

www.europeanproceedings.com

DOI: 10.15405/epsbs.2022.12.80

ISCKMC 2022 International Scientific Congress «KNOWLEDGE, MAN AND CIVILIZATION»

HIGHER EDUCATION DURING COVID-19

Alexander Kochnev (a)*, Vladimir Ermilov (b), Vasily Nikolaev (c) *Corresponding author

(a) Department of Vehicles and Technosphere Safety, Cherepovets State University, 5, Lunacharsky str., Cherepovets, 162600, Russia, kochnevao@yandex.ru (b) Department of Vehicles and Technosphere Safety, Cherepovets State University, 5, Lunacharsky str., Cherepovets, 162600, Russia, vladimir-ermilov@yandex.ru (c) Department of Vehicles and Technosphere Safety, Cherepovets State University, 5, Lunacharsky str., Cherepovets, 162600, Russia, vas.nikolaev@mail.ru

Abstract

The article studies the higher education system management during the pandemic on the example of Cherepovets State University (Cherepovets, Vologda Oblast, Russia). The problems and results that have arisen in connection with the transfer of universities to distance educational activities during the period of restrictions related to the spread of COVID-19 are analyzed. The purpose of the article is to identify the problems related to managing educational activities of students in the context of distance training during the COVID-19 pandemic. The study involves questionnaires and interviews of the educational process participants. The pilot study covered the period from the beginning of the pandemic, i.e. 2020 to 2021 academic years. The article indicates the reasons for the decline in student performance, both from the point of view of teachers and students. The results obtained during the study helped to reveal both positive and negative aspects of distance learning in higher education.

2357-1330 © 2022 Published by European Publisher.

Keywords: COVID-19, distance learning, learning activities, pandemic, student



1. Introduction

The COVID-19 pandemic has affected the education system around the world. In the current situation it is recommended to use distance learning programs and open educational platforms that universities could use for remote access to students. 2020 was the time of rethinking traditional ways of thinking and approaches in the education system. The main impetus for this process was the outbreak of the pandemic, which determined a number of new requirements in the context of life and work of universities. Online formats, distance technologies, digital educational environments became part of new educational reality that students, teachers and administrators have immersed themselves in over the past two years (Chaubey & Bhattacharya, 2015; Krishnamurthy, 2021).

2. Problem Statement

The research problem: Specific features of activities of teachers and students during the COVID-19 pandemic.

3. Research Questions

The object of the research under study: Training in the system of higher education. The study subject: University education during the transition to distance learning due to the COVID-19 pandemic.

4. Purpose of the Study

The purpose of the study: To analyze the problems of organizing distance learning at university during the COVID-19 pandemic from the point of view of teachers and students.

5. Research Methods

Methods used in the study: questionnaires and interviews with education process participants.

6. Findings

The university activities under the conditions of distance work during the pandemic have revealed the existing problem areas among the teaching staff and among students.

According to the surveys that were carried out among teachers of Cherepovets State University for the period of 2020–2021 the main problems related to the distance learning were as follows:

1. Insufficient preparation of teachers to use new information technologies;

2. Methodology drawback, which manifested in the lack of knowledge and practice as regards the inclusion of online formats and tools in the implementation of educational courses and programs;

3. Technical and technological deficits, which are primarily related to the provision of some teachers with the necessary technical information tools and their low level of digital literacy (Ablaeva & Abdullayeva, 2019; Stepanova, 2020; Vitchenko & Shcherbakov, 2022).

Later, these issues were partially resolved by the University management through the advanced training courses organized at the University.

It should be noted that the content of education has not changed, but the relations between the subjects of the educational process have changed. Before, all pedagogical process participants were in the same classroom, where a teacher could personally see students, communicate with them, ask questions and now teachers and students are in their personal space, as a rule, behind the monitor screen, which, in our opinion, complicates the subject – subjective relationship between a teacher and students. This, of course, was immediately reflected in the learning outcomes. Many teachers note an increase in absenteeism, a decrease in student performance in their disciplines. As for the organization of the educational activities of students, teachers note the following:

- some students, sitting at the computer, got the opportunity to work in a 'free mode', in some cases they were present but did not demonstrate any activity;
- part of the proposed tasks, especially in a test format, were solved by students using the Internet;
- students had more opportunities to get answers to some questions from their classmates, etc.

Everything mentioned above is largely due to the lack of proper responsibility and independence of many students, i.e. the qualities the requirements for which in the distance learning increase significantly (Aruchidi et al., 2021; Kochnev et al., 2021; Yavorsky et al., 2018).

As for the teacher activities, in the context of a distance learning, they could not always respond in a timely manner to the problems that some students have in the process of mastering educational material, for example, when giving a lecture on the Microsoft Teams platform (Cardoso et al., 2017; Dudar et al., 2021; Kokhan et al., 2022; Tretyakova et al., 2022).

