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PRECONDITIONS OF USING INFORMATION TECHNOLOGIES IN THE ENGLISH LEARNING PROCESS FOR STUDENTS OF NON-LINGUISTIC SPECIALTIES

Basic psychological, pedagogical and methodological features of English learning, using information technologies at the universities were reviewed and analyzed in this paper. The paper defines the main preconditions for using computer effectively in the learning process of non-linguistic specialists.

Key words: information technologies of learning, English learning, psychological, pedagogical and methodological preconditions, procedural motivation.

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ПЕРЕДУМОВИ ВИКОРИСТАННЯ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ В ПРОЦЕСІ ВИВЧЕННЯ АНГЛІЙСЬКОЇ МОВИ СТУДЕНТАМИ НЕМОВНИХ СПЕЦІАЛЬНОСТЕЙ

В статті охарактеризовані та проаналізовані психологічні, педагогічні та методологічні особливості вивчення англійської мови із застосуванням інформаційних технологій у вищих навчальних закладах освіти. Визначені основні передумови використання комп'ютеризованих методів навчання англійської мови студентів немовних спеціальностей.

Ключові слова: інформаційні технологій навчання, вивчення англійської мови, психологічні, педагогічні та методичні передумови, процесуальна мотивація.

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ПРЕДПОСЫЛКИ ИСПОЛЬЗОВАНИЯ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В ПРОЦЕССЕ ИЗУЧЕНИЯ АНГЛИЙСКОГО ЯЗЫКА СТУДЕНТАМИ НЕЯЗЫКОВЫХ СПЕЦИАЛЬНОСТЕЙ

В статье охарактеризованы и проанализированы психологические, педагогические и методические особенности изучения английского языка с использованием информационных технологий в высших учебных заведениях. Определены основные предпосылки использования компьютерных методов обучения английскому языку для студентов неязыковых специальностей.

Ключевые слова: информационные технологии обучения, изучение английского языка, психологические, педагогические и методические предпосылки, процессуальная мотивация.

Relevance of the study and formulation of the problem

In the twenty-first century, education becomes one of the main sources of strategic resources of human capital and knowledge and determines the overall level of society development. Informatization is one of its main triggers [3, p. 27]. Computerization creates a favorable learning environment, stimulates the learning process, improves the information culture of all learning process participants, activates lecturers' methodical activity, based on the use of modern means of creating, editing and printing of learning materials and improves the image of the university.

Nowadays the necessity to speak foreign languages is not questioned and modern communication-oriented teaching prepares students to use the foreign language in everyday life, and also it gives an opportunity for cultural, professional and personal contact with the representatives of various social traditions and social systems.

Analysis of the recent researches and publications

In this day and age the main task is to find the most effective ways of using information technology in an education sector. It is proved that the computer aided learning of foreign languages (FL) has several advantages. E.H.Azimov, P.H.Asoyants, T.I.Koval, N.I.Mulina, E.L.Nosenko, P.I.Serdyukov, H.S.Chekal, N.M.Chemerys, P.Bracamonte, K.H. Brucher, M.Cochraine-Smith, M.P.Collins, P.Dunkel, I.M.Hefzallah, K.Richardwords, M.Simonson, A.Thompson, T.Upton study the research problems of capabilities of using

computer in FL learning. But it is commonly known that computer does not solve learning problems by itself. It is necessary to solve the problems associated with computer-aided learning, i.e. psychological and pedagogical problems of computerization of learning and computer materials and technologies efficiency in specific situations of the learning process [1, p. 12].

The purpose and objectives of the article

We consider the opportunities of using computer effectively for learning English of students of non-linguistic specialties.

Substantiated exposition of the basic material and received results

Nowadays the usage of new multimedia technologies for the realization of interactive education is widespread. Multimedia is multivariate field, which gives the opportunity not only to get information, but also it allows to create texts and graphic information with sound, video and animation in the process of English learning. Today we have equipped classrooms with computers with Internet access. Students should have skills of information technologies using to enhance the language and knowledge of the country. This task is impossible without the use of computers and computer programs as an integral part of modern language education.

Interactive education is a special form of cognitive activity. It has specific and predictable objectives. One of them is to create a comfortable learning environment, where a student feels to be successful and his intellectual independence. It makes a productive learning. The essence of online learning is that during the learning process, all students are involved in the process of perception; they are able to understand and reflect about what they know and think. It takes place in the kind atmosphere with mutual support, which allows not only obtaining new knowledge, but also develops cognitive activity itself; it changes it into higher cooperation and collaboration.

First of all, we define the advantages of computer learning from a psychological perspective. High motivation is a feature of effective activity. This applies particularly to non-linguistic universities, where FL is not a core subject, but where the motivation can be turned into real driving force of the FL acquisition process and become one of the main factors of the intensification of learning activities. It is proved that computer learning has a great motivational potential. Upon the conditions that learning materials are correctly created, computer can help the teachers and students will feel the constant presence of friendly computer instructor. The novelty effect, changes in lesson system, the inclusion of the well-known computer games elements and the possibilities of using information from the Internet have a great influence on the formation and support of the procedural and internal motivations that affect the students' interest in the implementation of learning activities. Over motivation is the distinctive feature of computer-aided FL learning. This motivation is created due to the special nature of the student's interaction with computer, natural language dialogue, emotional coloring, and relative easiness of communication with the computer, dynamics of information, relevance, modernity and prestige of computer-aided learning. The impetus for computer-aided language acquisition is also the combination of computer academic work with acquisition of the actual techniques of using the computer for other kinds of professional activities. There is no doubt, that the future specialist must be ready for rapid perception and processing of a great deal of information in native and foreign languages, work with the means of transmission, processing, storage, search and dissemination of information.

