

Organization of education in the pandemic

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Abstract. The article is devoted to the analysis of recent changes in the form and methods of education due to the coronavirus pandemic. The advantages and disadvantages of online education for educational institutions, students and teachers are studied in detail. Online education can be a useful addition to the learning process even after the pandemic.

Keywords: online education, pandemic, coronavirus, educational institution, Internet

The 2020 pandemic has affected all aspects of our lives. But the hardest blow came directly to the education sector.

The number of students not attending schools or universities due to the COVID-19 outbreak is skyrocketing. Governments around the world have decided to close educational institutions to contain the global COVID-19 pandemic.

According to UNESCO, more than 100 countries have implemented nationwide school closings, affecting more than half of the students around the globe. Some other governments have implemented local school closures, and if those countries would also close the schools and universities nationwide, it would disrupt the learning process for millions of other students.

The pandemic has become a major challenge for secondary education systems. More than a billion schoolchildren around the world have been affected by this crisis. To keep up with the program, all of them had to continue their studies even after the closure of schools, quickly switching from traditional offline to new formats.

The obvious solution to the problem was distance learning, which became widespread during the pandemic. For example, in China, 278 million school and university students have switched to online classes. In Ukraine, the share of teachers who use online resources in class has increased from 64% to 85%.

If we look at the experience of different countries, we can distinguish two main approaches to organizing distance learning: centralized and decentralized. This is how they went in 10 countries around the world.

A centralized approach allows reaching a large audience and makes the transition to distance learning more streamlined. However, unified platforms do not provide a choice, which

means that users will have no alternative if they need additional functions or if the service fails. In addition, the centralized online learning systems developed even before the outbreak of the pandemic were not designed for a large-scale workload.

Finland was among the countries that coped best with adaptation. Here, schools have continued to conduct distance classes on a regular schedule, using classroom management tools from a variety of providers. Educators and students were actively working with these services before the coronavirus, so the transition went smoothly enough. At the same time, it was possible to organize official communication between teachers, schoolchildren and parents on the basis of the Wilma platform with a calendar, mail, diary and message board. All these opportunities were available even to children without personal computers - they were given laptops at home.

France also did not have to adapt to new conditions from scratch: this country has long had a powerful distance education system CNED. When schools closed, the *Ma classe à la maison* platform was launched on its basis for teaching schoolchildren. At first, the service could not handle the increased workload, and some teachers had to use *My Sites* to post assignments and collect homework. However, when the connections of the junior and senior classes were split in time, the disruptions stopped.

China has demonstrated a completely different, unique approach. Several large companies, including Alibaba, Baidu and Huawei, participated in the organization of distance learning here. However, as a result, it was still possible to create a centralized system. Within a few weeks, a single national online platform was developed and launched with video tutorials in all school subjects, electronic textbooks, reference materials and tests. This system united seven thousand servers, and up to 50 million students were able to use it at the same time.

In Germany, the public-law TV channel ARD joined the distance education of schoolchildren. Together with the Bavarian Ministry of Education, it launched the School at Home program. Regular educators have also continued to teach children, but usually through methods such as emailing, distributing printouts, and saving homework to the cloud.

The TV trend was supported by Austria, where the national TV channel ORF 1 began to produce educational programs for schoolchildren, divided by age. For example, in the mornings from 6 to 9 o'clock there are broadcasts for preschoolers and primary school children, and then - informative documentaries, interesting reports and tips for children from 10 years old. Online resources are also involved. In particular, schoolchildren use the Moodle e-learning system, cloud solutions from Microsoft and Google.

In turn, Bulgaria began showing educational programs on the international satellite channels BNT 2 and BNT 4. However, the main tool here was webinars, in which 65,000

teachers taught lessons to 700,000 schoolchildren - an impressive scale for a country of 7 million population.

In general, TV broadcasts of educational content became very widespread during the pandemic. The countries listed are just a few examples from a long list of supporters of this instrument.

