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TRANSFORMING EDUCATION IN A PANDEMIC

Abstract. *The article offers a general overview of the changes in education during a global pandemic. Particular attention is paid to the difference in the introduction of distance learning in the Republic of Kazakhstan and the difference between online and offline classes, the methods used by the government of the Republic of Kazakhstan and the positive aspects of the pandemic in the field of education and in the life of schoolchildren and youth are also considered.*

Key words: *pandemic, distance learning, global education, traditional teaching, Internet, online, offline, blended learning, educational sphere*

Introduction

With the implementation of the pandemic and numerous lockdowns in our lives, people all over the planet are faced with a problem: working and studying remotely from home. Resources, access and everything needed to continue learning has become a global issue in many countries. Just as the COVID-19 pandemic brought with its new trends, it also brought a host of challenges to the continuity of education. How we have solved or are solving this problem in the world, we can see from the news on social networks and the widget feed of our smartphone, which will become a decisive indicator of its importance during a pandemic. Is it possible to preserve and transfer education to a fully digitalized form, like “digitalized health care”, or should the tactics of blended education be applied?

We live in what is potentially one of the greatest threats in our lives to global education - a giant educational crisis. As of March 28, 2020, due to the COVID-19 pandemic, more than 1.6 billion children and young people are out of school in 161 countries. This is about 80% of the total number of enrolled students in the world.

The current crisis has provided an opportunity for all stakeholders to rethink how education is administered and delivered. Moving from traditional teaching to a more flexible style that suits the current crisis and beyond requires restructuring the education system and its tools and, most importantly, empowering teachers. But it is important to understand that beyond numeracy and literacy, schools are an important place for students to develop social skills. Teacher care is often viewed as one of the most important conditions a school can offer its students. Staying in touch with school and classmates is important to the well-being of the student, especially in the current circumstances. For teachers, providing this kind of care when the school is closed, and the children are at home can be particularly challenging. The current crisis has shown that students are tapping into resilience and adaptability reserves under the guidance and support of schools, teachers and parents. If students' needs are not met, their learning will be compromised.

The mission of all education systems is the same. Their goal is to overcome the learning crisis we live in and respond to the pandemic we still face. The current challenge is to mitigate the negative impact of the pandemic on learning and education as much as possible, and to use this experience to get back on track of faster learning improvement.

Distance learning is not only about online learning but also blended media learning with the aim of reaching as many students as possible today.

In many high- and middle-income countries, the transition to distance learning has been the first way out of the pandemic crisis. In such countries, many schools, universities, and other

educational institutions have switched to this format. In turn, this shows the importance of developing a virtual culture and redefining teaching technology. Learning technology should not be seen as a mere utility, but as an academic opportunity. Instructional design, multimedia production, and data analysis are vital. This means that teachers in many different disciplines need to be motivated, directed and well equipped as their courses and programs are redesigned and adapted to a new and uncertain future in youth learning and education.

As information from various sources shows, at the beginning of 2020, before the outbreak of coronavirus, a number of European countries, as well as the United States, Canada and Australia, were concerned about the following aspects in the field of education:

- Ensuring equal opportunities, guarantees and access to low-income students and representatives from low-income families.
- Concerns have arisen about the well-being of teachers and students at universities, namely their physical, mental health and nutrition.
- Supervisory authorities were interested in a formula that would allow them to regulate the level of education and achievement of students with the subsequent employment of graduates, and to distribute public money in accordance with these criteria.
- Universities are committed to the Sustainable Development Goals and have taken a firm stance on helping the economic development of their regions.
- Some parties have pushed for universities to encourage vocational training and educational programs for working adults.

The coronavirus pandemic has supplemented and even changed these points. Now many universities needed to think about the sociology of work: new methods of teaching, research and changes related to working conditions.

Consequently, the suddenly closed universities faced new problems: inequalities in means and opportunities among students. The disruption of their lives and the separation of classes in the eyes of students and their families.

