# TECHNOLOGY OF INDEPENDENT E-ASSESSMENT OF FOREIGN LANGUAGE TRAINING OF UNIVERSITY STUDENTS USING REMOTE CONTROL TOOLS

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## Abstract

The purpose of this study is to develop a technology and describe its algorithm for organizing the current and final control of foreign language training of students in the context of distance learning.

The objectives of the study are to analyze the experience of using test shells and distance education platforms in the organization of recurrent control of foreign language training of students and to develop a general technological approach to the organization of current and final control in a foreign language.

The research methodology is based on the principles of personality-oriented education and a competence-based approach to evaluating learning outcomes. When developing the technology, a recurrent approach to the organization of foreign language teaching for university students was used. Based on the modern scientific and pedagogical theories of recurrent education and the concept of lifelong learning, the main conceptual provisions of the technology of organizing an independent assessment of foreign language training of university students using remote control tools and the content of methodological materials for conducting current and final control in a foreign language of students of non-linguistic areas were determined. The experimental part of the technology was attended by students of 4 universities of non-linguistic areas with a total number of 3123 people. 8 teachers took part in the development and testing of the technology and content of the test materials.

The findings of the study allowed us to create a common approach to the organization of remote control in a foreign language. The obtained results showed the presence of difficulties for students and teachers in the organization of remote control and allowed us to eliminate the problems by developing and demonstrating clear algorithms and stages of the control process to students. The study also showed the presence and allowed us to specify the psychological and pedagogical difficulties and ways to solve them in the process of preparing students for remote control.

In conclusion, the stages of the developed technology of remote control in a foreign language, the data of the theoretical content analysis of psychological and pedagogical literature and the statistical results of the application of the created technology in the educational process are presented. The results of the study showed a positive trend in the attitude of students to remote control, an increase in educational motivation and a decrease in the level of anxiety and psychological discomfort of students when passing remote control in a foreign language.

Keywords: E-assessment, remote control, distance learning, foreign language teaching, pedagogical technology.

## 1 INTRODUCTION

Modern paradigms of teaching foreign languages reflect the main directions of the modern education system. We consider distance learning as one of the most relevant areas of modernization of education, as well as the features of distance learning in foreign languages [1]. Teaching foreign languages in the modern information and educational environment has its own specific features, due to the fact that the main component of the content of teaching a foreign language is not the study of concepts, but the formation of communicative competence, teaching various types of speech activity: reading, writing, speaking, listening [2]. The role and importance of a foreign language as a means of intercultural communication is significantly increasing in the modern conditions of the development of

global society. In the new conditions, with a new formulation of the problem of teaching foreign languages, it has become obvious that meeting the growing social need for intercultural communication cannot be realized only with the help of traditional organizational forms of education. The development of information technologies has led to the emergence of a new technology of education – distance learning, the introduction of which is especially important because of vast expanses and huge intellectual potential. ICT is especially effective, including in the study of humanities and foreign languages in particular. The founders of distance learning consider it as one of the forms of the education system. Distance learning is a form of learning in which the interaction between teachers and students is carried out at a distance and reflects all the components inherent in the educational process (goals, content, methods, organizational forms, learning tools), implemented by specific means of Internet technologies or other means that provide for interactivity.[3]

The process of implementing distance learning in the educational system in different countries has its own characteristics. In some countries, distance learning is recognized as a form of education along with other forms of learning, while in others, distance learning technologies are used in the educational system as a means of learning. Nevertheless, the development of the distance learning system is given great attention all over the world, which is explained by objective prerequisites. First of all, this is the possibility of a sharp increase in the volume of educational services without significant expenditure of material resources for the development of regional training centers. By implementing a distance learning system, an educational institution gets a number of competitive advantages: multiple expansion of the range of potential students; reduction of the cost of teachers' salaries; the possibility of multiple reduction of the teaching space and the costs associated with them; improvement of the quality of education; reduction of the cost of the library fund; the possibility of organizing a convenient schedule for students to hold sessions, defend theses; the possibility of attracting leading foreign specialists to the educational process, etc. [4].

