

Assessment of the Impact of the Pandemic on Learning Processes

Elena Shirinkina^a and Alexander Groshev^b
Surgut State University, Surgut, Russia

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Abstract: The relevance of the study is determined by the fact that the pandemic and the quarantine associated with it forced all participants within the educational sphere to immerse themselves into the development and application of modern approaches and technologies, to feel how it is possible to offer a completely different training and learning experience online, while maintaining the education quality. The study investigates the ways and methods of organizing and conducting training in the context of the COVID-19 pandemic. The purpose of the study is to assess the impact of the pandemic on business training processes. The empirical basis of the study is analytical research conducted by BBC, Learning Solutions, Foswa, McKinsey, Sberbank's «Investment to the Future». The research analyzes the state of educational technologies before and during the pandemic. This issue has not been studied in economics before. Global educational trends with an emphasis on the current demands of society are presented. The challenges that arose as a result of the pandemic are described. The reactions of corporate sector institutions to the new training regime are analyzed. The practical significance of the research results is provided by the fact that it will allow managers and specialists of corporate universities, talent development departments, educational solution providers, as well as a wide audience of education professionals to develop business training strategies for the formation of necessary skills in a new reality.

1 INTRODUCTION

For many years, we have been hearing from various sources that we live in a VUCA world and must be prepared for its challenges: volatility, uncertainty, complexity and ambiguity. In 2020, due to the coronavirus pandemic (Reznik, Isralowitz, Gritsenko, Konstantinov, Khamenka, 2020), all countries instantly found themselves in these realities, feeling the challenges and realizing their unreadiness for them. The main question was: "What do we need to successfully exist and interact in the conditions of a new normal?" According to the participants of the educational sphere, one of the key problems was the search for a new balance in the changed way of interaction between the teacher and the student, as well as the issue of organizing the distant learning process, which will take into account the expectations and requirements of all parties.

In the conditions of the pandemic, all spheres of education in the world faced difficulties and an

instant reaction was required from everyone in order to adapt to the new conditions of the education organization and the transition to a distance learning format. Corporations reacted as quickly as possible to this force majeure situation and changed working conditions, implemented measures and practices aimed at reducing the spread of coronavirus infection, maintaining the effective work of employees and business training processes (Saif, Ruan, Obrenovic, 2021).

New life circumstances have also resulted in the need of many corporate employees for acquiring new knowledge and skills. As a result, the demand for corporate training has increased among employees, which has led to an expansion of the range of educational services provided by corporations. This resulted in programs and courses of advanced training and retraining, developed and implemented by companies for internal and external users (Novelli, Biancolella, Mehrian-Shai, Erickson, Godri Pollitt, Vasiliou, Watt, Reichardt, 2020).

^a <https://orcid.org/0000-0002-6933-1903>

^b <https://orcid.org/0000-0002-9694-5601>

In this regard, the main hypothesis of the study is whether there is an impact of the pandemic, as a new reality, on the processes of business training of companies.

It is worth starting by viewing the overall picture, which quantitatively reflects the transition of corporate and other training to a distance format.

2 RESEARCH METHODOLOGY

Education and training industry was familiar with such approaches and technologies before the pandemic. But their application was uneven. For example, in Russia, innovative educational technologies were most noticeably used in the segment of additional vocational education, while higher education institutions focused on classical learning models.

The pandemic and the quarantine associated with it forced all participants within the educational sphere to immerse themselves into the development and application of modern approaches and technologies, to feel how it is possible to offer a completely different educational experience online, while maintaining the quality of education (Francesco, 2019). Of course, not every goal was reached. It happened due to the emphasis on digital technologies, and not the methodology for developing training programs. But it can be rightfully stated that such an experience made everyone see which approaches and technologies work, and which do not.

Today, the possession of educational technologies is an advantage that allows us to develop more effective and high-quality training solutions in order to apply knowledge in practice (Ukolova and Novikova, 2020). Unfortunately, in open sources, educational technologies are mistakenly equated with online courses and educational applications, so we propose to understand the basic definition.

Educational technologies (EduTech) as a combination of the terms "education" and "technology" is a set of tools, technologies and approaches used in teaching. They allow to improve the educational process and bring it to a more advanced and personalized level, to make it more effective and exciting for the student. They include, but are not limited to, the following components:

1. Approaches to the organization of training, which include experimental, personalized, social, and continuous learning.

