

УДК 371.39: 371.68:37.062

DOI 10.11603/me.2414-5998.2021.1.11924

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*M. Pyrohov Vinnytsia National Medical University***PARTICULARITIES OF DISTANCE LEARNING OF FOREIGN STUDENTS
IN A PANDEMIC COVID-19****Л. О. Ющенко, О. В. Тихолаз, В. С. Олійник***Вінницький національний медичний університет імені М. І. Пирогова***ОСОБЛИВОСТІ ДИСТАНЦІЙНОГО НАВЧАННЯ ІНОЗЕМНИХ
СТУДЕНТІВ ПІД ЧАС ПАНДЕМІЇ COVID-19**

Abstract. Advantages and disadvantages of distance learning at the Department of Propaedeutic Pediatrics of M. Pyrohov Vinnytsia National Medical University were assessed. Students' attitudes to distance learning was analyzed. Most of foreign students were satisfied with the educational process at the Department of Propaedeutic Pediatrics. On the one hand, they have enumerated lots of advantages, the most important of them are staying safe and interruption of infections spreading, comfortable and convenient learning, saving a lot of time, reduction stress and tiredness. On the other hand, distance learning has disadvantages. Distance learning at medical universities are having theoretically classes mainly without practical and communicative skills at the patient's bedside. The main barrier of remote learning is the quality of internet connection. Active communication, interaction, getting feedback, understanding the needs and feelings of students are significant during remote studying.

Key words: distance learning; questionnaire of medical students.

Анотація. У статті оцінено переваги та недоліки дистанційного навчання на кафедрі пропедевтики дитячих захворювань Вінницького національного медичного університету імені М. І. Пирогова. Проаналізовано ставлення студентів до дистанційного навчання. Більшість іноземних студентів була задоволена навчальним процесом на кафедрі пропедевтики дитячих захворювань. З одного боку, вони перерахували безліч переваг (безпека та попередження поширення інфекцій, комфортне та зручне навчання, значна економія часу, зменшення стресу та втоми), з іншого – дистанційне навчання має ряд недоліків. Дистанційне навчання в медичних університетах включає переважно теоретичні заняття без практичних та комунікативних навичок біля ліжка пацієнта. Основною перешкодою дистанційного навчання стала низька якість з'єднання з Інтернетом. Активне спілкування, взаємодія, отримання зворотного зв'язку, розуміння потреб та почуттів студентів є важливими аспектами під час дистанційного навчання.

Ключові слова: дистанційне навчання; опитування студентів-медиків.

Introduction. Distance learning is one of the most promising and relevant forms of education nowadays which provides interaction between student and teachers, requires special technical equipment [4]. It involves training, delivery of knowledge and feedback. According to Valentina Arkorful and Nelly Abaidoo distance learning is a revolutionary approach to enable workforce with the knowledge and skills needed to turn change into benefit [5]. Internet-based learning,

computer-based learning, virtual classrooms, and digital collaboration all represent different types of e-learning [7]. There are two groups of e-learning: interactive or synchronous (natural way of communication with possibility of immediate reaction) and non-interactive or asynchronous (e-mail communication over the Internet or using groups in social nets) [11].

Traditional medical education was disrupted because of pandemic COVID-19 worldwide [9]. Universities had to organize online classes shifting live clinical ex-

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posure with the virtual one to maintain the continuity of medical education during the quarantine restrictions [3, 4]. There are several types of distance learning courses at Ukrainian universities: face-to-face practical online classes, seminars, multimedia presentations, video materials, video lectures and consultations when students can ask questions, rework missing classes. It allows to study anywhere in any place and at individual learning pace. However, the interaction between the student and the patient, development of clinical thinking, clinical skills is a necessary component of all educational programs of medical universities and all the proposed methods do not replace real contact with the patient [2]. Other disadvantages of online teaching were distractions, quality of internet connection, timing of tutorials, anxiety and lack of space [10]. The effectiveness of the distance education process depends not only on the use of modern digital technologies, but also on the awareness of the need for a creative approach to work, the establishment of interaction between students and teachers. Remote studying at medical universities requires a thorough analysis of both the assessment of the effectiveness of learning and perceptions of the role of e-learning by medical students. Pedagogical approaches to teaching constantly require the search for new tools that can bring an element of novelty to the educational process while simultaneously increasing the interest of applicants, especially during the current (Covid-19) quarantine period [6].

In order to increase the effectiveness of distance learning it is important to enrich its content with the achievements of visual studios, visual culture, video lessons, virtual patient simulator that can help understand the material better [8]. Introduction of distance learning as a part of general educational process is a promising area of medical education [1].

The aim – to assess advantages and disadvantages of distance learning at the Department of Propaedeutic Pediatrics of M. Pyrohov Vinnytsia National Medical University to analyze students' attitudes to distance learning, to identify the main issues of concern regarding distance learning, create the main strategies for the development of the educational process and maximize the advantages of distance learning methods nowadays.