Traditional forms of training are often aimed at transferring a certain amount of knowledge without developing the necessary skills. In this case, the training has a contradictory internal structure, which is due to the vaguely formulated end result. As a result, the motivation of students to learn is sharply reduced. The main difference between distance learning and e-learning is the activation of the students themselves in the learning process. This becomes possible because the training goes through all the necessary phases: study of the material-feedback-correction of the acquired knowledge. Such a pronounced focus on practical output in the form of skills allows to achieve the highest quality of training. A significant role here is played by the organization of feedback between the student and the teacher( tutor), the functions of which are usually assigned to the subsystem of control of students' knowledge [5]. It is generally recognized that the control function is one of the most difficult when organizing distance learning. To a large extent, this is due to the geographical distance of students from the teacher, which is characteristic of distance learning. It is unlikely that it will ever be possible to fully automate the control of knowledge, shifting this function from the teacher to the software. However, the functions of the teacher are gradually changing when testing knowledge, personal contact is partially replaced by network contact [6]. An important element of knowledge control is the system of automated control of educational activities, while the task is not set. This system completely replaces the teacher in the assessment of students' knowledge. It should relieve him from the routine work of intermediate assessment of knowledge, provide self-testing of students and help the teacher during the boundary and final control [7]. It is obvious that in order to achieve the highest efficiency, the subsystem of automated control of educational activities should cover all stages of the distance learning system: the development of the training course and its control components, training, boundary and final control of knowledge [8]. At the first stage, it is important to correctly distribute the control elements as an integral part of the educational activity in the body of the electronic lesson, integrate it into the didactic process, on the one hand, and on the other – to obtain and use further information about the course of training of a particular subject to optimize the cost of his training. It is obvious that the relative underdevelopment of the information infrastructure and the low availability of computer technology make it necessary to optimize the educational process in order to make the most rational use of the time of contact of the student with computer technology and the use of information communication channels. For this purpose, part of the logic of material delivery management and control functions can be integrated by means of information technologies (for example, VBScript, JavaScript) with the training material itself and used by the student in the off-line mode, while due to the flexible adaptive structure of the lesson, its duration will be optimal [9, 10].

The purpose of this study is to develop a technology and describe its algorithm for organizing the current and final control of foreign language training of students in the context of distance learning. The objectives of the study are to analyze the experience of using test shells and distance learning

platforms in the organization of periodic monitoring of foreign language training of students and to develop a general technological approach to the organization of current and final control in a foreign language.

## 2 METHODOLOGY

The research methodology is based on the principles of personality-oriented education and a competence-based approach to evaluating learning outcomes. When developing the technology, a recurrent approach was used to organize the teaching of foreign languages to university students. On the basis of modern scientific and pedagogical theories of continuing education and the concept of continuing education, the main conceptual provisions of the technology of organizing an independent assessment of foreign language training of university students using remote control tools and the content of methodological materials for conducting current and final control in a foreign language of students of non-linguistic areas are determined. The experimental part of the technology was attended by students of 4 universities of non-linguistic areas with a total number of 3123 people. 8 teachers took part in the development and testing of the technology and content of the test materials.

Creating an automated control system requires formalizing the process of interviewing the student. For this purpose, a system of formal questions is used. There are open and closed questions. Open questions require the user to enter the answer using the keyboard. Open-ended questions do not involve ready-made answers, including one or more correct ones, but require independent synthesis of the answer. On the one hand, this increases the educational value of the question, but on the other hand, it significantly complicates the automation of results processing, since such questions usually allow for several variants of correct answers. Most often, the teacher checks the correctness of the answers to open questions, and the functions of the computer system include only the delivery of information, recording and storing the results of the control. At an advanced stage of teaching a foreign language, the answers to open questions can help the teacher to create a psychological portrait of the student, and for this purpose, the database of control results should provide appropriate information fields. Closed questions are much more often used in the practice of distance learning, since they are much easier to process automatically.

The following typical types of closed questions can be distinguished:

- alternative and multi-alternative questions that require the choice of one correct answer from several suggested options or several correct answers from the suggested options;

- sequential, where the learner must arrange the given words in the correct sequence. For example, to make a sentence from the given words, to arrange historical events in chronological order, etc.;

- matching require to make the correct pair from the options in the left and right sides of the issue, for example, to find the synonyms or antonyms find the continuation of the sentence, compare foreign words and their Russian equivalents, etc.;

- search requiring the learner is found in the text, satisfying the condition of the question;

- evaluative, offering the student to evaluate something on one of the scales.

Closed questions, thanks to a simple algorithm for interpreting the answers, can be integrated into the training material and used to determine when to stop issuing exercises and move on to the next training question, determine the level of complexity of the next training task, etc. It should be noted that an informative indicator, in addition to the answer received, is the time that the student spent on preparing the answer. When drawing up the scenario of a training session, on the one hand, you should try to compose training tasks and test questions in such a way as to ensure the consistency of presentation and continuity of the material, and on the other hand, to avoid monotony, since this reduces the motivation of the student and the effectiveness of the lesson as a whole. The given classification of questions allows us to formulate requirements for an automated system designed to prepare a database of questions and build adaptive training sessions. When designing and managing a foreign language distance learning course, the teacher (tutor) faces an important task of optimal organization of the educational process. One of the most effective tools for solving this problem is the continuous monitoring of educational activities as an integral part of the professional education process.

