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Practical application of the flipped classroom technology in teaching translation to technical students

The article discusses the possibilities of using the innovative technology of flipped classroom in introducing theoretical topics in the discipline «Translation of specialized technical literature» to non-linguistic university students which lead to a significant improvement in the quality of language training and an increase in the effectiveness of the educational process.

Key words: modern educational technologies; flipped classroom methodology; blended learning; technical text translation.

Contemporary system of higher education is marked by the implementation of different advanced teaching technologies in the process of academic studies, the main goal of which is to upgrade and enhance the general effectiveness of students' vocational expertise and cultural competence as well as their ability for self-development and self-education. Among the variety of educational techniques used in the educational process, the technology of blended learning seems to be the most realistic and effective for application. This educational model is an interconnected combination of information, communication and interactive technologies, which makes it a unique environment, the purpose of which is to develop the cognitive capabilities of students.

Today, the most distinctive peculiarity of the educational process is that both tutors and students can get access at any time and any point to all available teaching materials and handouts, educational multimedia complexes and packets, having different structures, content and layout. But unfortunately, the availability of teaching materials doesn't create the prerequisites for students' successful mastering of necessary knowledge and skills. That's why special attention should be paid to the opportunities provided to the students to keep in touch with the tutor for communicating and getting any kind of online and offline assistance and advice as well as to get personal guidance in studying compulsory and optional subjects.

This unique opportunity has appeared precisely due to the implementation of information and communication technologies (ICT) in the learning process. Researchers note that the use of ICT increases students' motivation to study, their productivity, academic achievements and progress.

Thus, according to the experimental data obtained by experts during the study of the training effectiveness in a non-linguistic technical university, improved information technologies of teaching can increase the productivity of practical and laboratory classes in subjects of natural science and linguistic profile

by about 30%. Academic performance in the control groups, in which training was conducted using educational ICT, was usually higher by an average of 0.5 points (with a five-point evaluation system). At the same time the rate of foreign language vocabulary enlargement increased by 2–3 times, the formation of the work stock being based on the use of computer technologies.

It is obvious that ICT creates an opportunity to introduce changes to the educational process pattern as it implements the transition from reproductive learning to a creative and interactive learning model [1]. In this regard, there is a need to find ways to optimize and intensify the learning process, as well as to introduce innovative methods of teaching foreign languages in institutions of higher technical education. One of the well-known and quite effective interactive innovative techniques is the so-called flipped classroom model that is widely used for organizing classes that include both theoretical and practical components.

The proposed training scheme based on flipped classroom model is determined by the interrelated alternation of full-time and distance (electronic) training components. At the same time, due to the fact that students have got access to varied electronic educational materials and resources provided by the tutor, the initial learning process is implemented outside the educational institution, i.e. outside the classroom, which creates the possibilities for students to develop the skills of independent study work. On the other hand, practical activity is organized by the tutor during the actual class conducting in the presence of the students' group.

Relative accessibility both to tutors and students, ease of implementation and practical application in the educational process favourably distinguish the flipped classroom technology within a large scope of blended learning models. Among the basic principles underlying this methodology, the following can be marked out: a significant reduction of the time allotted for explaining the material to the entire study group; increasing students' motivation through interactivity and the use of modern technologies; the formation of learning and working skills in cooperation; the organization of students' joint project activities. In the flipped classroom educational model, the work is organised so that a university tutor creates a file with a lecture or theoretical material so that students get an idea of the topic long before the actual class will be conducted [2]. The transition to such a learning model marks the change of the role of the tutor and the student in the training process from teacher-centered to learning-centered, it means teachers in cooperation with students develop a constantly altering teaching methodology aimed at achieving individual learning goals.

In our opinion, the flipped classroom educational model has a number of benefits, in comparison to the conventional class conducting organization, for instance, the tutor has an opportunity to set more complex professional goals in the classroom, such as the development of language skills, consolidation and detailed

deepening of knowledge acquired by students during independent extracurricular work due to the time saved on explaining the material in the classroom.

There are obvious additional opportunities offered to students by such a learning model: a) they can re-read, re-listen to or revise an incomprehensible or confusing part of a lecture or theoretical material as many times as it is required; b) students can use any additional reference books and materials; c) students have got a possibility to share information concerning the studied theme in the discussion module; c) they can prepare and send questions to the tutor via e-mail in order to get clarifications before the real classroom discussion. This educational model makes it possible to realize the individualization of the educational space, which, according to experts, will be one of the main trends in education of the twenty-first century [3].

In practice, we implement the flipped classroom model to introduce theoretical topics concerning some basic aspects of translation practice to the third-year students of the Faculty of Mechanical Engineering, BNTU while teaching the academic discipline «Translation of Specialised Technical Literature».