Methods. An anonymous voluntary online survey of 162 medical international students has been conducted using Google Forms. All questions were formed in English and concerned the features of distance learning. Questions included: gender, age, nationality, location. We have asked about their attitude to remote education, remote lectures, remote reworking missing

classes, their willingness to continue learning online subject of propaedeutic pediatrics, their psychological adaptation to the remote education, satisfaction with the organization of the educational process at the Department of Propaedeutic Pediatrics of M. Pyrohov Vinnytsia National Medical University, technical capabilities of training platforms have been granted, their motivation to study remotely, learning conditions (computer, laptop, tablet PC etc.) and internet connection are at an appropriate level. Students provided the answer they found most suitable from question options. They have written their own opinion about advantages and disadvantages of remote education, difficulties during remote education, they evaluate the level of cooperation with the teacher, sum up the burden on the student during distance learning, assess the socio-psychological conditions during lessons. They have tried to answer the following questions: What is a good teacher (lecturer)? What are lectures good for? How can students remember what teacher has taught? How does teacher keep students awake and learning? What do you want to change or improve? What advantages of remote education do you want to have in general system of education after pandemic COVID-19? We have asked to write at least 3 options.

162 foreign students of the third year of study of the Faculty of Medicine agreed to answer the questions. There were 64,20 % of males and 35,80 % of females. The majority of students (77,16 %) aged 20–25, 21,60 % were under 20 and 1,24 % were over 25 years old. 80,86 % of students were from India, one student (0,62 %) was from Palestine, one student (0,62 %) was from Syria and the rest were from Africa (10,49 % of Nigerians, 2,47 % of Ghanaians, 2,47 % of Egyptians, 1,23 % of Angolans, 0,62 % of Namibians and 0,62 % were from Swaziland). 52,50 % of students had remote classes in their own countries and 47,50 % were in Ukraine.

Results. This study investigates students' attitudes to distance learning. Distance educational platform Microsoft Teams is used. Several types of distance learning courses were presented: face-to-face practical online classes, seminars and consultations when students can rework missing classes. Schedules for consultations and missed classes rework, syllabuses, curriculums, calendar plan for practical classes and lectures, presentations of lectures, practical skills in the subject, questions for credit test, exam, the rules of examination, students individual work, methodic development to practical classes and literature are available at the department website.

The survey has revealed that only a third of international students were dissatisfied with distance learning, the rest (71,60 %) were satisfied. 75,92 % of respondents would like to have distance lectures, 86,42 % of people wanted to continue to rework missed classes online and 74,07 % wanted to study in this format in the future. Distance learning requires a computer and a good speed Internet connection. However, 8,64 % of students did not have an appropriate technical equipment (computer, tablet PC, laptop) and 11,1 % had problems with Internet connection. That is why 10,49 % wanted to have other options provided for communication with students, without the Internet.

More than half of foreign students (57,40 %) were completely satisfied with the educational process at the Department of Propaedeutic Pediatrics, 38,27 % were partially satisfied, 0,64 % could not answer, and the rest (3,69 %) were not satisfied. The distribution of interest was similar when assessing the capabilities of educational platforms, the majority (92,58 %) were satisfied (55,55 % were completely satisfied and 37,03 % were partially satisfied). It is possible that using different distance learning platforms has led to a reduction in the workload, which has been written by 52,47 % of students. Although a third part (28,39 %) believed that it had not changed, 19,14 % have felt that the workload increased. In general, all students wrote that they liked the subject of Propaedeutic pediatrics and 69,13 % are motivated to continue to study remotely.

We asked students to evaluate the level of cooperation with their teacher. 82,71 % of students were completely satisfied, 14,81 % were partially satisfied, 0,62 % could not answer, and the rest (1,86 %) were not satisfied. They assessed the socio-psychological conditions during the lesson as well. 62,97 % were

completely satisfied, 28,39 % were partially satisfied, 1,85 % could not answer, 5,55 % were not satisfied and the rest (1,24 %) were absolutely dissatisfied.

84,56 % of medical students agreed to enumerate advantages of distance learning, 3,70% said there were no benefits, 0,61 % did not know what to say and the rest of students ignored the question. Most of the students (24,87 %) emphasized importance of remote learning to prevent any infectious diseases like measles, common cold or coronavirus like COVID-19 (Figure 1). It is a convenient way for not turning back in academic work. Distant learning does not require regular classes, it saves time in commuting. About a half (46,71 %) mentioned it. Students have more personal time to study and do home tasks. They can study anywhere and there is no need to be physically present in Ukraine to attend classes. It is easy to access classes (12,40 %) on time without missing. Chances of being late for class are less. It is more comfortable and convenient (14,59 %), students can avoid the unfavorable weather (snow, rain, freezing cold), stay warm inside their places, when going to university is difficult (7,29 %). It also saves money (5,83 %). Distant learning involves technology which helps both students and teachers to get used to the technological advancements in the field of medicine, constant access to Internet resources, to all books (9,48 %). It includes visual methods such as videos and presentations which improves the learning process. Students have the ability to use gadgets more widely, take screenshots, record videos of explanations and demonstration material of the teacher.