It is well known that the psychological atmosphere in the classroom is significant factor for the development of procedural motivation and a positive attitude to FL acquisition. Fear to make mistakes, doing exercises and reading in English makes the atmosphere tense and inhibit the acquisition process of reading skills. The computer ensures privacy: when results are not recorded for teacher, only the student knows which mistakes he made and he is not afraid that others will know his results. Thus, the student's self-esteem is not reduced, and the psychologically comfortable atmosphere is created in the class. The computer provides a greater degree of interactivity of learning than work in the classroom or in the language laboratory. This is ensured by constant and direct reaction of the computer to student's responses during the task performance. The computer allows us to individualize learning. Students independently determine the pace of work and in some cases the sequence of exercises. If they wish, they use additional supporting information. Therefore, the use of information technologies, which allow students to vary the flow rate and delay of exercises and texts on the screen, find lexical or grammatical background papers and analyze only their own mistakes, greatly contributes to the intensification of the FL acquisition process and to comfortable atmosphere in class.

The principle of individualization of learning has the leading role in the implementation of the learning process in non-linguistic universities, because training level of students, who apply for non-linguistic universities admission, is very different (leavers from specialist language schools, general academic schools, technical schools, general village schools have definitely different level of FL proficiency).

The use of information technologies for learning of students of non-linguistic specialties is more natural than, for example, for students-philologists [5, p. 21]. Analytical thinking, ability and tendency for abstraction, generalization and systematization of facts and obtained information are more inherent for students of non-philological specialties.

We can not say that using of multimedia in the English classroom solves all the problems, but it makes the process of education much easier and gives obvious positive results:
- multimedia-technologies accelerate the learning process;
- improve the quality of learning material;
- contribute to a fast growth of interest to the subject;
- provide interactive learning;
- allow organizing differential training, taking into account the variety of specific types of thinking and learning styles of students;
- give the opportunity to avoid of subjectiveness of estimation;
- develop systems of thinking, learn to analyze, collate and summarize the facts;
- enforce the students' independence;
- use received knowledge in everyday lives (communicate in English; translate songs, dialogues of actors in cartoons and movies).

The effective use of computer learning and reading requires that the computer materials were integrated into the curriculum [4, p. 34]. According to most researchers, it is better to use separate computer courses and programs as an inseparable component of the curriculum along with traditional materials.

There are eight types of computer tools used in teaching based on their functional purpose (for A. V. Dvoretskaya):

Presentation – electronic slides that can include animation, audio and video clips, interactive elements. To create a presentation one can use software such as PowerPoint or Open Impress. Presentations are widely used for demonstration of student projects.

Electronic Encyclopedia – are analogs to conventional reference and information publications – encyclopedias, dictionaries, reference books, etc. To create such encyclopedias such hypertext systems as Hypertext Markup Language, for example, HTML is used. Unlike their paper counterparts they have additional features and capabilities: – they usually support a convenient search engine for keywords and concepts; – convenient navigation system on the basis of hyperlinks; – the ability to include audio and video clips.

Didactic materials – collections of tasks, dictations, exercises, and examples of papers and essays submitted in electronic form, usually in the form of a simple set of text files in doc, txt, and combined into a logical structure of hypertext tools. Program simulators serve as teaching materials and can track the progress of decisions and report bugs.

Virtual Experiment System – a software package allowing the student to conduct experiments in a «virtual laboratory». Their main advantage – they allow the student to carry out such experiments, which in reality would be impossible for reasons of safety, timing, etc. The main drawback of these programs – the natural limitations which are inherent in their model, beyond which the learner can not go out in the framework of the virtual experiment.

Software Knowledge Control Systems, which include questionnaires and tests. Their main advantage – quick convenient, impartial and automated processing of the results. The main drawback – inflexible system response that prevents the student showing their creativity.

Electronic textbooks and courses – are combined into a single set all or some of the types described above.

Educational games and educational programs – are the interactive programs with the gaming scenario. Performing a variety of tasks in the game, children develop fine motor skills, spatial imagination, memory, and may receive additional skills, for example, are trained to work on the keyboard [2, p. 23].

Conclusions and prospects for further researches

Using of interactive multimedia technologies in the communicative teaching foreign languages greatly improves the quality of the material explanation and effectiveness of learning of this material by students. According to the experience the usage and implication of modern technology and multimedia equipment enriches the content of the educational process, increases students' motivation to learn English and there is strong partnership between teachers and students.

Analysis of psychological, pedagogical and methodological preconditions of using computer, allowed us to reveal opportunities for improving and intensifying of the acquisition process of English knowledge and skills for students of non-linguistic specialties due to the use of the unique possibilities of computer technology. The next steps of computer learning materials development should be the selection of learning content based on the analysis of future specialists' professional needs and development of methods of English learning, using authorial computer materials. These steps also include prospects for further research, problems of creation and using computer materials for the FL learning (creating special software for learning of students of various non-linguistic specialties, for students ' independent work and distance learning).

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