It is obvious that in order to teach students to translate skilfully and adequately or to assist them to acquire translation skills, it is necessary to familiarise students with the basic techniques and methods of translation, to help them master basic translation concepts, otherwise the translation process will remain at an intuitive amateur level, often not meeting the requirements of adequacy and equivalence.

The target of this course is to introduce basic translation concepts, lexical and grammatical transformations that students should master and use in practice. It is the flipped classroom model that we apply for organising the process of students' studying the theoretical materials. The tutor sends by e-mail to the joint e-mail address of the group the topic title and a description of a certain translation technique or concept with a great number of analyzed and translated examples taken from professionally-oriented texts. At home, students study the material, each at their own pace, and in class they give their own examples on a specific topic. In the classroom in mutual cooperation, we pay attention to the specifics of using translation techniques, we discuss examples found by the students and their variants of prepared translations. All the questions concerning any difficulties or misunderstandings are discussed during the cooperative work of the tutor and students.

Very often at the tutor's request some students select videos in the form of news reports or parts of presentations, lectures on their speciality, and in the classroom, they perform the roles of experts and control the understanding and translation of other students. As most video materials have English or Russian subtitles and students-experts have an opportunity to study them at home before the class they are quite energetically involved in the process of

correcting inaccuracies in the translation into the Russian language by other students. In some cases, the video can be selected by the tutor, taking into account not only the specialization of students, but also a number of other factors, such as the clarity of the speaker's pronunciation of the text, reinforcement by the visual range, the predominance of general scientific vocabulary, the absence of numerous numbers, names.

Our use of this technique signalizes students that we trust them to independently study and master the educational material in an individual, convenient mode for them. However, at the initial stages of the model implementation, certain difficulties arose due to the fact that not all students were responsible for the preliminary preparation for various reasons: some students did not understand what they were supposed to do, others thought it was too difficult to deal with the material on their own, someone simply forgot about the task. The unpreparedness of students for the class led to the fact that the tutor had to rearrange the class course, look for ways to organize the educational process in such a way that all students of the group were familiar with the topic being studied and took part in the work. Just in case, the tutor had pre-prepared presentations on theory and additional handouts in the form of cards with examples from authentic technical literature. It is also advisable to use such cards if students have independently picked up not quite correct examples or in insufficient quantity. The function of the tutor is not limited to providing students with material to study. The tutor is also an active participant in the educational process in a practical class: the tutor asks clarifying questions, asks to explain a particular lexical, grammatical phenomenon, stimulates students to think and analyze.

Gradually, students appreciated the advantages of this learning method, as it became obvious that all the study time in the classroom can be entirely devoted to practical work, which is usually more interesting and productive. In addition, since the main forms of organizing students' interaction in the classroom in this case are pair and group work, tutors have the opportunity to vary the composition of pairs and groups, distributing students in them depending on their level of language training, areas of interest, similarities and differences of selected text examples.

It should also be noted that since the translation of a scientific and technical text involves the use of not only knowledge of a foreign language and translation theory, but also knowledge gained in all disciplines of the vocational block, as well as background knowledge, the application of the flipped classroom method helps to implement the principles of interdisciplinary interrelation with the possibility of students' participation in interdisciplinary research work.

Analyzing the practical experience of using flipped classroom technology to develop non-linguistic students' skills in translating professionally-oriented

engineering and technical texts, we can highlight a number of positive aspects. Firstly, in conditions when there is a reduction in the teaching hours allocated to the discipline «Translation of Specialised Technical Literature», namely, three academic hours of practical classes per week, the absence of the need to explain new theoretical material increases the amount of time that a tutor can devote to practice, i.e., actual translation of both educational and authentic texts. Secondly, students' personal responsibility and their ability to self-actualize increases, as they cease to be passive participants in the educational process, as when writing theoretical material under tutor's dictation. Thirdly, the tutor's selection of adequate educational material, both theoretical and practical, ensures the individualization and differentiation of the learning process, gives each student an opportunity to work at their own pace. Fourthly, students develop a skill of working with information which is very useful in the modern society, as in addition to studying the material prepared by the tutor, they turn to other sources, independently look for examples and samples of texts.

It should be noted that this training model will work only if tutors and students are ready for innovations. Both tutors and students should have technical means for work organization, first of all, a free access to digital devices and the Internet. The tutor should know modern technologies and computer programs, be a good organizer, be ready to take on additional work in preparing and conducting practical classes. Students are required to be willing to take on part of the responsibility for the educational process, the ability to seek help from groupmates and a tutor if such a need arises, the awareness that the material is studied not just for marking, but for obtaining practical knowledge, which is one of the main goals of organizing the educational process in a higher educational institution.

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