DISTANCE EDUCATION IN THE CONDITIONS OF 2020 - RISKS AND SIGNS

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Abstract

This article deals with the benefits and risks of distance learning programs being based on the modern information sources. Alco the personal experience of distance teaching, released by teaching stuff of the Department of Physiology, Bioethics and Biosafety, as well as research of psychological comfort during working hours. Personal ways to solve difficulties were in that period are presented, opportunities of effective implementation of obtained experience are proposed, including the back to classical studying scenario.

Key words: homeschooling; COVID-19; high education; depression; communication; distance education

ДИСТАНЦІЙНА ОСВІТА В УМОВАХ 2020 РОКУ – РИЗИКИ ТА ЗНАКИ ПИТАННЯ

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Резюме

У статті аналізуються переваги та ризики дистанційного навчання на основі світових джерел інформації, а також подається особистий досвід дистанційного викладання викладачами кафедри фізіології з біоетикою та біобезпекою, зокрема, ступінь психологічного комфорту в студентів під час виконання завдань на дистанційному навчанні. Наводяться шляхи вирішення ризиків, з якими зіткнулися, і розглядаються можливості ефективного використання отриманого досвіду в найближчому майбутньому, в тому числі і за умов повернення до звичайного класичного навчання. Встановлено, що зростаюча необхідність проводити більше часу за екраном моніторів мала негативний вплив на стабільність психічних процесів студентів.

Ключові слова: домашнє навчання; COVID-19; вища освіта; депресія; спілкування; дистанційна освіта.

Introduction. The positive consequences as well as the risks of distance studying are discussed in a wide range of scientists. Although, groups of scientists readily explain their vision of home schooling in the modern world, but the emergence of a global pandemic has put classical education in a special frame. The features of studying in medical and military universities is the necessity to perform experimental research, work in laboratories, and, finally, communicate with patients in the department – all this had to be avoided in high school, in particular, at the medical university.

The task of the article. To analyze the experience of distance learning in European countries, to establish the features of distance learning on the basis of Ternopil National Medical University. Identify the difficulties faced by teachers and students.

Results and discussion. As is known from the literature, distance learning has its own positives and dangers. During distance learning the teacher and students do not work in the same room, students save time, have an enough wide choice of opportunities and during

training can continue earning money [1]. However, a significant disadvantage is that not all employers want to accept graduates only with distance education diploma. At the same time, in view of the processes of globalization, significant changes in the demographic situation, distance learning itself makes education accessible [2]. Speaking about the risks and disadvantages of distance learning, I want to note another ambiguous factor that can significantly affect not only the quality of education, however, also its ability as such. In particular, a well-designed educational base is a guarantee not only of thorough knowledge, but also a factor in the recognition of the place of work and the relevance of the information obtained [3, 4].

In general, only a few basic components are needed to implement distance learning. The main, without which distance learning is impossible as such – is the ability to correspond, the availability of access to media data [5]. In addition, an important factor that is a relevant feature in the modern educational process is the active transfer of part of the classical pedagogical process in the Moodle system. At one time, its implementation made it possible to significantly replenish resources to prepare students who study both remotely and full-time. To maximize the success of distance learning, it is important to understand it as a causal process of economic growth, globalization and even political influences [6].

Distance learning at Ternopil National University for more than a decade has been an integral part of it, particularly in the faculties of nursing and pharmacology, thus enabling adults to satisfy their need for professional growth without being physically present at the university.

The Moodle educational system itself has been implemented in Ukraine for a long time ago [7-10], but with a radical turn in the educational process on the background of the global pandemic COVID-19, training required urgent changes. Thanks to the coordinated work of the information and technical department of the university, significant work of the teaching staff, the educational process at TNMU was not only not interrupted, but was successfully changed to a completely distance form in all faculties. All basic requirements, in particular, recommended by international and domestic sources of information [6, 11-13] were observed. Thus, lecture materials, materials for preparation for practical classes, links to video resources and educational videos created by departments specifically for this purpose – play an important role in the preparatory process of self-education have already been available in the database. Also, at the end of each lesson, students write a test control, the result of which is part of a comprehensive assessment for the lesson.

However, according to scientists, a number of problems that will be faced with modern distance learning, will constantly need attention and adjustment [14].

The first ambiguous reason is the organization of correspondence in the latest conditions. Every day during this special summer a letter with a task came to the students' e-mail. Two days were given for the solving of theoretical and practical goals. It is known, distance learning can be synchronous (when participants participate in the class at the same time, with an immediate response; this type can be provided through TV courses, chats, etc.), as well as asynchronous (allows students to communicate with each other and with the teacher in a convenient time and in a convenient place and for implementation requires primarily audio courses and email address) [15].