Due to the abundance of services, when using a decentralized approach, many users get lost and cannot immediately find suitable platforms. This can stretch the transition to online learning and make it more chaotic. However, the choice compensates for these shortcomings and allows the school to decide independently which system is best for it. As a result, it is possible in each case to find the optimal balance between teaching methods, student requests and curriculum requirements. It is much easier to do this at the individual school level than at the national level. At the same time, the absence of a single platform gives more freedom to providers, without restricting their work and helping them to adapt quickly to new conditions.

Despite its high potential, the decentralized approach has not always led to the introduction of the most advanced services in the industry. For example, in the UK, this was thwarted by concerns about insufficient data protection in popular messengers and video conferencing programs. Therefore, many British private schools, such as the famous Dulwich College, have started using their own online platforms for classes. Public schools could not afford to develop such complex solutions, so they organized the sending of assignments to students by e-mail.

In Italy, the transition to distance learning came as a complete surprise to educational institutions and was chaotic. This is not surprising: schools here began to close in February - earlier than in any other European country. Even within the same school, teachers used different services and platforms for online lessons, such as Meet, Classroom, Zoom, Jitsi and Edmodo. At the same time, the servers could not withstand the load from the simultaneous connection of eight million students, and many children could not log in at all.

In the United States, the decentralized approach has been applied much more successfully, although the scale of distance learning here is much wider: 30 thousand schools have closed, and 20 million students stayed at home. In this country, teachers have used the widest range of platforms and formats, from video messaging via Flipgrid and publishing lessons on YouTube to teaching classes using dedicated services Blackboard Learn and Google Classroom. In addition, to make it easier to navigate the educational process, the New York Department of Education has opened a Learn At Home section on its website with assignments, programs in various subjects and links to online platforms.

It only remained to solve the problem of the technical base. In the United States, many schoolchildren do not have a computer or high-speed internet. To enable them to download and submit assignments, libraries began to turn on Wi-Fi networks around the clock, to which they could connect from parking lots. Some schools sent buses with internet hotspots to their students' homes. In Virginia, non-computerized schoolchildren were even given laptops and tablets. In addition, HP collaborated with Time for Kids, Britannica and NASA to launch Turn to Learn, which distributes educational content in print.

Under normal circumstances, Ukrainian distance learning services have developed primarily as a means of additional education. However, with the onset of the pandemic, they began to be actively implemented as tools for teaching the main school curriculum. To systematize their application in the educational process, the Ministry of Education of Ukraine studied the solutions presented on the market and offered a list of recommended services, from which teachers could choose the most convenient for themselves. To help school students quickly prepare for exams, the Ministry of Education, together with partners, also launched a satellite TV channel "All-Ukrainian school online" with lessons in all basic subjects.

A great contribution to the organization of remote classes for Ukrainian schoolchildren was made by IT companies, which have launched many distance-learning projects. An online platform has appeared in Ukraine, which includes several sites and mobile applications for learning.

Within the framework of the project, 40 teachers from Kiev actually became teachers for the whole of Ukraine. The lessons were being filmed every day according to a balanced school curriculum, which was developed by the Ministry of Education and Science together with teachers. Filming of the educational process took place in the Novopechersk school in Kiev.

In addition, Ukrainian stars were present on the shooting of the lessons: musicians, actors, athletes and others. They answered questions, solved problems, and conducted experiments with teachers.

The video tutorials was shown by Ukrainian television channels, which, at the request of Volodymyr Zelenskyy, had joined this important social mission.

Each class was assigned to specific television channels:

5th grade - PlusPlus and 112 Ukraine;

6th grade - ZOOM and NewsOne;

7th grade - ZIK;

8th grade - Indigo and UNIAN;

9th grade - Rada and UA: Culture;

10th grade - UA: First;

11th grade - M1.

The lessons were broadcasted daily, from Monday to Friday, beginning at 10 am. The broadcasts started on April 6, 2020.

Besides, video tutorials could be watched daily on the official websites of the Ministry of Education and Science on Facebook and YouTube.

As primary teachers in China, we had to quarantine, and as a result, we were among the first to teach online. From the first days of February, we, like other teachers in China, faced the challenge of adapting the curriculum for online teaching. We had to look for different methods of conveying information through the monitor screen. We faced the task of finding working mechanisms of classroom management while instructing online. Teaching online without a well-established way to control the behavior of children is a disaster that could jeopardize the teaching of a lesson. Indeed, without classroom management, the teacher might not be able to organize the educational process correctly. Teachers in classrooms have to control the quality of education, the quality of the knowledge gained, which already suffer due to many factors.