The purpose of studying a foreign language course is to acquire students' language competence, the level of which will allow to use a foreign language in everyday communication and in the future in their professional activities, as well as for further self-education. From the generalized experience of many teachers, it is concluded that strict reporting is needed for each section of the course – until the student fulfills all the requirements of this module, he can not move on (the best way to control is testing). The work of each student on the development of the course should be, on the one hand, individual and self-organized, and on the other hand, sufficiently regulated, the student should work every day. Building individual feedback, with the focus of attention and effort of the learner allows to increase the effectiveness of training. Therefore, the foreign language course developed and used in this study has a modular system. Each module contains information about the goals and objectives of the study in a particular module; the thematic plan of this module is presented, a list of basic and additional literature that will help to study the topics of this module is already being developed by the teacher himself; tests for self-testing and tests for knowledge control on topics that the student should study in a particular module and perform (all test results are received by the teacher by mail, some distance learning systems allow you to develop test tasks).

In the first (organizational) module, students are given general information: the goals and objectives of studying the discipline, organizational and methodological information, a summary of the course topics, a list of test topics and questions for preparing for the test and exam, a schedule of online and classroom consultations of teachers, as well as control dates for completing work in a particular module. Thus, the modular learning system helps students to distribute the learning load.

In our opinion, special attention should be paid to the typology of computer training tools, the technology of developing electronic textbooks, the justification of the parameters for assessing the quality of computer textbooks, the development of high-quality testing complexes in a foreign language, which will not only intensify the educational process, but also implement the ideas of a holistic approach to teaching a foreign language in the process of distance learning of students. So, the test in distance learning is a carefully prepared, in accordance with certain developed rules, passed a preliminary experimental test and a special procedure for its improvement, a set of questions and tasks presented to the subject in order to identify the social, mental or psychophysiological characteristics of his personality.

## 3 RESULTS

The results of the study allowed us to create a unified approach to the organization of remote control in a foreign language. The results obtained showed that students and teachers have difficulties in organizing remote control and allowed them to eliminate the problems by developing and demonstrating clear algorithms and stages of the control process to students. The study also showed the presence and allowed us to clarify the psychological and pedagogical difficulties and ways to solve them in the process of preparing students for remote control.

One of the fundamental factors of productive learning for most students is the ability to socialize. When studying disciplines remotely, students are deprived of live communication with teachers and classmates, which leads to a number of psychological problems that can negatively affect academic performance. The absence of an incentive in the form of a familiar dialogue or polylogue, as a rule, negatively affects the interest in learning in general. The next aspect that creates a psychological barrier in the process of distance learning is the increase in the independence of the student, who most of the time is forced to comprehend serious amounts of information not in the classroom, under the patronage of a teacher-mentor, but by reading literature or watching video lessons. This imposes a great responsibility on the student, because if a number of disciplinary conditions are not met, there is a high probability of academic debt. The permanent lack of feedback due to possible delays in receiving and sending messages also provokes anxiety states in students. Often, in the process of distance learning, not all communication between the teacher and the students takes place in real time, and a long wait for a consultation on the task or the assimilation of the material can create psychological discomfort. Partial or complete lack of empathy and reflection in the process of correspondence and depersonalized electronic communication of the teacher with students is another factor contributing to the emergence of psychological difficulties. Much depends on the personal interpretation of the read messages, while real communication has a more understandable emotional coloring due to the use of verbal and non-verbal means of communication: speech, gestures, facial expressions.

The problem of trust is the most important moral criterion for evaluating the activities of students in the process of distance learning. The teacher does not have the opportunity to make sure that his students perform tasks independently, without resorting to cheating or forgery. In addition, remote teaching is more time-consuming due to the special complexity of the organization of the learning process, this increases the labor costs in the work and entails excessive emotional stress. Sensory degradation in communication also damages the psyche due to the fact that this depersonalizes the subjects of the educational process, students experience an information deficit. For psychological comfort, it is important for a person to have a full-fledged existence and communication in society, not limited by circumstances that force him to communicate with a teacher and peers through electronic communication only. Taking into account the peculiarities of distance learning, as well as its mass results obtained in practice in 2020, there is a need for mandatory implementation of psychological support and the creation of optimal psychological conditions for remote interaction between students and teachers on a regular basis. The teacher is able to help students cope with the problems associated with the lack of socialization through the use of interactive methods of distance learning – a business game, an online discussion or seminar, brainstorming and a case method. The introduction of more practical courses that reinforce the assimilation of theoretical knowledge will contribute to the interest and involvement in the process of distance learning. It is the theory that is so difficult to assimilate in isolation. The visibility of practical classes will help to relieve psychological stress from the student, stimulate the activation of educational activity. The development of a group project will help to awaken empathy when communicating through electronic communication. The event encourages the development of an emotional connection both between students and with the teacher, whose participation implies intellectual support and resolution of possible conflicts at each stage of the work. The method has another positive aspect – the project promotes the development of independence in the process of distance learning. In the conditions of remote learning, it is possible to draw up an individual curriculum, according to which the student will be able to independently regulate the pace of studying disciplines and the order of their development. This will allow the student to choose a convenient time for mastering the material and completing tasks. The introduction of a daily routine is also extremely important for psychological comfort in distance learning. The illusion that you can study «remotely» at any time leads to a decrease in productivity and academic performance. It is important for teachers and students to have a clear schedule of not only classes, but also preparation for them. Students need to adhere to the daily routine – this applies to morning rises and going to bed, time for homework and even rest. With the observance of the daily routine, all participants in the distance learning process will be able to increase its effectiveness and thereby overcome a number of psychological difficulties associated with the initial lack of a clear training schedule and its format. Chat is also good because it allows to communicate with all its participants at a convenient time for everyone, especially if several recipients can answer the question at once. The occurrence of psychological difficulties in the process of distance learning depends on a number of factors: the subjective perception of students, the relationship with the teacher, the social environment, the situation in the family and the state of health.