For Kazakh schools, the current situation was also completely new and unexpected. The Ministry of Education and Science of the Republic of Kazakhstan had to increase the duration of spring break by one week and use this time for emergency preparation for organizing the educational process in non-standard quarantine conditions. In preparation for the new training format, the main problems were identified.

- First, the lack of regulation and practice in this format. In the current legislation, there is no concept of "distance learning", respectively, there are no programs, regulations, methods, and instructions.
- Secondly, the factor of readiness of the secondary education system itself: the transition to distance learning in the context of the crisis showed that the ICT training of teachers is not high enough, especially in rural schools.
- Thirdly, these are external factors: the factor of Internet connection, infrastructure, lack of computers and equipment for communication.
- Fourth, the lack of domestic IT platforms for organizing simultaneous streaming connections for a large number of students, the lack of digital educational content and full-fledged software for conducting classes via the Internet.

Considering the existing problems and opportunities, after studying international experience, recommendations of UNESCO and the World Bank, the Ministry of Education and Science of the Republic of Kazakhstan decided to use several distance learning technologies at once:

- training via the Internet;
- training through television and radio;

- regular training in remote villages, as well as sending educational materials through the mail in settlements where there are no schools;

It was in this format that studies began in the fourth quarter in the country's schools.

The formats of examinations both in schools and in universities of the Republic were also changed, all this led to the head of state announced the development of protocols, methods of teaching children and students remotely, and to complete the digitalization of all educational institutions in the country. The following are the first conclusions of the Minister of Education of the Republic of Kazakhstan Askhat Aimagambetov:

First, it is necessary to introduce into the legislation the concept of "distance education" and further normative regulation of this process.

Secondly, along with the changes in the regulatory legal acts, it is necessary to prepare domestic digital educational platforms, including for the organization of streaming connections. Not all countries can afford to maintain an external channel sufficient to simultaneously connect millions of schoolchildren, so it is important to develop an in-country system. This includes work on digitizing textbooks. At the same time, there should not be a simplified translation as just a scanned version of a textbook with the same traditional structure, on the contrary, information in them should be presented in the form of pictures, texts, video, audio, animation, and the system of links and search should allow you to instantly jump from one fragment of the textbook to another, to give the opportunity to repeat the material covered from previous classes.

Thirdly, it is necessary to improve the competence of our teachers to work in a distance learning environment. Work in this direction has already begun. All educational programs, from university programs for the training of future teachers and ending with programs of advanced training courses, include special modules on the organization of distance learning, methodology for working in DOT, pedagogical technologies, as well as on IT competencies.

Fourth, the change in the structure and content of the educational process to distance learning. Obviously, distance learning does not mean simply translating traditional content, methods and programs into teaching over the Internet. This is an oversimplified and ineffective understanding of the process. To work in the new mode, new teaching methods, new pedagogical technologies, diagnostic and monitoring procedures should be developed, programs, the structure of the lesson should be changed, a transition to more flexible and individualized standards should be made.

Fifth, it is necessary to transform the culture of school education, to form effective feedback between students and teachers to work in a distance learning environment. It is also important to find reliable identification tools when taking exams and monitoring academic achievement.

Sixth, updating the academic policy of universities, taking into account the possibility of achieving the planned learning outcomes both by traditional methods and remotely. Thus, individualization of training will take place. For example, independent work of a student / master's student with a teacher (SSSP / SSMP), which was usually scheduled and carried out in person, can be optionally transferred to the format of distance and truly independent study. As well as a certain limited number of courses in universities, students may choose to be allowed to study in a distance format or credit the learning outcomes of MOOCs.

Seventh, it is necessary to prepare responses to the new challenges of internationalization. The higher education system will face the problem of transforming international cooperation as a result of the "islandization" of states. Perhaps, the academic mobility of students will be reduced. Joint and double-degree educational programs and the overall international strategy of universities will also rely heavily on digital technologies. Kazakhstani universities should transfer their programs to the online format as soon as possible. The task of becoming a regional educational hub is not removed. In this case, universities must themselves determine the demand for courses and use all the available potential.

