poor preparation for employment in the labor market, and the inability to assess students' understanding with the old assessment methods and exam regulations, poor control over plagiarism, and cheating during the exams.²⁴ It was also re-

ported in interviews that students and teachers perceive digital education as "less important" or "less serious" than offline education.

- Respondents noted a **lack of digital education 'culture' / ethics**: students who used ICT for non-educational purposes during classes were less motivated to pay attention in online classes. Skipping classes became more common among both school and university students.²⁵ However, junior, senior, and master's students found the distance-learning mode convenient to combine with part-time jobs/internships and thus attended classes more often.

Psychological well-being of Students and Teachers

- Digital education **is very resource-intensive**. Teachers and professors need time for lesson preparation in a new mode. Late emails, messages, extended working hours, lack of time-management skills led to burn-out and shortages of free time. Secondary and high school students did not demonstrate the same level of self-discipline, motivation and mental preparedness as university students.^{26 27} Digital education also **limited communication** among peers. Many students who could avoid the unstable and unhealthy environment at home, stayed with the abusive parents in one household during the lockdowns. It exacerbated their anxiety and potential mental health problems.²⁸

²³ KG: According to the research conducted by Data School and City Initiatives, 94% of teachers used WhatsApp messenger to conduct online lessons.

²⁴ UA: The Ministry of Education and Science claims that the losses are not critical, and estimates the decline in the quality of education at only 8%.

²⁵ ALB: Council of Europe: Responses from schools in Albania

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²⁷ KG: According to the research conducted by Data School and City Initiatives, 65% of students felt anger, anxiety, sadness and frustration

²⁸ KG: 7 teenagers committed suicides in Kyrgyzstan for 10 days of quarantine.

Vulnerable Groups

Distance learning has highlighted many problems for certain categories of youth, whose access to education has been restricted. In some countries the issue, however, is poorly studied and respondents have not noticed that certain groups of young people were severely disadvantaged. Nevertheless, this study highlights the following categories of young people who, in addition to the problems outlined above, have experienced additional difficulties:

- Students from underserved communities and from lower-income families could not set up a working environment at home and experienced a **shortage of technical devices**, which disrupted the learning process and increased likelihood of school dropout.²⁹ ³⁰ Some students had to interrupt their studies due to **circumstances beyond their control**.³¹ **Students with special learning needs** in many cases did not receive the additional attention and struggled with the online mode of instruction.³² Experts note that students with special education needs function best in environments with regular routines, which were drastically disrupted during the pandemic.³³ In the US, administrators and policymakers took little attention to understanding how the pandemic altered special education, leaving teachers trying their best with already limited resources to make education meaningful for the students they work with.
- Some students **did not receive coverage of education cost/tuition fee waivers, failed to pass the procedures for scholarships/reimbursements/rewards due to unforeseen consequences of the lockdown, such as limited travel opportunities**, or delayed post-delivery. **International students didn't enjoy institutional support** and faced problems with registration in migration authorities, residence permit, and identification documents.³⁴ ³⁵ Furthermore, activities and programs aimed at integrating international students into the student body disappeared, leading to further isolation than years past. Roma children and children with learning difficulties and disabili-

ties in Albania did not have access to distance learning.³⁶

- The **disparity in access to education among youth from different ethnic minorities** was also mentioned in the interviews.³⁷ However, this topic is underexplored, and field research is needed, especially in multi-ethnic countries like Belgium, Kazakhstan, Kyrgyzstan, etc. **Gender inequality** was observed in Kyrgyzstan and Kazakhstan, since increased pressure on female students to perform household chores prevented them from focusing on digital education during the lockdown.³⁸

²⁹ UA: According to the survey of the Education Ombudsman Service: 32.5% of respondents' families reported partial or complete lack of technical equipment for remote interaction during the spring 2020 lockdown (p. 217).

³⁰ ALB: UN Albania COVID-19 Socio-Economic Recovery & Response Plan

³¹ BE: Covid-19 et décrochage scolaire <https://www.lalibre.be/debats/opinions/2021/02/10/covid-19-et-decrochage-scolaire-une-bombe-a-retardement-GR2YTP4QA5FLXMQABJF7FISMQ>

³² ALB: In Albania every second child with disabilities could not access education activities online. World Vision - Main findings of the assessment on the impact of COVID-19 on the well-being of children and families in Albania

³³ USA: "How COVID-19 Has Affected Special Education Students."

³⁴ KG: Students from Kyrgyzstan cannot leave the country for Russia to study.

³⁵ USA: In the United States, many universities did not allow international students, some of the most vulnerable to changes in education policies, to take online courses. Int'l students 'particularly vulnerable.'

³⁶ ALB: At least 11 thousand students have been identified as not having access to online learning, many of them living in remote and rural areas with no internet or devices at home. UN Albania COVID-19 Socio-Economic Recovery & Response Plan (p. 10)

³⁷ Especially in the case of Belgium, in schools in Brussels where there is a majority of students from different ethnic minorities, issues were more intense with a bigger number of students being unmotivated and refusing to take part in the normal school processes (teaching, group discussions, evaluations etc.)

³⁸ According to the RGA, among the most frequently cited difficulties (40%) experienced in quarantine were the closure of schools or reduction of school-related activities for children and the impact on psychological / emotional well-being (stress, anxiety, etc.). KZ: Girls and education: UNDP in Kazakhstan. UNDP. (2020, September).