Also, distance learning requires clear criteria and techniques for the use of means of communication, as emphasized by a group of researchers [16]. However, TNMU teachers underscored the desirability of sending students' answers during the pair in real time, or, as an exception, the next day. According to both sides, this significantly facilitated the process of checking the works, and students did not relax and were less distracted. Through online chats or video conferencing, teachers were available for consultation almost around the clock and could provide clarification as it was necessary. Video calls via the available social networks Instagram, as well as using the Viber and Zoom applications, proved to be especially useful in this regard.

The next point of analysis is Web-based Resources. Almost from the very beginning, we were faced with the necessity to somehow change the guidelines, adding theoretical tips on what should happen in practice. As a result it was easier for students to imagine the process being studied, and, provided sufficient training on the topic, write a positive daily Moodle-control. Moreover, the Moodle database was supplemented by additional videos – created at the department and with a link to Youtube-resources on the topic.

These problems, which both sides faced with during the training, are discussed by many researchers. In particular, it is [17, 18] control over the independent performance of tasks by students and the availability of stable high-speed Internet traffic. The repeated online consent of the users of the Moodle system in TNMU (by which the person made the entry has being confirming their identity) had certain positive psychological effect in solving the first problem. Regarding the second reason, if the student failed to establish access in time, he received permission to practice free of charge. And although it was really impossible to control whether the tests were written by this student, but even when they received a high score – in personal communication through social networks and evaluation of answers to the

main tasks of practical work, it was easy to identify violators. Answers to additional questions were also taken into account.

An important component, as noted in the source [19], is a clear calculation of time for teaching and methodological work and a sufficient level of computer literacy of both students and educators. For the most part, this point was the easiest to overcome, as teachers and students of TNMU worked with these resources before the introduction of state quarantine. As for the list of shortcomings of distance learning [20], on which work will definitely need to be continued, it is that the skills of mastering the practical material remained without full-fledged practice this year. In addition, quarantine sharply divided students into those who were highly motivated to acquire knowledge, to work independently and additionally, and those who did not come into contact. At the same time, if we analyze the motivation of students in relation to learning before the transition to distance learning and during it, it has increased significantly. From the personal experience of the author, if earlier 3-4 students from group received negative estimations, 1-2 were absent in the classroom, negative estimations were received on the average 1 person on 2-3 groups, and attendance has been increased as a result of transition to a new form.

However, another important component of distance learning is the formation of psychological readiness for it [21]. Again, the real possibilities for solution of this necessity in European countries, the United States and Ukraine differ significantly. Emphasis is placed on the providing assistance to every child and student who needs it, and not to accentuate the negative, if the applicant did not manage to learn everything during this year of distance learning [22]. . However, in many countries, these ways of solving problems remain only declared and not implemented.

The poll of Ukrainian parents on "Teaching children during quarantine" confirmed the risks of distance education, as most were not ready for such sharply changes. However, according to the latest recommendations of the Institute for Educational Policy from the Johns Hopkins School of Education (USA), as well as a number of foreign teachers, for successful distance learning it is important to follow the following points [23, 24]:

1. Have a comfortable place to study at home;

2. Develop a plan and create the structure of the material to be studied;

3. Adhere to the same training schedule, including time intervals, with possible minor deviations from the usual shedule.
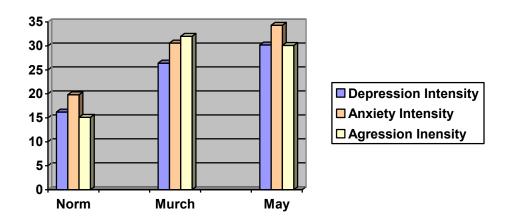
In today's conditions, the problems of distance learning, at first glance, are not extremely acute as students and teachers regularly participate in online trainings and

webinars. As noted in the source, one of the negative important psycho-emotional problems that arose during forced distance learning in 2020, students noted excessive workload and increasing levels of aggression [25]. These features were detected in number of students who participated in our proposed polling.

When surveying 53 second-year students of TNMU who graduated from the Department of Physiology, it was found that there were hidden risks that they faced with. For the initial detection of stress and depression, as well as to assess situational (currently) anxiety, an 8-factor personality test was performed according to the method of Spielberger-Radyuk [26].

The questionnaire consisted of 80 questions that established the intensity of psychomotor characteristics at the time of the survey and in general, reminding state before quarantine. The level of nervous tension, in particular, emotional stress, was assessed by analyzing the degree of anxiety, aggression and depression. The high level of anxiety and aggression were considered signs of stress.

The results of the survey were compared with the norm recommended by the keys of the Spielberger's test. At the same time, we took the upper or lower limits of the recommended values, as the norm of intensity of psychological manifestations at the time of examination (control with which pathologically rejected indicators were compared).