2. Technologies to increase motivation and involvement in learning, for example, microlearning, gamification, etc.

3. Synchronous and asynchronous formats of training solutions, such as face-to-face lectures, webinars, massive open online courses (MOOCs), VR and AR simulations, interactive distance classes (virtual classes), e-courses with interactive simulators, etc.

4. Tools for working on educational content, as well as tools for its implementation in the learning process. These include applications for creating e-courses (Articulate Storyline, Adobe Captivate, etc.), for organizing webinars (Zoom, Google Meet, etc.), for managing learning work (Granatum Solutions, Microsoft Teams, etc.), for implementing surveys (Kahoot, Socrative, etc.), for collaboration (G Suite, Confluence, etc.), as well as learning management systems (LMS) (Epigram, 2020).

Despite the fact that EduTech is traditionally associated with online formats, its methods and approaches are also applicable for face-to-face training. The educational process consists not only of creating video tutorials or lectures. It involves constant feedback from the teacher, practical development of skills and their transfer to practice, as well as other interactive processes.

The coronavirus has become a powerful impetus for the development of the entire EduTech market, the economic role of which has increased significantly.

The global EduTech market in 2019 was 2.7% of the global education market, and its volume by 2025 was estimated at \$241 billion (average annual growth of 13.1%). It is expected that due to the coronavirus pandemic, the market volume will increase 2.5 times: the average annual growth will be 16.3%, as a result of which it will reach \$404 billion in total global spending by 2025 (Figure 1).

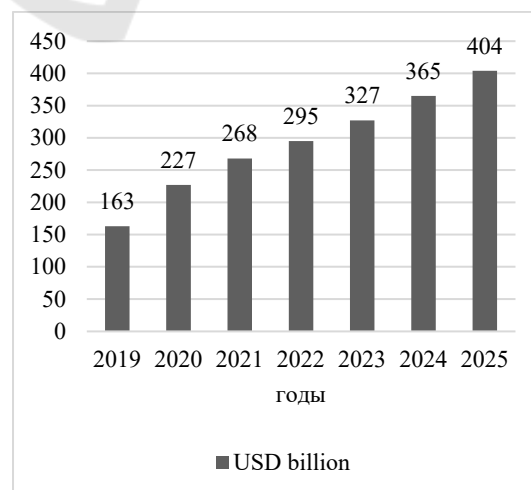


Figure 1: Assessment of the global educational technology market, billion dollars.

The market share will accordingly increase to 5.2% of the global education market. The volume of the Russian educational technology market in 2019 was estimated at 45-50 billion rubles. Before the pandemic, it was expected that by 2020 it would overcome the mark of 55-60 billion rubles. However, by new estimations, an increase of up to 70 billion rubles is quite possible.

Among the drivers contributing to the accelerated growth of the EduTech market, the following can be distinguished:

1. Development of digital infrastructure in secondary and higher education institutions: introduction of learning management systems and data storage, acquisition of tools for the development of training programs in a remote format.

2. The growing demand for B2C training and retraining programs.

3. Due to the transition to distance learning formats, students' preferences regarding technologies that support learning approaches are changing. Among them are mobile, gaming, adaptive learning, etc.

These drivers are prerequisites for the development of educational markets. Startups and educational institutions that solve the problems of accessibility of mass education, reduce inequality by offering non-standard approaches to learning, and also become globally successful, allowing everyone to acquire in-demand professions.

According to The Learning Guild, which surveyed more than 500 respondents of the largest American and Canadian companies (Harvard Business Publishing Education, 2020), at least 54% of all training solutions in 2019 were implemented exclusively in face-to-face format and only 37% in distance (see Table 1).

Table 1: Percentage of companies that switched to remote synchronous training, %.

Implementation of programs in a synchronous remote format	2019	March-May 2020	Second half 2020	2021	2022 and further
Everything	4	49	44	20	17
Most	16	16	26	45	45
Partially	20	16	19	23	28
A little	37	11	9	10	7
Absent	23	8	2	3	3
Total number of respondents (n)	100% (n = 121)	100% (n = 122)	100% (n = 121)	100% (n = 115)	100% (n = 110)

It is obvious that during the pandemic there was a trend for an emergency transfer of training to online and by March 2020, 49% of respondents in the departments of training and development indicated that programs were conducted in a synchronous remote format.

