

SEZIONE XIV. PEDAGOGIA ED EDUCAZIONE

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CURRENT REALITIES OF PRE-EDUCATION TRAINING UNDER THE CONDITIONS OF MARTIAL LAW

SCIENTIFIC RESEARCH GROUP:

ORCID ID: 0000-0002-2205-5622

Trehub Mykola Volodymyrovych
cand.sc. (of technical sciences), Ph.D.,
associate professor
of Department of Geodesy,
vice-rector for perspective development of the
Dnipro University of Technology

ORCID ID: 0000-0003-3296-996X

Pashchenko Oleksandr Anatoliyovych
cand.sc. (of technical sciences), Ph.D.,
associate professor, director of the Interbranch Institute of
Continuing Education, Full-time and Distance Education
Dnipro University of Technology

ORCID ID: 0000-0002-0510-0196

Medvedovska Tetyana Pavlivna
cand.sc. (of pedagogy), Ph.D., associate professor,
vice-director of the Interbranch Institute of
Continuing Education, Full-time and Distance Education
Dnipro University of Technology

Skachko Larisa Anatoliyivna
Methodist of the first category of the Interbranch Institute of
Continuing Education, Full-time and Distance Education
Dnipro University of Technology

UKRAINE

The department of pre-university training is a structural subdivision of the Interbranch Institute of Continuing Education, Full-time and Distance Education of the Dnipro University of Technology. This department carries out educational and career guidance work related to the preparation of applicants for admission to higher education institutions.

In the conditions of martial law, the organization of the educational process becomes much more complicated. Schools in cities and villages work remotely or in a mixed mode, therefore, career guidance meetings of employees of higher educational institutions with graduates of lyceums, gymnasiums, schools, colleges are held exclusively remotely and take place once a month within the walls of our university. They are called "Open Door Days". The department of pre-university training also takes an active part in these actions.

Applicants who plan to enter the Dnipro University of Technology join the preparatory courses of the department of pre-university training of our university.

The purpose of pre-university training at universities is to diagnose and fill the "white spots in knowledge" that for various reasons have accumulated in each applicant.

Because of the war, some students are forced to miss classes in schools and cannot constantly participate in education. There are more and more gaps in mastering the educational material. Various forms of pre-university training help applicants cope with most problems.

Teachers of preparatory courses need to teach students to independently find and systematically work with educational information.

First, school students are not trained to take notes on lectures, to listen and at the same time take notes of the most important, main conclusions, algorithms for solving problems, etc.

It is also necessary to psychologically prepare students for the external examination in the form of the National Multitest (NMT). The NMT format provides answers to questions from three different subjects in a limited period of time, which requires the ability to quickly switch, for example, from mathematics to the Ukrainian language or the history of Ukraine. It is very difficult. Constant training of this skill is required.

Often, students who have spent a long time in occupied territories or in cities where hostilities are taking place, at first do not feel very confident, but with time they quickly adapt and look more optimistic about the future <https://sqe.gov.ua/pozashkilna-osvita-v-umovakh-voiennoho/>

It is important that the students in the preparatory course groups are united by one goal - to prepare well for the NMT and enter the university for the chosen specialty. This increases their motivation to "fill in the white spots of school education." And the teachers tell the students how the student's studies are going about the modules, about the sessions, etc. In these calm democratic conditions, students are not afraid to ask questions and express their point of view on various topics.

In the conditions of martial law, planned and emergency blackouts are constantly in effect. The teachers, together with the students, look for such periods of time when there is light in the homes of most of the students in the group. If a person was unable to listen to the lecture on time, the session is recorded, which can be listened to in asynchronous mode, that is, independently at another time.

Courses are taught remotely, using tools such as Microsoft Teams and Zoom, in synchronous and asynchronous modes.

It should be noted that in wartime conditions, distance education is the only opportunity to educate children, maximally observing the conditions of their safety in accordance with eco-recommendations State Service of Ukraine for Emergency Situations and Ministry of Education and Science of Ukraine. (<https://mon.gov.ua/storage/app/media/civilniy-zahist/2022/15.06/Rekom.shchodo.orhanizatsiyi.ukryttya.15.06.2022.pdf>)

Ukrainian and English language classes are held in Zoom in the form of live communication during scheduled video conferences.