For us, the transition to online education was not as painful as it was for many other educators, because for the last 3 years we have significantly digitalized our classrooms and our lessons. To be a teacher of the 21st century is to be always in trend. It happens due to the rapid development of technology in the world. Therefore, in such an era, it is very important to keep up with the times and teach children the skills which are necessary for modern society. Nowadays, it is crucial to approach problem-solving creatively and respond quickly to the demands of society. In the 21st century, the teacher entered the age of new information and communication technologies. And there is no doubt that a modern teacher needs to be competent in the field of information and communication technologies and implement them into the educational process. From our own experience, we know that lessons with the use of multimedia and the Internet increase interest in the material, the effectiveness of independent work grows, and it becomes possible to realize one's creative potential.

We would like to share resources that work and give a positive result. Keeping students' attention, guiding them through lessons, and making sure the classroom environment is respectful, supportive, and productive takes constant effort and sucks a lot of time and energy. These great classroom management tools can be time-saving and energy-freeing sidekicks, helping instantly deliver and assess learning, create seating charts, improve students' behavior, and set timed tasks to make a classroom run like a well-oiled machine.

If we talk about classroom management in an online environment, we would like to highlight two programs: ClassCraft and Class Dojo. This software could help to keep students on

task, to teach them successfully no matter where a class is held (<https://www.common sense.org/education/website/classdojo>).

ClassDojo is a tool that we use in class from start to finish. It begins with a short Think-Pair-Share activity, using the timer and noise manager to keep the discussion on track and respectful. Teachers can assign an activity for student portfolios: Let them draw out a challenge math problem, record a video discussing the novel they're reading, write a hypothesis for a science lab, or snap a picture of a completed assignment for teacher feedback. Once or twice during the lesson, teachers can send a quick positive message or image to a parent. This is a great way to strengthen the home-school connection, celebrate classroom successes, and document student learning over time. Also, the class admin can add pictures to a class story to keep parents in the loop. Sometimes instructors record audio messages explaining assignments so parents can help at home.

Throughout the class, teachers can award points to positively reinforce individuals or groups for meeting or exceeding expectations or send gentle reminders to students or groups who need them. Every teacher has to be careful and ensure that individuals aren't publicly singled out in negative ways: Teachers have to consider privately use the app to track student behavior. Closeout the class with a five-minute growth mindset activity, giving kids a chance to wind down and reflect on their learning for the day. Having all these options built into one handy tool cuts down on the need for multiple products and gives us lots of data to inform instruction.

Another resource is ClassCraft. Classcraft integrates easily with regular classroom activities, encouraging teamwork and collaboration while giving students instant feedback on soft skills, such as attendance, homework completion, soft skills, time management, team work, responsibility, creativity, and classroom behavior. This is a game to motivate students and to build collaboration and teamwork skills. Award points for encouraging classmates, completing assignments on time, respecting noise levels, and more. Even if students are cooperating just to gain points at first, it's inevitable that with teacher support they'll learn valuable social skills along the way. Teachers can, and should, make the program their own - adapting the game for their students' unique needs and personalities. Being attentive to these details upfront will help craft a virtual environment of motivation and positive reinforcement instead of a punitive one. Teachers can also use the program to teach concepts through a gamified storyline, pulling assignments in from your computer or Google Drive, or writing the story yourself.

Though teachers have to be careful, some of the preset powers and events may cause strife, especially among younger students. Everyone who uses this tool has to take a close look and customize them as necessary. For example, optional random events include suggestions such as "The player with the least HP loses 15 HP." Although that may work well in some classrooms,

students who are struggling may feel targeted for being the "weakest" players, especially if the game is broadcast, as suggested, via interactive whiteboard or screen.