Eighth, it is required to improve the information system of the ministry: the inclusion of databases of diplomas, electronic textbooks, various video simulators, complete digitalization of public services, monitoring of educational achievements, testing, certification, etc. There is a need to create a platform for generating content, where teachers can independently create their own materials and share their experience with each other.

Ninth, the creation of digital situational centers and infrastructure development. It is important to provide equipment with the necessary equipment: servers, communication channels, proctoring systems and communication equipment. The relevant requirements may have to be included already in the licensing of educational activities. To effectively build a learning trajectory, summary information is needed, the so-called "digital footprint", which should include data about the content, learning tools, results obtained and the degree of student engagement.

In addition, work in the new conditions showed the need to change the education management system. The experience of introducing remote technologies has clearly demonstrated the importance of closer coordination and building clear connections in management.

The decision taken in December last year to transfer the district and city departments of education, in which all schools and kindergartens are subordinate, directly to the regional education departments has shown its timeliness. Moreover, we see the need to further build clearer and more precise systems of interaction and to strengthen communication between the ministry and regional education departments.

Tenth, further liberalization and strengthening of academic independence is needed. Practice shows the need for further transfer of authority on academic policy issues to the educational organizations themselves in order to provide individualized, flexible training programs.

That is, the ministry does not completely abolish the traditional form of education, but also cancels a completely "new" form - distance learning. Kazakh students and schoolchildren, as well as European ones, faced the problem of classes, because not everyone could afford electronic devices to connect to continuous learning, as well as a good Internet connection to online learning platforms.

But everything is as bad as it might seem at first glance. Surprising as it may seem, paid tuition online proved to be more flexible than it was offline. For example, the Level One lecture hall used to hold only live lectures, and during quarantine they completely switched to webinars. This allowed us to analyze how the behavior of people willing to pay for education differs on the Internet and live, as well as to predict the future of the market. According to the results, it was expected that the audience, after the announced quarantine, may demand a refund for frozen or switched to online lectures, however, there were only 30% of people who were not ready to compromise and froze tickets - a lot, but not critical. For some, this is due to the fact that information is not perceived through the monitor, so that educational meaning is lost; for someone the atmosphere, meeting people or new places are more important than content; someone just doesn't want to experiment. And another small nuance: as the timeline for returning to normal life was postponed, 20% of offline adherents gave a chance to online. The target audience turned out to be larger, which showed sufficient experience in the field of online education. According to the observations of Level One, in such a situation, where the students registered for a live event in advance, in the online format they lost about 10% of the payment for the same event, because everything was a "living moment". Online businesses must be flexible in scheduling and determining marketing costs. In terms of scheduling, the team started announcing new lectures on average a week before the start, not two, and planning the schedule about three weeks in advance, rather than a month and a half. In terms of promotion, the team spent the maximum amount of money in the four days prior to the event and did not leave supporting campaigns on other days.

A key factor in the success of offline lectures is a broad topic; online lectures on narrow topics are better sold.

When a lecture is held offline, not only the date, but also the time should be suitable for all interested people. Too many factors should coincide, and the appropriate size band was more appropriate to just gather for lectures such as "How not to get lost in the history of the world and remember important" or "How to understand classical music."

With online restrictions, there are much fewer - the main thing is whether the topic is appropriate, whether it is interesting. Everyone has their own place, it is not necessary to guess the time, because you can look at it in the recording, the majority of people do not need a spare time for the road.

As a result, it is much easier to run lectures on specific topics: before Level One could spend up to 10% of the events on the topics about which doubts whether they will demand a wider audience - and now such activities to 30%.

Online people are more willing to buy a series of webinars than offline, and also more often sign up for the next lecture immediately after the one just ended.