Additionally, in addition to Zoom, teachers use Google Classroom to test and evaluate students' knowledge.

The formation of a digital educational environment at Dnipro University of Technology involves the use of a set of information technologies. Therefore, in pre-university training groups, university teachers actively introduce students to such a tool as the Teams program, determining its greatest convenience. Entrants who

become students of the Dnipro University of Technology feel more confident when using Teams in their studies.

S.E. Tymchenko, associate professor of the department of applied mathematics, has been working with students of preparatory courses for several years and, like other teachers of mathematics and history of Ukraine, introduces students to Teams. She emphasizes the following features of working in Teams during classes with pre-university students.

1. The class time is not limited. Since the duration of one lesson on preparatory courses is 1 hour and 20 minutes, this is significant. For example, when working through Zoom, you have to take breaks every 45 minutes, which is inconvenient, after a forced break, not all children connect again at the same time, you have to spend time waiting for those who are late.

2. Teams has the possibility of video recording of classes, if one of the students does not have electricity at the time of class, or at that time an air alarm starts, he could view the recording at another time convenient for him, being safe.

3. It is possible to work with a video camera. If the class is conducted on camera, it is even more convenient than the usual classroom classes at the blackboard - everything recorded is saved, and if you need to repeat a certain point, it is enough to turn the page and return to the previously discussed material.

It should be noted that students perceive material that is written in detail in a notebook better than prepared presentations or text files. Although the benefits and convenience of the latter cannot be denied. Teachers present the prepared files in the "files" section, in the form of a textbook or tasks for independent work.

4. Unlike school, classes at pre-university training courses do not require scrupulous evaluation but require study and understanding of program material. For this, it is enough to work directly in classes and do homework, but once a month, control tests are held, which give students the opportunity to see the results of their studies.

5. A significant disadvantage of remote work is the need for sufficiently expensive equipment for high-quality conducting of classes. It is necessary to have a sufficiently powerful computer, high-quality headphones and a microphone, a professional video camera that allows you to demonstrate the notes that the teacher makes in a notebook, solving tasks and explaining new material, and in conditions of constant power outages, as well as an uninterruptible power supply device with a powerful battery and spare modem.

There is a lack of live communication, not all students have cameras and microphones, so they cannot always react immediately, but in wartime conditions, what we do is probably the best we can do for them.

The university has decided to conduct lectures in basic disciplines such as mathematics, probability theory, econometrics, Ukrainian language, history, philosophy, economic theory, electrical engineering theory, general mechanics, physics only through Teams.

I.M. Pistunov, professor of the Department of Economics and Economic Cybernetics, has been teaching mathematics and physics at the preparatory courses of the Dnipro University of Technology for several years and has extensive experience in using Teams in the educational process. He emphasizes that the Teams program is extremely convenient for teaching theoretical material to any number of students and for testing knowledge.

Therefore, it is very important that students at pre-university training - future students of Dnipro University of Technology familiarize themselves with the features of various information technologies that are used for the educational process (fig.1).

The Teams program allows you to enter a schedule of classes for any term, for any time, and there is the possibility of repetition of the type: "Daily, Weekly, Monthly". The date of termination of these classes is also indicated.