How to test a child online, how to organize work with a work shield, if the teacher is physically unable to provide a hard copy. In this case, Quizlet will come to the rescue. Quizlet is a free website providing learning tools for students, including flashcards, study, and game modes. Users start by creating their own study sets with terms and definitions. They can copy and paste from another source, or use Quizlet's built-in auto-define feature to speed up the creating process. Over 40 million user-generated flashcard sets are on the website (<https://quizlet.com/89313049/what-is-quizlet-flash-cards/>).

Another challenge that teachers had to face is the psycho-emotional state of children. The coronavirus pandemic has had an impact, in particular, on children, whose families fear death from coronavirus infection. The media repeatedly noted that the child is influenced not by the events taking place in the world, but by the reaction and words of family members about it. Thus, if the child's environment does not adequately respond to a pandemic, often saying that everyone would die from the virus, the child runs the risk of facing pathological fear.

Our students, at the very beginning of the pandemic, faced incredible pressure from the media. Teachers working in China, one of the first in the world, had to look not only for an approach to teach but also for mechanisms that would prepare little people for all the innovations they had to face. The transition to online education was a great stress for children, and teachers had to work very actively with the families of students to maximize their teaching to help their children during this difficult period. We looked for ways to involve parents in the learning process itself.

During our research we have found that teachers who proactively reach out to parents of low-performing students and invite them to be involved in their childrens' education to improve the students' performance over time (Westat & Policy Study Associates, 2001). By connecting with parents and discussing ways to develop home supports, activities, and routines that align with school expectations and classroom curriculum, teachers can employ families' "funds of knowledge", or the knowledge, resources, and skills, which families possess, in their classrooms ... (Preparing Educators to Involve Families: From Theory to Practice Introduction: Preparing Educators in Family Involvement Edited by Heather B. Weiss, Holly Kreider, M. Elena Lopez, Celina M. Chatman)

In addition to the academic component, we have launched several projects for children and their families. One of the most global project was the "Wash your hands" challenge where students participated with their parents. This project was built based on a global trend when a

large number of people pass disinfectant to each other to remind once again of the importance of washing hands.

Being at a distance of 10,000 km away from our students, we launched an online school TV show, which consisted of several headings and allowed to involve students from 1st to 6th grade.

The COVID-19 pandemic has affected all of us. But being educators that our students look up to, we simply have no right to be discouraged. We must continue to develop and improve our skills, adapt our knowledge and techniques to the conditions of 2020, to continue to bring high quality education to the new generation.

Practice has shown that with any approach - centralized or decentralized - school distance learning platforms open up opportunities that are in demand not only in a pandemic. Of course, online tools will never be a complete replacement for regular lessons. Nevertheless, complementing traditional approaches, technological solutions can free teachers from routine duties, leaving him more time to work with the individual characteristics and needs of each child. In addition, modern technologies make it possible to better organize the educational process, opening up access to a wide range of content, including multimedia.

The forced transition to distance learning introduced teachers and students to the advantages and disadvantages of online tools. Their proliferation may very soon reach a level that under normal conditions we would see only in two years. According to forecasts, by 2021 the share of the “school segment” should reach 1.5% of the online education market (if we talk about the distribution of private business services). But as a result of the “boom” of distance learning for schoolchildren during the period of self-isolation, this share may increase significantly.

References:

COVID-19 Impact on Education // en.unesco.org
(<https://en.unesco.org/COVID19/educationresponse>).

Key country policy responses // oecd.org
(http://www.oecd.org/coronavirus/en/?utm_source=Adestra&utm_medium=email&utm_content=Image%3A%20Country%20Policy%20Tracker&utm_campaign=What%27s%20New%20-%2006%20April%202020&utm_term=demo#country-tracker) Просмотрено 04.2020

AI-powered COVID-19 watch // oecd.org (<https://www.oecd.ai/COVID>)

The top-50 countries with the largest percentage of older adults // prb.org
(<https://www.prb.org/countries-with-the-oldest-populations>).

Learning remotely when schools close: How well are students and schools prepared?
Insights from PISA // https://read.oecd-ilibrary.org/view/?ref=127_127063-iiwm328658&title=Learning-remotely-when-schools-close)

Education responses to covid-19: embracing digital learning and online collaboration // https://read.oecd-ilibrary.org/view/?ref=120_120544

<https://www.unian.net/uroki-onlayn>

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