Also important are the reasons why there was a need for distance learning. This may be a temporary measure, as during the quarantine period, or education initially assumes a remote nature due to the lack of physical opportunity to attend an educational institution. A serious stress is a sharp change in the usual routine, when the full-time format of training suddenly passed into the category of «remote». In this case, students who are more prone to depressive or anxious states show low adaptive abilities. Therefore, it is so important for a teacher to provide emotional comfort to their wards and maintain a favorable psychological climate in their group. All participants of distance learning – students, their parents, and teachers – face psychological problems. It is important for each of them to have qualified psychological and pedagogical support for the period of remote interaction. Benevolence and tolerance of distance learning participants to each other are the most important psychological conditions for the favorable development of the entire process. It is important for students and teachers to be able to ensure privacy, to prevent the occurrence of stress associated with the erasure of personal boundaries.

Distance learning participants are not required to always be online, and both students and teachers have the right to personal time, so some questions can be discussed offline, in correspondence that does not require a quick response. Compliance with the daily routine will help regulate the hours required for interaction between a student or a group of students with a teacher, and will provide distance learning participants with the opportunity to stay in touch at certain times, relax, do homework or prepare for new lectures and lessons in a comfortable, private environment. The creation and

coordination of a set of rules governing the communication of the teacher and students will help to overcome the psychological difficulties that arise in the process of distance learning.

## 4   CONCLUSIONS

The goal of innovative methods in education is the formation of a person capable of creative activity. However, as practice shows, the introduction of additional disciplines does not fully solve the problem of the formation of personal qualities as a unity of knowledge, relationships, and activities. The formation of a personality is associated to a greater extent with changes in educational forms, methods, and technologies that are aimed at changing the position of the individual in the context of his practice-oriented and professional activities.

All this requires the modernization of the educational process, the use of innovative teaching methods that can create a special educational environment, namely, the pedagogical support of the educational process, which would be aimed at the formation of both a successful student and a personality, that is, would contribute to the formation of the competitiveness of the studentəs personality. In this regard, it becomes clear that schools and universities are developing distance learning, the effectiveness of which largely depends on the quality of the materials used and the skill of teachers.

Distance learning is largely a support for traditional learning, since all teaching materials are on electronic media, which, in turn, helps to organize the independent work of students in the discipline being studied. Independent cognitive activity of students involves the formation of their skills to independently acquire and consolidate knowledge, using various sources of information. In addition, the effectiveness of distance learning largely depends on how regularly the students are engaged. This is due to the fact that it is impossible to form a knowledge system with an uneven learning load. Therefore, strict reporting is an important aspect of the distance learning system. For each completed section of the course, the student must report to the teacher and, until this happens, the student will not be able to move further in the training.

According to the technology of pedagogical communication, distance learning has common features with distance learning: independent work of students with educational materials under the guidance of teachers is the basis of distance education; this form of education involve the active use of modern means of electronic communication. The teacher, using Internet technologies, provides methodological guidance to the student's independent work at a distance, checks homework, answers questions, gives advice, and monitors the students' knowledge.

Modern information technologies also significantly contribute to the teaching of foreign languages. After all, the international computer network provides a huge amount of information, provides access to authentic materials, and has a positive impact on the entire learning process. Thus, at the center of the process of teaching a foreign language is the independent cognitive activity of the student.

This study presents the description of the developed remote control technology in a foreign language, the data of the theoretical content analysis of psychological and pedagogical literature and the statistical results of the application of the created technology in the educational process. The results of the study showed a positive trend in the attitude of students to remote control, an increase in educational motivation and a decrease in the level of anxiety and psychological discomfort of students when passing exam in a foreign language by the remote control system.

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