Scheduling flexibility was also significant for 4,37 % of students. Students have the freedom to juggle their careers and school because they are not tied down to a fixed schedule. Students noticed that distant learn-

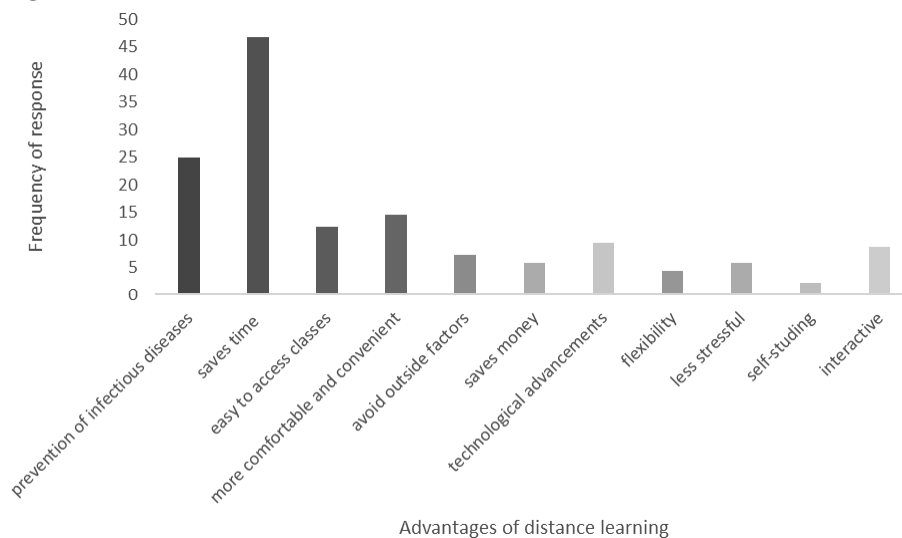


Fig. 1. Frequency of advantages distance learning.

ing was less stressful and less tense (5,83 %). Their feeling was different at home. They felt better in the family circle and had more possibilities to focus on themselves, their own level of knowledge, self-studying (2,18 %). Students have time to finish tasks and answer questions and have individual learning pace. Some students (8,75 %) believed remote education created better opportunities for interaction, healthy discussion, good communication with teacher, the opportunity to have personal contact with the teacher and get answers to questions outside the class. It offers more individual attention.

Students wanted to have some advantages of remote education in general system of education after pandemic COVID-19: education explanatory videos and presentations, online lectures, enabling rework-

ing online, flexible timetable with long breaks, working efficiently with various technologies, managing and balancing work and life, good nutrition and being prevented from getting infected. They considered that theoretical subjects should be online which will save more time and clinical subject should be offline so that they can learn technique. All materials should be online and they can buy less books and save money. Usage of technological means should be inculcated into the educational system.

83,33 % of medical students agreed to enumerate disadvantages of distance learning, 4,32 % said there were no disadvantages. The main disadvantages of distant learning were absence of practical classes, students could not get proper practical knowledge and gain practical skills (51,85 %) (Figure 2).

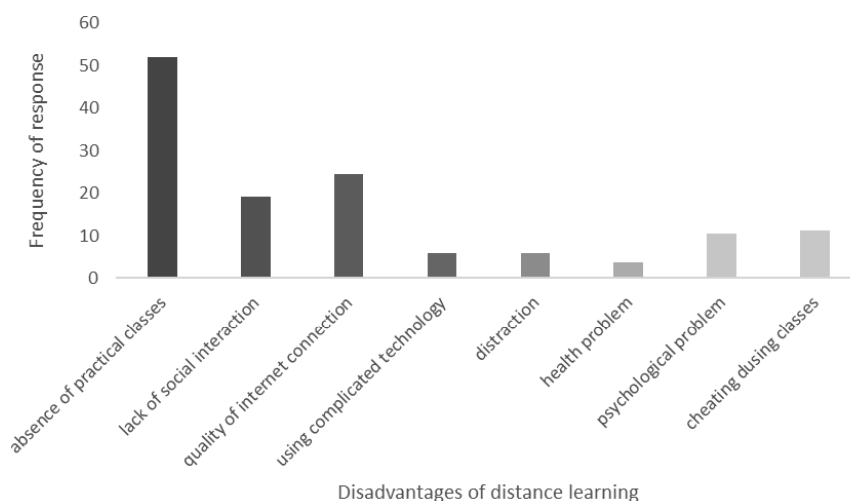


Fig. 2. Frequency of disadvantages distance learning.