All obtained data were processed using the statistical processing program "Statistics 6.0". A non-parametric Wilcoxon test with a significance level of 0.05 was used to assess the degree of reliability of the difference of the same indicators.

Picture 1. The level of anxiety and depression observed in 2nd year students of TNMU
Notes: The results are presented in absolute numerical points obtained by analyzing the answers of the Spielberger-Radyuk questionnaire filled out by students.

So, as can be seen from Figure 1 – the level of anxiety and depressed mood in students were at quite high level. At the same time, the condition worsened as the semester approached to finish. According to their subjective feelings, the need to stay indoors for a long time, with limited social contacts were the main reasons for this condition. The main complaints were fatigue, irritability, and unwillingness to learn.

The obtained results are consistent with the results of other teachers. According to the author, distance learning promotes antisocialization and is especially manifested by complete immersion in the digital space [14].

Table 1. Computer/gadget exploitation during distance studying by students and teachers

	Before quarantine	**During quarantine**
Teachers	1,5-3 hours	Unlimited time (not less than 6-8 hours
Students	40 (90 min)-4(6 hours)	Unlimited time (not less than 6-10 hours

When analyzing the current situation (Table 1), it is known that used before the quarantine gadgets were used bystudents for 10 minutes to write tests in the Moodle system (depending on the number of pairs, it was 30-40 minutes a day); if desired, some students used them during a long break for the 30 minutes at least (a total of 60-90 minutes used technical means to repeat the material before class). While at home in preparation for the next day, students could continue to use gadgets, not just printed books (time ranged from 2 to 4 hours), so the total amount of time spent at the screen was 4-8 hours daily. During the transition to distance learning in the condition of the pandemic COVID-19, this time increased significantly – to 6-10 hours or more per a day. Such a long time, on my opinion, was caused by the factor of distraction from learning and the desire to read online that did not apply to training. To summarize that, it was a long time in front of monitors, and not just social isolation as one of the factors of psychological instability, fatigue, even in physically healthy people.

As for the teachers, they normally spent 2 hours at the computer during working hours at least, while distance learning increased that significantly.

Conclusions:

The main features of distance learning on the basis of the Department of Physiology with Bioethics and Biosafety of TNMU were established:

1. Repeated lack of Internet and total failure in the Moodle system (which for several hours completely paralyzed any work of both students and teachers), which, however, was very quickly restored to normal. Lack of Internet on the part of students, although 90% of them all got in touch in a few days, have being sending the necessary materials about the lesson and the results of the final test.

2. Increased class attendance. It was easier for students to attend classes, so there were fewer passes per spring semester compared to the previous autumn.

3. Students have become more responsible. This statement applies to almost all university students, although their motivation, in my opinion, was different – those who studied well had more time to better organize their own learning, which as a result had little effect on their grades, because they were good so before that. Another factor was the trivial motivation not to pay for the missed class, especially since the student have been already at home and in most cases have had the opportunity within the recommended period to review the task from the mail and complete it by sending photos from lesson protocols and test results.

4. Some students sent other's, not own copybooks, even last year's protocols. However, generally, it was easy to find out, and they were reported about. That was reflected in the grade for the lesson. The next time, they did not allow themselves to do so, although it was almost impossible to verify whether they were writing online testing. However, as the grade for the lesson is complex and consists of several parts, no significant discrepancies were found in the comparison with the marks obtained in the previous semester.

5. Most students began to make additional notes in preparation for classes, which, in turn, was already a kind of preparation for the exam.

6. Prolonged stay in self-isolation, continuous work with electronic media has led to a significant overload of both the visual apparatus of students, and has triggered emotional exhaustion of many of them.

Distance learning in quarantine was significant. This period exacerbated problems that previously seemed superficial or even hidden. However, a comprehensive analysis of the current situation, cooperation between teachers and students, can not only increase the success of the latter, but also contribute to the normalization of the psychological state of students, which is an important component of their successful examination session.

If it is decided to continue distance learning in the new semester, we will continue to work in the recommended direction. When necessity to return to the usual way of attending classes appears - we should take into account and apply the developments that arose during the pandemic.

It is also important to recommend additional improvements in the educational process in terms of returning to the usual way of learning. Thus, a student who is ill and his condition allows reading, perception of information and in order to avoid infecting classmates (because in previous years, students often did not want to leave the classroom, have being motivating that with reluctance of numerous reworks – so have being sitting in the class-room in masks), for conditions for presenting a certificate from the medical center, which confirmed his acute respiratory viral disease – could be admitted to study by participating in the Zoom-conference and staying in touch in video mode with the group and the teacher during the lesson. In this way, it would be possible to avoid the spread of infection in the learning environment and reduce the overwork of teachers to rework missed classes.

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