Nevertheless, according to the estimates of the international association of corporate training Unicon, only 30% of corporate training programs in the world managed to be fully converted to a distance format, while the rest were either suspended or completely canceled. The trend towards suspending training programs (33% of respondents answered) is also noted by IE University, which from March to May 2020 interviewed at least 100 heads of training departments, including EY, McKinsey, Sberbank Corporate University and others (McKinsey, 2020). For example, Sberbank Corporate University has successfully converted more than 50 training programs into a distance format. The NLMK Group Corporate University has converted 15 educational solutions (of various contents for managers of different levels) into an online format, in particular programs for the development of coaching skills and level programs. The reactions of the corporate sector to the challenges and barriers faced as a result of the transition to a new format and training regime will be demonstrated below.

Having a multi-aspect nature, this challenge has affected both technical and methodological aspects of the training process. The responses and proposed solutions relate to the introduction by corporations of new technical, methodological, communication, and other approaches, techniques, and tools aimed at maintaining an effective educational process, which is primarily characterized by a high level of satisfaction of all participants.

Despite the fact that in the conditions of quarantine, organizations initially brought all the training content to the online broadcast, a trend was gradually outlined for the use of other methods. Synchronous and asynchronous training formats were combined, software solutions were introduced with a high level of broadcast quality and interactive elements, as well as with the opportunity to participate in group discussions.

Among the most popular tools for organizing synchronous distance learning in organizations, Zoom can be singled out, which before the pandemic was considered as a corporate service for creating video and audio calls via the Internet. The free version of the service allowed you to create group conferences lasting up to 40 minutes, which could be joined by up to 100 people.

During the pandemic, the service quickly adapted to the needs of the field of education and allowed organizing a number of activities:

- online lectures;
- discussions (synchronous and asynchronous) in small groups;
- work on group projects in synchronous and asynchronous formats and their further protection.

Later, other alternative tools were used, such as Microsoft Teams.

This challenge has affected the educational request of both corporate employees and other recipients of educational services provided by the corporate sector. The request was formed as a result of the need to develop new skills and acquire new knowledge. This led to an increase in the internal corporate demand for training and the expansion of the range of educational services offered to the foreign market.

In addition to synchronous online training with teachers during the pandemic, employees began to devote more time to independent learning. For example, the analytics of Sberbank Corporate University portal the Virtual School led to the following results (Figure 2).

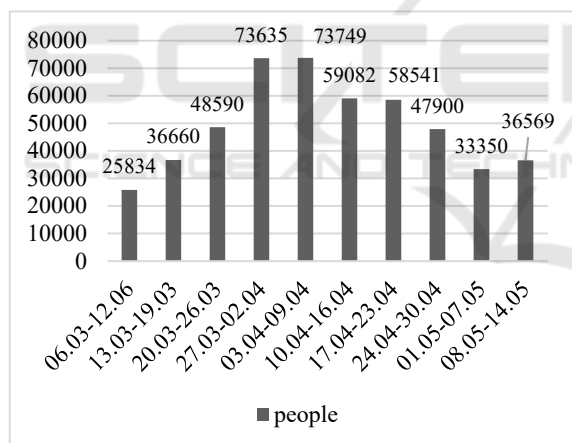


Figure 2: The number of visitors to the Virtual School among Sberbank Group employees.

The presented data indicate a twofold increase in traffic, the average of which during the pandemic was 37,086 users per week (compared to 31 thousand before quarantine). Moreover, the maximum peak occurred in the third and fourth weeks after mass transition to distance working format from March 16. Currently, there is a decline in activity, but nevertheless it still remains above the average by 18%.

A sharp rise in the attendance of educational platforms is associated with a request for the

acquisition of new skills. For example, the pandemic required managers to have control skills for the remote work. The IE University survey confirms that managing distributed teams has become a real problem for managers, the demand for training in these skills has grown (53% of respondents noted), since the remote team needs the tasks that are set differently. There is a need to switch to other approaches in management, to track the process.

Psychological assistance and employee coaching programs have also become in demand (18% of respondents noted this). At the level of top management, there was a request for the organization of training programs for leadership training in times of crisis (20% of respondents noted this) (BBC, 2020). At the employee level, the need to improve technological, communication and digital skills has increased.

The number of registrations for courses in the Virtual School of Sberbank Corporate University in the following directions is shown in Figure 3.

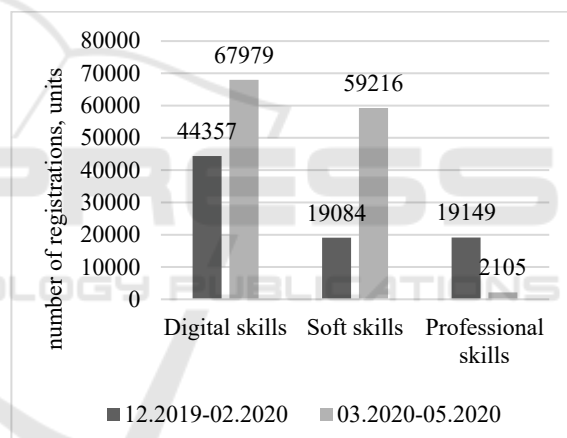


Figure 3: The number of registrations for courses in the Virtual School of Sberbank Corporate University by training programs.