In quarantine, the team returned to the concept where lectures can be purchased in a package at the same time. Plus, they began to pay attention to the accuracy of recommendations for the existing audience, so that it would be easier for webinar participants to decide on the next step in their educational trajectory. Now 30% of people are willing to listen to more than two lectures a month - and that is quite a lot when it comes to two-hour events. The approach to the choice of topics has also changed: people experiment and much more often study more than one direction, but several at once - they start, for example, with fashion, and then they are carried away by history or literature.

Online formats in which participants communicate with each other are especially in demand. That is, discussions and various conversations-discussions are important for the audience, as was mentioned above for young people and for working adults.

Everything online, where there is communication, interaction - yes. And everything that needs to be done individually is not so popular.

For example, they launched communities of interest - "sandboxes": they provide an opportunity to learn new things in small steps.

Despite the paid access to the subscription, on April 3 thousand people from different regions connected to the sandboxes. In April, the Level One team earned 800 thousand rubles. on these formats. But since a new sandbox is launched every week, they expected to receive more than 1 million rubles in May, which they did in the end.

In other words, even the paid online sphere is ready to advantageously change its programs, thereby proving the flexibility of education.

When asked what will happen next with education, the Level One lecturer gave the following:

- Growing online audience. Many of those who did not give a chance to online education before, tried it for the first time in quarantine. Some of them will continue to study online after quarantine.
- Mix formats. Blended learning will be a great success when several different formats complement each other: for example, there is not only a series of webinars, but also a general chat for participants; not only art simulators, but also a chatbot that sends a new simulator every day for passing; not only a workshop with assignments, but also expert support in case of problems.
- Confidence in the successful. Against the backdrop of a huge amount of free educational content, those products that can immediately demonstrate people's trust to new users will be in demand. What matters is a large number of real reviews on the site, recommendations from friends and the size of the community (be it an active community or the number of course participants).

- Reducing the role of the technical side. Increased tolerance for technical problems. Since they are found in almost all organizers, users began to perceive such problems more often as "such is life" and not as "you are terrible, I will go to others."
- Individualization of education. Most of the big players have moved online and have made many small-scale learning products. In quarantine, people have much more opportunities to find what suits them from different providers, and from this to mold the educational trajectory that suits them. This is especially important for leisure education, when all theaters, exhibitions, concerts and film screenings have also moved online, so that consuming and studying culture now does not require huge transaction costs, like having to wait for the desired performance in two months at a high price.

But this still does not fully guarantee the preservation of the educational sphere entirely in safety without deep breakthroughs. As mentioned earlier, the difference in classes, in material terms, is present to this day and not everyone is ready to pay money for courses and communication support with a good connection, and this leads to the fact that the gap remains. The online education sector also has its drawbacks due to a sharp increase in its demand: a huge load, psychological unpreparedness of market participants, lack of a regulatory and methodological framework. The most difficult thing is to understand how events will develop further. Can such demand be considered organic, or will the indicators roll back, once the quarantine is over? Invest in development or not?

Fast scaling of companies. The load on servers and platform support services is growing - therefore, many companies began to rush to increase capacity, automate processes and recruit employees so that the quality of services does not drop. Due to the pandemic, educational standards are changing. It is expected that the share of online education for schoolchildren will increase, and some of the processes can be automated (for example, checking homework). But online will not completely replace classical education - the role of the teacher as a mentor and communicator will increase.

The importance of the role of teachers requires greater awareness, and families must play this role in isolation. The impact of the coronavirus on education will go beyond the current situation. Schools may not return to where they were before the global pandemic, and the boom in learning during this period could have a profound impact on shaping new learning experiences. Therefore, a lot of assistance from ministries of education through the media should be directed to parents as well. It is necessary to use radio, television and SMS messages to give them advice to help them better support their children. That has already begun at the beginning of the fourth quarter to be carried out on the territory of the Republic of Kazakhstan.