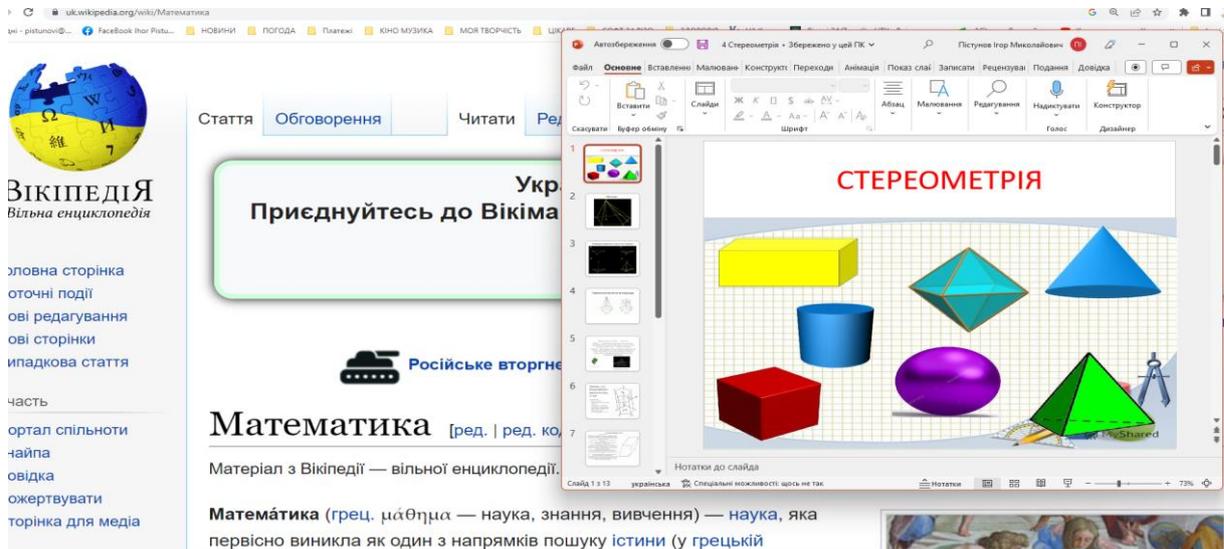


Fig. 1. Example of Internet resources

In the process of learning, students can not only see their teacher, but the teacher can also see them, provided that the webcam is turned on. In addition to computers and laptops, you can run this program on a smartphone and listen to the lecture anywhere: in transport, at home, at work, at vacation...

In the process of teaching, the lecturer can show posters that explain the subject of the discipline, refer to Internet resources, show films, and give examples from various textbooks.

If there is a need to make calculations using different programs, it is done without delays and greatly facilitates the understanding of the material (fig.2).

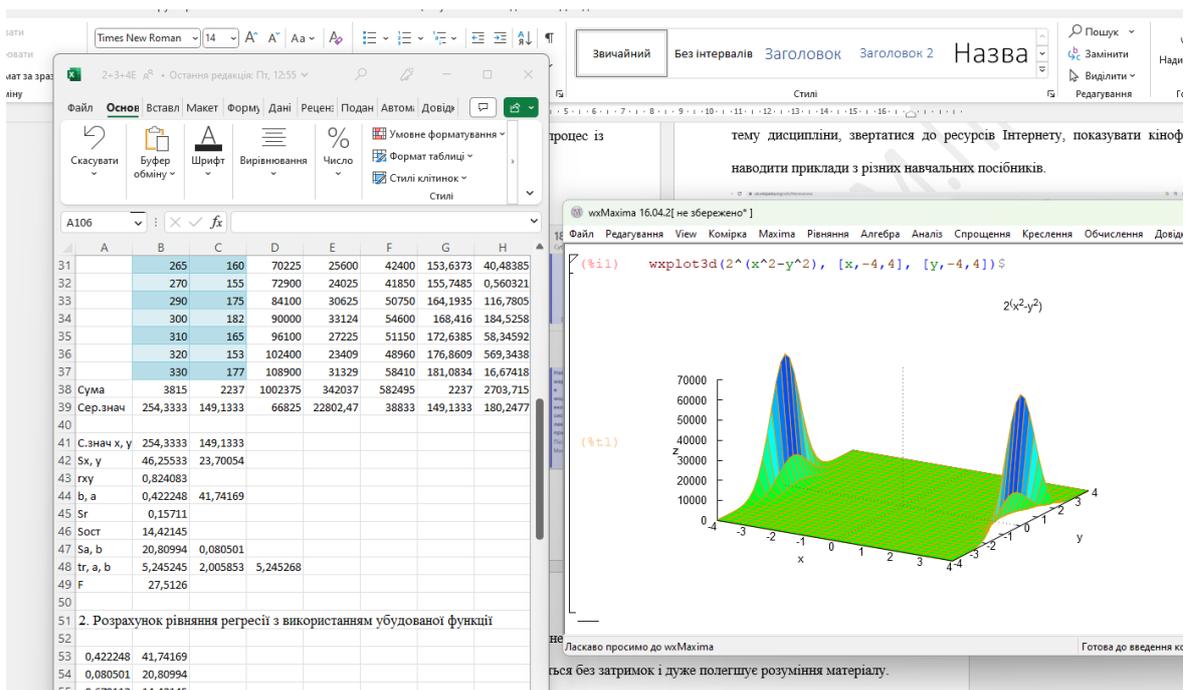


Fig. 2. Example of calculations in Excel

All calculations made during the lecture can be saved as files and sent to the listeners by e-mail, which will allow them to repeat the entire procedure once again. There is also an opportunity to divide the students into separate rooms and conduct classes with several groups (fig.3).