In addition to the problems identified by the teachers in organizing the educational activities of students in the context of a distance learning, the very attitude of students to this form of education is of great interest. To this end, in 2020–2021 academic year, this study was carried out. The students were asked to complete a questionnaire, which consisted of 20 questions. Students from 5 institutes of CSU took part in the survey: Business School, Humanitarian Institute, Institute of Pedagogy and Psychology, Institute of Information Technologies, Department of Biology and Human Health. A total of 238 people took part in the study at various stages.

To the first question of the questionnaire "Do you think that distance learning is our future?", 55 % of respondents answered that it would be one of the technologies, but not the leading one; 20 % of respondents answered that distance learning is clearly a future format of training; 15 % of respondents answered that technology would never replace a person and live communication; 10 % of respondents noted that distance learning could be the future as regards personal communication between a teacher and a student. To the clarifying question "How do you see distance learning at a university in relation to the traditional one?", the vast majority of students, i.e. 60 %, noted that it plays a supporting role. Thus, we see that the majority of students consider distance learning to be an addition to the traditional education.

The next question we asked the respondents was the following: "What factors, in your opinion, hinder the use of distance learning technologies?". As the main factors, the students indicated the

following: imperfection of the system for diagnosing the quality of learning outcomes and the insufficient technical equipment of the educational process.

The next question was: "What forms and means of distance learning do teachers and students use?". It was determined that students mainly use MS Teams software, where teachers assign lectures, practical and laboratory classes, exchange information on given topics in a chat, and communicate with each other. This pattern is due to the fact that at the beginning of the pandemic, the CSU management chose this software as the main platform for training. In addition, the educational process participants used CSU educational portal and e-mail. The CSU educational portal allows you to conveniently place all necessary educational information and tasks for students of specific groups, has the necessary test forms. In addition, the portal contains the possibility of statistical processing of learning outcomes, etc. E-mail was used by students and teachers mainly for information exchange.

To the question "What disciplines, in your opinion, are better to study remotely?", 74 % of students indicated fundamental disciplines (mathematics, etc.). and special disciplines (sociology, psychology, foreign language, etc.). Only 26 % of students noted the disciplines of the professional cycle. Thus, students are more oriented to acquire traditional knowledge of the professional cycle, which, as they explained, would be useful to them in their future professional activities.

To the question "Is it convenient for students to study in the remote format?", the majority of students (60 %) noted "yes, but it was difficult". This judgment of the respondents was also confirmed by the fact that 75 % of the participants said that they were rather dissatisfied with the process of distance learning. In addition, the study load during the period of using distance learning, according to students (64 %), has generally increased. Most of them associated this with the need not only to master the educational material on their own, but also to draw up and send reports to teachers.

What technical difficulties did students face in the process of distance learning? 56 % of respondents said that there were technical interruptions in the process of reproducing educational material, 25 % of students noted insufficient knowledge of information technology, 15 % of students indicated the inconvenience of using the distance learning system. Only 4 % of students noted that they did not experience any problems.

In addition to technical difficulties, 84 % of students noted, as a negative factor in the use of distance education, limited opportunities for direct communication with the teacher and classmates. This confirms the idea that there is no proper subject – subjective interaction between the participants in the educational process. However, it should be noted that half of the respondents – 48 % – would like to continue their education in a distance format.

Assessing the quality of education in connection with the transition to distance learning, 63 % of students noted that the quality of education has deteriorated. The following were named as the main reasons: difficulties in independently studying some issues of training material, limited opportunities for individual consultations, clarifications of difficult-to-understand questions, use of test methods for taking exams and tests, etc. Students of engineering and some other areas of training indicated the importance of using necessary laboratory equipment in the educational process, which was not always possible in the context of distance learning.

Despite the preference for traditional learning, distance technologies, according to students, develop self-control skills, form the ability to work with big volumes of information, develop independence in finding and using necessary information. Out of all respondents, only 6 % had a negative attitude towards distance training. In addition, the majority of students (89 %) were satisfied with modern information in the process of distance learning. This is due to the available information provided by information technologies: an electronic timetable on the website of the university and the Tandem system.

How, in general, do students evaluate the work of the teaching staff in the context of distance learning? 43 % of respondents answered that everything is clear and interesting. 41 % of students, in general, responded well to the work of teachers, but noted that they would like more additional materials on the topics studied and explanations from the teacher, 16 % of students rated the work of teachers unsatisfactorily, noting that they do not understand and do not assimilate educational material.

What do you like about the current distance learning? Most of the respondents (78 %) noted the opportunity to study in a comfortable home environment and time saved on trips to the university.

To the question "Have the labor costs of teachers changed in connection with the transition to a distance learning, the majority of students (85 %) suggested that they have increased.

The results of interviewing students and teachers made it possible to come to certain conclusions.