Schools and teachers should not be seen as mere delivery vehicles; they should also be able to control what they teach and how to teach it. Technology can also enhance the role of teachers, turning them simply as bearers of knowledge into active work as co-authors of knowledge for their students. Since many countries, according to UNESCO statistics, have switched to distance learning, it should be borne in mind that the capital of many online services and platforms has increased for their use, mobile applications are also used in training. For example, after the pandemic, the use of video conferencing applications increased: Microsoft, which owns the Skype messenger, announced that the number of Skype users in April grew by 70%, and the number of calls from Skype to Skype increased by 220%. As for Zoom, according to SensorTower, within a month after the who announced the Covid-19 pandemic, traffic to the platform increased by 535%, and the iOS app became the most downloaded in the App Store. In addition, in March 2020, the daily audience of Zoom increased 20 times compared to the same period in 2019 and reached the 200 million mark. That is, digitization with its own makes a profit for such mobile applications, which means the development of its online environment is necessary.

Here most of us can also ask the most silly question at first glance: is it worth isolating society as a whole? If not, how might this affect the education sector as a whole? The answer may be different, but if you resort to the answer of the Israeli historian Yuval Noah Harari, then "Isolation will not protect us from epidemics. The best remedy for them is the global exchange of information and cooperation of scientists." Does this mean that blended learning can help global education avoid deepening the drawbacks of data collection, quality control of education and further organization of society safely during a pandemic and afterwards? Also, do not forget about the "motivation of the population" in order to avoid the loss of good education for schoolchildren and young people.

Result

As a result, I would like to say that a number of CIS countries, including Kazakhstan, having decided on a plan for the digitalization of education, can move on to blended learning in the future. The purchase of various electronic devices can also benefit low-income families to support children's learning from home.

The prospect of further introduction and promotion of distance learning shows opportunities in the development of social skills and family support, which is often necessary for many students. Students adapt to work in a new world, hitherto unknown to anyone, develop skills in which they study for further employment, thus developing their own communication skills, too, in order to merge with the new team. Universities are beginning to apply more and more new policies promoting various disciplines, methods to attract a new stream of students. By partnering with a variety of online campuses, they are developing various lifelong learning methods from afar. All this shows how flexible and adaptable learning can be if you want only a little stability in the current situation. Many experts claim that the pandemic has changed forever and that nothing will be the same as before, and this inevitably concerns the education sector in the first place. That is, in order to create a healthy and responsible society, it is necessary to maintain the level of education of the nation and the people as a whole at a high level. The worldwide COVID-19 pandemic confirms the need to introduce new IT technologies in the field of human activities as soon as possible.

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Пандемия жағдайында білім берудің трансформациясы

Аңдатпа. Берілген мақалада әлемдік пандемия уақытында болып жатқан білім саласындағы өзгерістер туралы жалпылама шолу жасалды. Қазақстан Республикасының білім жүйесіне жаңадан енген қашықтан оқытудың тәсілдері мен әлемдік тәжірибені ескеру жайлы сөз қозғалған, сонымен қатар пандемияның білім саласына әкелген тиімді және кемшін тұстары төңірегінде пікірлер айтылған.

Түйінді сөздер: пандемия, қашықтан оқыту, әлемдік білім беру, дәстүрлі оқыту, Ғаламтор, онлайн, оффлайн, аралас оқыту, білім беру саласы

Спабекова А., Сабитов А.

Преобразование образования в условиях пандемии

Аннотация. В статье предлагается общий обзор изменений в сфере образования во время глобальной пандемии. Особое внимание уделяется разнице во внедрении дистанционного обучения в Республике Казахстан и разнице между онлайн и оффлайн занятиями. Рассматриваются методы, используемые правительством Республики Казахстан, и положительным сторонам, пришедшим вместе с пандемией в сферу образования.

Ключевые слова: пандемия, дистанционное обучение, всемирное образование, традиционное обучение, Интернет, онлайн, оффлайн, смешанное обучение, образовательная сфера

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