Recommendations

The present policy paper offers an overview of the distance learning challenges of in six countries with concrete examples drawn from the relevant literature and interviews with local stakeholders. While being far from complete, the study focused on accessibility issues that shape the phenomenon of the digital divide affecting young people, especially those belonging to vulnerable groups. Based on the main findings of the analysis, we propose the following recommendations:

- To better achieve even the most ambitious development goals and battle inequality among countries at different stages of economic and digital development, it is important to maintain (to the best way possible) the same pace of digitalization throughout all the countries. Therefore, we propose that OSCE encourages cooperation between different national and local authorities (e.g. ministries, local governing bodies, national education providers and non-formal training providers, NGOs, academia etc.) and international stakeholders, e.g. the UN and the EU, to exchange best practices and guidance on how to keep up with technological advancements to meet changing demands. Participating States should strive to improve the level of trust and cooperation to establish more developmental projects and coordinate the inflow of financial aid to improve the distance learning conditions for students in difficult life circumstances.
- At the national level, OSCE participating States should adopt policies encouraging cooperation between the public and private sectors to support digitalization of education effectively. A first good step would be to establish a National Pool of Experts (technology experts, security experts, digital education experts, educational psychologists) within the Ministry of Education as a taskforce for ensuring the Plan for Digitalization of Education.
- Since digitalization of the learning process strongly depends on flexible funds, we propose specialized funds to be made available and to be allocated according to the needs of local, regional and national stakeholders. When planning their annual budget and redistribution policies, OSCE participating States should give priority to the improvement of the level and quality of connectivity, network infrastructure and the provision of suitable equipment for educational institutions. A detailed needs' assessment should be conducted for all educational institutions within each geographical region, allowing the investment in development plans for technology-related infrastructure and equipment to effectively serve the educational goals.
- OSCE participating States' national or subnational education policies should include the development of new teaching formats and modernized curricula, involving the use of digital tools, and promote the development of digital competences at all academic levels. Education policy stakeholders should provide an updated list of competencies required for educators to work with digital tools, in distance and blended learning modes. Regular training should be provided for teachers to enable them to incorporate digital teaching methods into their teaching practices to meet the individual needs of different students, especially the most vulnerable ones. Awareness of digital security and data privacy issues is crucial for all types of educators, especially those dealing with minors.
- OSCE should adopt the "Resilience by design" approach to digital education as a tool for ensuring security and cooperation among its members that encourage the adoption of national education plans, that give priority to analyzing risks caused by natural or man-made causes that would require another complete switch to a distance-learning format. For that purpose, the creation or consolidation of an Inclusive Plan of Digitalization of Education adapted to the specific context of each National Education Scheme should be made a priority. Special attention should be given to the factor of motivation of teachers, students and other education stakeholders by providing clear guidelines that emphasize the value and



positive outcomes of digital learning. Some initial propositions would be to provide open educational resources and to establish national online educational platforms to guarantee equal accessibility. If there are further issues, like in the case of the digital divide experienced by youth from low-income environments and areas with low levels of Internet-connectivity, allocation of funds through the national social aid system should also be examined.

- Finally, it is strongly recommended to engage the academic and expert community in the OSCE participating States with the goal to conduct further and more in-depth research on distance education, the short and long-term effects of the pandemic on education systems and the impact on young people who have been affected by the current crisis. As main stakeholders in educational policymaking, youth people should be a priority subject of further research.



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Organization for Security and Co-operation in Europe (OSCE)

With 57 participating States in North America, Europe and Asia, the OSCE – the Organization for Security and Co-operation in Europe – is the world’s largest regional security organization. The OSCE works to build and sustain stability, peace and democracy for more than one billion people, through political dialogue and projects on the ground. The OSCE is a forum for political dialogue on a wide range of security issues and a platform for joint action to improve the lives of individuals and communities. The Organization helps to bridge differences, build trust and foster co-operation within and between states. With its expert units, institutions and network of field operations, the OSCE addresses issues that have an impact on our common security such as arms control, terrorism, good governance, energy security, human trafficking, democratization, media freedom and national minorities.

The Secretariat, which includes the Conflict Prevention Centre, assists the OSCE Chair in its activities, provides operational and administrative support to field operations and, as appropriate, to other institutions.

The Office for Democratic Institutions and Human Rights in Warsaw promotes democratic elections, respect for human rights, the rule of law, tolerance and non-discrimination, and the rights of Roma and Sinti communities.

The OSCE Academy in Bishkek provides a regional and international public forum for professionals and students in the spirit of co-operation in the fields of international relations, comprehensive security, democratization, the rule of law and human rights.

In cooperation with



FES ROCPE in Vienna

The goal of the FES Regional Office for Cooperation and Peace in Europe (FES ROCPE) of the Friedrich-Ebert-Stiftung in Vienna is to come to terms with the challenges to peace and security in Europe since the collapse of the Soviet Union a quarter of a century ago. These issues should be discussed primarily with the countries of Eastern Europe – Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine – and with Russia, as well as with the countries of the EU and with the US. The security order of Europe, based until recently on the Helsinki Final Act (1975) and the Paris Charter (1990), is under threat. This is, among others, a result of different perceptions of the development of international relations and threats over the last 25 years, resulting in divergent interests among the various states.

For these reasons, ROCPE supports the revival of a peace and security dialogue and the development of new concepts in the spirit of a solution-oriented policy. The aim is to bring scholars and politicians from Eastern Europe, Russia, the EU and the US together to develop a common approach to tackle these challenges, to reduce tensions and to aim towards conflict resolution. It is our belief that organizations such as the FES have the responsibility to come up with new ideas and to integrate them into the political process in Europe.

We support the following activities:

- Regional and international meetings for developing new concepts on cooperation and peace in Europe;
- A regional network of young professionals in the field of cooperation and peace in Europe;
- Cooperation with the OSCE in the three dimensions: the politico-military, the economic and the human.

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