To avoid problems with memorizing the material, the entire lecture or part of it can be recorded on video and offered to the listeners to watch it in their free time as many times as necessary, until they fully understand the material.

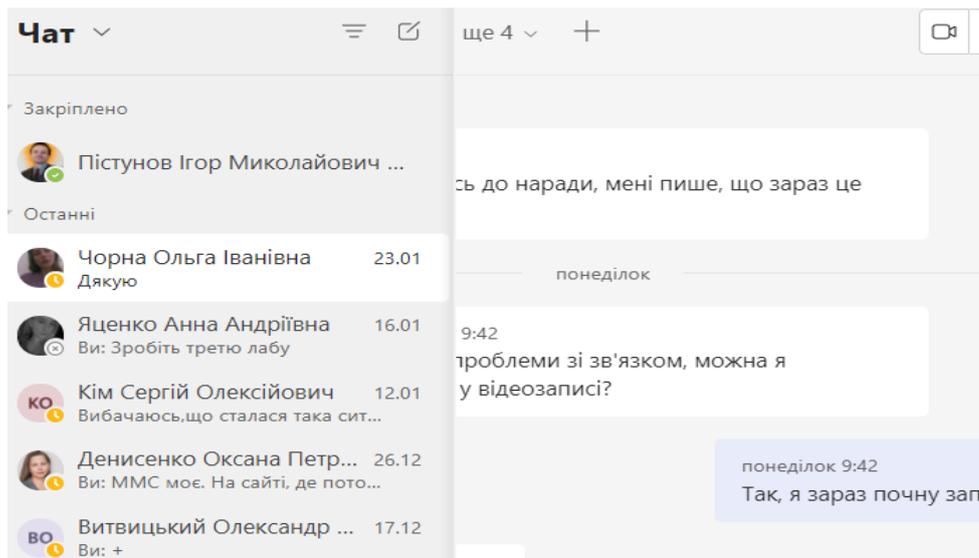


Fig. 3. An example of a chat in the TEAMS program

During classes, students could ask questions by voice, turning on the microphone, or in writing, through the class chat.

Through the chat, you can also send files containing calculations, reference materials, books on the topic, etc.

If the class has already ended, each student still could contact the lecturer or via Outlook email through the chat group in which these classes were held.

External independent testing programs are a basic component of the work programs of preparatory courses. The study schedule consists of lectures, practical classes, and control measures.

Teachers of preparatory courses monitor the dynamics of improving students' knowledge, conduct consultations, control activities, homework, and final exams. They identify topics that are given less time in school, which leads to poor learning, missed topics, and allocate more time to these sections in the curriculum.

It is also popular to check and evaluate their progress by the students themselves, which enables them to see learning deficiencies in time and try to avoid them in time by repeating the material on their own.

"In the conditions of military operations, communication systems with children, their parents, families, teachers and the introduction of new relevant forms of work are becoming most relevant. As practice has shown, teaching staff of out-of-school education institutions adapt lessons to today's conditions" [1, 2].

Conclusions. The administration and teachers of the preparatory courses are in constant contact with the parents of the students. Educators believe that parents have better control and support of their children in the remote format. Parents can be present at the classes and see and hear what is taught in the courses, participate in the organization of independent work of students [3-6].

Upon completion of training, students take a final exam, based on the results of which you can roughly calculate your competitive score and draw a conclusion about whether you can apply for a state-sponsored place in the specialty of your dreams.

Part of the graduates of the preparatory courses can, based on the results of the final exam, receive additional points for admission to technical specialties supported by the state.

In the last days of study, the administration of the preparatory courses invites students and their parents to a meeting with A.V. Kozhevnikov, the responsible secretary of the university's admissions committee, who talks about the features of admission and the rules of admission to the university, and answers questions from the audience.

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