7. Conclusion

Distance learning, in general, has a number of undeniable advantages that should be used in our system of higher education (information, accessibility, communication, etc.). Russian universities should take advantage of the current situation to improve development programs, professional growth of teachers, including the provision of opportunities for teaching staff to discuss (reflect, analyze) the results of their work during that period (Rimpelä et al., 2021; Semenova & Vilkova, 2017)

The positive results of distance learning include updating the skills of all participants in the educational process. Distance and mixed learning have become the reason for the development of video communication and information exchange platforms, such as MS Teams, the Educational Portal, etc. This will further allow using the accumulated experience to improve the process of education. A positive aspect is the revision of the traditional form of teaching, which is extremely important in modern life, when there is a global computerization and informatization of all human life processes.

A feature that distinguishes both distance and mixed learning from a traditional full-time education is the development of electronic resources of universities. In this regard, the possibilities of using additional sources of information and self-education are significantly increasing.

The main negative point of distance learning, as it was revealed, was the difficulty in organizing the necessary subject-subjective relations between students and teachers, which in many respects complicates the processes of mastering knowledge, the development of professional skills and abilities. In addition, in the distance form of studying disciplines with a large amount of laboratory and practical classes, the problems arise associated with the need to use the material base of educational laboratories and classrooms.

Thus, the main issue that the pedagogical community will have to solve after the pandemic is how to correlate the experience of distance education and the best practices of the traditional school, how to

use digital platforms and include the possibilities of digital education in the classical system, how to expand the opportunities for live communication of all subjects of education.

References

- Ablaeva, L. N., & Abdullayeva, U. B. (2019). Foreign and domestic experience of using Github in universities. Inf. Comput. Technol. Econ. Educ. Soc. Sphere, 3(25), 65–72.
- Aruchidi, N. A., Kalugyan, K., & Shcherbakov, S. M. (2021). Typical mistakes (Antipatterns) of educational and methodological activity in higher education. *Internet Research Journal*, 2-2(104), 13–18. https://doi.org/10.23670/IRJ.2021.103.2.033
- Cardoso, A., Mackenzie, I. F., Kirner, C., & Tori, R. (2017). Development of educational resources with virtual and augmented reality: Challenges and perspectives. 43th Latin American Computer Conference, CLEI 2017 (pp. 1–6).
- Chaubey, A., & Bhattacharya, B. (2015). Learning management system in higher education. Int. J. Sci. Technol. Eng., 2(3), 158-162.
- Dudar, V. L., Riznyk, V. V., Kotsur, V. V., Pechenizka Gubareva, S. S., & Kovtun, O. A. (2021). Use of modern technologies and digital tools in the context of distance and mixed learning Linguistics and Culture. *Review*, 5, 733–750.
- Kochnev, A. O., Nikolaev, V. V., & Ermilov, V. V. (2021). Scientific-methodological aspects of students' concepts formation at a technical university. *European Proceedings of Social and Behavioural Sciences EpSBS*, 83–90. Krasnoyarsk. https://doi.org/10.15405/epsbs.2021.09.02.9
- Kokhan, S., Vlasava, S., Eshiev, A., Musabayeva, K., & Anarbaeva, G. (2022). Learning Path of Distance Education in Regional Universities: Challenges and Opportunities. *Lecture Notes in Networks and Systems*, 247, 341–355.
- Krishnamurthy, N. (2021). Teaching Freshmen Chemistry in India during the COVID-19 Pandemic: Student Perspectives and Challenges. *Journal of Chemical Education*, 98(12), 3884–3891. https://doi.org/10.1021/acs.jchemed.1c00813
- Rimpelä, A., Lindfors, P., Kinnunen, J. M., Myöhänen, A., Hotulainen, R., Koivuhovi, S., & Vainikainen, M.-P. (2021). The way of distance teaching is related to adolescent students' health and loneliness during the school closure in Finland. *International Journal of Environmental Research and Public Health, 18*(23), 12377. https://www.mdpi.com/1660-4601/18/23/12377/pdf?version=1637820596
- Semenova, T. V., & Vilkova, K. A. (2017). Types of Integration of Mass Open Online Courses in the Educational Process of Universities. Univ. Manage. Pract. Anal., 21, 114–126.
- Stepanova, E. V. (2020). Project training a way to increase students' motivation. Science and Education: Experience, Challenges, Development Prospects. *Materials of the International Scientific and Practical Conference* (pp. 127–130). https://www.elibrary.ru/item.asp?id=43324328
- Tretyakova, T., Barakhsanova, E., Alexeeva, T., & Bogushevich, I. (2022). Provision and Management of Educational Activities in the Conditions of Distance Education at the North-Eastern Federal University. *Lecture Notes in Networks and Systems*, 247, 869–880.
- Vitchenko, O., & Shcherbakov, S. (2022). Problems and Challenges of Educational and Methodological Activities in Higher Education in the Context of Digitalization of Education. *Lecture Notes in Networks and Systems*, 247, 823–832.
- Yavorsky, V. V., Chvanova, A. O., & Baidikova, N. V. (2018). Possibilities of using the Github service in the educational process. *Materials of the International Scientific and Methodological Conference Modern education: Improving the professional competence of university teachers – a* guarantee of ensuring the quality of education (pp. 159–160).