According to the statistics of user training in the Virtual School for Sberbank employees, there is a threefold increase in interest in courses on the development of soft skills, the request for digital skills increased by 53%.

It is worth noting that the business has focused not only on training its employees, but also on expanding educational solutions in the foreign market. The pandemic led to a wave of layoffs and the beginning of the economic crisis, so for many people getting a new profession or mastering additional skills was the only way out of a difficult situation. Those who have never studied online courses before, first of all, became interested in the content that most educational platforms have opened free access to.

The Virtual School of Sberbank Corporate University has opened free access to its materials to all interested users with the possibility of obtaining certificates after successful completion of training. 16 e-courses were made publicly available, including solutions on digital skills, personal effectiveness and fundamentals of macroeconomics. According to the results of the month of the portal, the percentage of course completions ranged from 8 to 60%. In most cases, the completion of the course depends on two factors: the duration of the course and the complexity of the subject. Short and relatively simple courses with minimal barriers in the form of verification tests are easier to complete. Long courses with complex topics, in which control tests were required, were completed less often. Among the users of the open "Virtual School", the leaders in the number of registered users (more than 1000 registrations) were the courses:

- Macroeconomics (basic course).
- Big data.
- Creativity and innovation.
- Fundamentals of behavioral economics and neuromarketing.
- The phenomenon of leadership.

The shortage of knowledge and skills among employees of many companies revealed by the pandemic has stimulated the business sector to initiate courses and programs of advanced training and retraining that will help employees to better cope with work in new conditions.

Coursera for Business, an educational platform which is connected to by more than 2,000 companies around the world, noted that in 2020, the interest of companies in programs that teach business digital skills has significantly increased. It means that as a result of the coronavirus and the challenges that have arisen, companies have begun to pay 12 times more attention to training employees in the sphere of digital technologies (Hamza, Badary, Elmazar, 2021).

The corporate educational sector of Russia, in particular Sberbank Corporate University and the NLMK Group Corporate University, has also been actively working on the development and implementation of advanced training and retraining courses and programs aimed at teaching digital literacy to employees of both their own and other organizations. Below are two cases of Sberbank Corporate University on teaching digital literacy to teachers of partner universities of the bank and recent graduates of universities.

3 RESEARCH RESULTS

The pandemic has accelerated the process of providing educational services and solutions in a remote format, which was started earlier. The transition to a new format of work and interaction with both employees and recipients of educational services affected most companies in the Russian and international arena. Despite the initial organization of the educational process by the companies, preferably in a synchronous format, the transfer to an asynchronous learning format was gradually carried out. This was facilitated by the introduction of various educational technologies and tools that can support distance education.

The introduction of these practices and the use of the necessary electronic tools helped to improve the motivation of students and maximized practice-oriented learning.

Discussion of the results of the study.

The epidemic stimulates the construction of new professional collaborations. The lack of knowledge among some and the transfer of knowledge to others is what has helped many people and organizations to continue to work effectively in the new realities. Among such collaborations, it is possible to note the support provided by universities to each other, as well as the support of higher educational institutions and individual groups by educational corporations at both the world and Russian levels. The planned trend of creating partner programs will certainly continue to develop, as all parties involved in the partnership receive certain benefits.

4 CONCLUSIONS

1. The author studies the ways and methods of organizing and conducting training in the context of the global COVID-19 epidemic, analyzes the state of educational technologies before and during the pandemic, which is a new and unexplored issue in economics.

2. The impact of the pandemic, as a new reality, on the business learning processes was assessed on the basis of analytical research conducted by BBC, Learning Solutions, Foswa, McKinsey, Sberbank's "Investment to the Future".

3. The author presents global educational trends with an emphasis on the current demands of society; describes the challenges that have arisen as a result of the pandemic; analyzes the reactions of corporate sector institutions to the new training regime.

The practical significance of the research results is provided by the fact that it will allow managers and specialists of corporate universities, talent development departments, educational solution providers, as well as a wide audience of education professionals to develop business training strategies for the formation of necessary skills in a new reality.

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