Medical students commented on experiencing lack of feeling of studying by attending online classes, lack of live communication with the teachers face to face, lack of social interaction (19,26 %). It has affected the direct student-student and student-teacher relationship. Teacher student bonding is being lost. 24,44 % of students wrote about the quality of internet connection including electricity problems so they could not get proper information, were not able to understand properly and sometimes failed to take exams due to network issues. Both student and teacher are helpless in this situation. Distant learning requires to use complicated technology (5,92 %). External noise from outside, external voices due to roommates having classes at the same time, highly distraction, hard concentration leads to low learning efficiency (5,92 %). Students have sedentary lifestyle, burnout, headache, eyestrain due to a lot of screen usage (3,70 %). Missing the company of peers and friends outside, inability to express feelings, lack of university routine creates a sense of isolation,

feeling tired all day to stay in one room, some kind of depressing (10,37 %), they wrote it was boring and not enjoying. Lots of ways to cheat during class makes students lazy to prepare for classes (11,11 %), leads to less seriousness in study and unfair marks.

Foreign language student should answer the question what they want to improve and change during distance learning. A third of respondents (33,95 %) wanted to diversify innovative learning technologies using videos, interesting and modern learning platforms, media sources. 16,66 % of students required well organized classes/consultations/meetings/other forms of communication with teachers and 16,66 % wanted to receive tasks with corrected errors and comments to improve their work. 8,02 % wished to write less by hand. 6,79 % desired technical improvement of the official educational platform for lifelong learning of students and the same number of students (6,79 %) wanted to improve online testing formats.

The majority of the students (84,56 %) were adapted psychologically to the remote education but 15,43 % of foreign students were not adapted. Mental health of students might be affected by the COVID-19 pandemic as indicated by some posts in the comments.

To improve teaching students should answer the question how they can remember what teacher has taught. 75,92 % of respondents considered that they have to take notes before classes and during classes, but 37,65 % confessed they do not like doing that. Students wanted teachers to give them notes of a particular topic and recorded videos. Extra materials should also be available. Students believed they could remember better by revising and rewatching recorded videos from the class. If there had been any doubts, they would have gone back to Microsoft Teams and would have seen the recorded class again. Revisiting lessons the teacher taught at regular intervals in weeks and months can help to remember lessons content more properly. Teachers should combine visual and auditory learning methods, record the audios or videos of what he/she teaches in class and then should also ask questions from previous classes. Students can remember more by doing home tasks before classes, by self-study, by paying attention in class, by recording videos, by revising content, by hard. It is essential when the teacher is fascinated by the subject. If students are interested, they will remember the content automatically. Teachers should keep students awake and learning by engaging students in active interaction with questions to get responses, by making the class more interesting, informative, curious and funny, by using examples, by giving writing and speaking tasks, by cracking some jokes to light the environment in class. Constant interaction between the students and teachers creates a rapport that instigates a sense of learning in them. By interacting with the students, a little bit outside of study too so that they feel connected and involved at all times. Teachers have to stick to clinical exposure share their experiences because mostly students are interested in practical training during studying clinical subjects.

19,5 % of students believe that most of them study only when there is pressure from teachers. Teachers

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should give bad marks to students who do not answer properly. Teachers have to keep strict rules, timing and ask questions randomly not according to the register with opening the webcam.

Conclusions and Prospects for Research. 1. Distance learning is one of possible types of organization of the educational process at universities nowadays. It allows to continue studying in quarantine restrictions due to the COVID-19 pandemic. All students agreed that remote education is the forced measure during a pandemic that protects their lives from the coronavirus and most of them were satisfied with the educational process at the Department of Propaedeutic Pediatrics.

2. To investigate perceptions of medical students we have established it has lots of advantages, the most important of them are staying safe and interruption of infections spreading, comfortable and convenient for students, it saves a lot of time, reduces stress and tiredness.

3. Progressive implementation of distance learning also has disadvantages. Important cons of distance learning at medical universities are having theoretically classes without practical and communicative skills at the patient's bedside. The main barrier of online classes is the quality of internet connection.

4. Active communication, interaction, getting feedback, understanding the needs and feelings of students were really significant for them during remote studying.

5. Remote educational process at medical universities always requires to create new methods of interaction to increase the interest and motivation of higher education applicants especially during the quarantine period.

To analyze medical students' attitudes allow to find out gaps in the learning process. Prospects for research will be development criteria for objective assessment of students' knowledge, search for new methods and tools of interaction and ways of feedback. Psychologic aspects are exceedingly essential and it requires further research in this area. Further studying of the benefits of distance learning in medical universities can contribute to its implementation in the overall system of education process after finishing pandemic COVID-19.

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Received 08.02.21

Recommended 10.02.21

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