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Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

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Learning Language with Multimedia Technologies

Innovative technologies in education are information and communication technologies inseparably connected with application of computer-assisted learning.

The first-priority tendency is the introductions of multimedia technologies in education which provide availability and efficiency of education, preparation of young generation to the living in the informative society.

The purpose of this article is to consider possibilities of learning foreign language and culture with the help of Internet and multimedia technologies.

In higher schools of Ukraine computer educational multimedia is widely used in the learning of foreign languages, especially English.

The methods of computer application in the learning of foreign languages appeared to be a perspective direction [Аскоянец, Чекаль, Сердюков *Основи...*; Нилов 1997: 35–38; Gavalis 1998]. To traditional forms of language assessment belong writing control assignments, oral assessment, dictation, essay, rendering and examination, but they are not objective, exact and efficient enough. The computer-assisted language learning allows to control educational activity of students with high exactness and objectivity, and has a constant feed-back.

New audio-visual multimedia technologies give such possibilities, that traditional textbooks cannot provide. Such technologies enable teachers to plan such types of activities, which bring in the element of personal interest in the educational process. They allow to create the active guided communicative environment in which training is carried out. Co-operation of a student with a computer, thus, from simple exchanging of information or carrying out commands transforms into interactive activity in this environment, which opens unlimited possibilities to a student [Gavalis 1998].

Computer-assisted learning language has many advantages [Кужель, Коваль 2001] such as:

- possibility of application at the different stages of learning;
 - possibility of application at any stage of practical classes;
 - educational material is better perceived and easier memorized by students;
- And such computer-assisted learning also:
- saves time of learning;

- individualizes learning;
- helps to keep records of student's progress;
- reduces boring and tiring activities;
- enriches and motivates learning with visual and dynamic presentation of learning material;
- analyses student's errors;
- adapts traditional educational materials to the computer-assisted conditions of learning;
- creates pleasant and productive environment for learning;
- introduces experimental researches;
- activates student's educational activity;
- intensifies learning and increases motivation;
- develops students' self-assessment skills and creates opportunities for independent work.

All the above-mentioned advantages of computer-assisted language learning help to solve the basic task of language learning as to form students' language competence.

Modern learning language courses can be widely used to introduce new language material and patterns both at stages of practice and application of acquired knowledge, skills and abilities. With the help of computers students are able to: practice spelling; learn lexical material; perfect listening skills; develop reading skills; learn grammar; develop writing skills; practice pronunciation.

The computer allows to artificially create natural communicative environment through successive training exercises based on real-life situations [Аскоянец, Чекаль, Сердюков *Основи...*].

M. Warshauer determines three phases in computer-assisted language learning: behavioral, communicative and integrative learning [Warshauer 1996: 1–14].

Behavioral learning represents the behavioral theories of learning and is based on drill and practice, and the computer simply serves as a vehicle for delivering instructional materials to the student. Behavioral learning is mainly aimed at learning of grammar and lexis. The disadvantage of this method is that the computer cannot provide authentic communication.

Communicative learning is related to the development of communicative method of learning and aimed to create real-life environment for the usage of language, allows and encourages students to generate original utterances and is flexible to a variety of student responses. Speaking about software for learning a foreign language, it is possible to mention language games, stage-by-stage reading, and text reconstruction. In these activities the computer is still a source of information; however, students have more control compared to behavioral programs.

Integrated learning programs are based on two important technological developments: multimedia computers and the Internet. Multimedia computer pro-

grams allow the user to have immediate access to audio-visual information (text, graphics, sound, animation, and video) on a single machine. Multimedia also includes hypermedia which links multimedia resources together and allows learners to choose their own path by pointing and clicking a mouse.

Lately, quite a lot of multimedia programs, dictionaries and encyclopedias have appeared in the distribution network along with textbooks, manuals and exercise-books. Software for learning the English language is being developed intensively, too. There are a lot of various language learning programs which support the computer-assisted learning of English. All existent software can be divided into:

1. Computer dictionaries.
2. Electronic encyclopedias.
3. Programs of computer-assisted translation.
4. Automated educational courses for learning English.
5. Computer language games.
6. Automated testing systems.

The reasons for using this software include: (a) experiential learning, (b) motivation, (c) enhance student achievement, (d) authentic materials for study, (e) greater interaction, (f) individualization, (g) independence from a single source of information, and (h) global understanding.

Teachers primarily require access to learning resources, which can support concept development by learners in a variety of ways to meet individual learning needs. The development of multimedia technologies for learning offers new ways in which learning can take place in schools and the home. Enabling teachers to have access to multimedia learning resources, which support constructive concept development, allows the teacher to focus more on being a facilitator of learning while working with individual students. Extending the use of multimedia learning resources to the home represents an educational opportunity with the potential to improve student learning.

The multimedia technologies that have had the greatest impact in education are those that augment the existing curriculum, allowing both immediate enhancement and encouraging further curriculum development. For example, the WWW serves as a storehouse of information that individual learners can search for subject matter content that specifically fits their learning agendas. Multimedia applications for computers have been developed for single computing platforms such as the PC, Apple Mac and games machines.

Multimedia programs allow involving almost all of senses, combining a printed text, graphics, video, static pictures, and audio record, creating „virtual reality” of real communication. It is well-proven that application of multimedia programs and computer networks make time of learning three times shorter, and the ability to memorize with the simultaneous use of image, sound and text grows by 30–40 percent. However, M. Warshauer [Warshauer 1996: 1–14] states that

in spite of all advantages, hypermedia programs did not make considerable influence on language learning. In fact, most multimedia programs are created by commercial developers, who do not always create the programs according to the traditional theory of second language learning. A good program should be able to diagnose the learner's „problems” with pronunciation, syntax, or usage and then intelligently decide among a range of options (e.g., repeating, paraphrasing, slowing down, correcting, or directing the student to background explanations). Unfortunately, computer programs with that degree of intelligence do not exist, and are not expected to exist for quite a long time.

A Multimedia Learning environment involves a number of components or elements in order to enable learning to take place. Hardware and software are only part of the requirement. Multimedia learning integrates five types of media to provide flexibility in expressing the creativity of a student and in exchanging ideas.

Text. Out of all of the elements, text has the most impact on the quality of the multimedia interaction. Generally, text provides the important information. Text acts as the keystone tying all of the other media elements together. It is well written text that makes a multimedia communication wonderful.

Sound. Sound is used to provide emphasis or highlight a transition from one page to another. Sound synchronized to screen display, enables teachers to present lots of information at once. This approach is used in a variety of ways, all based on visual display of a complex image paired with a spoken explanation (for example, art – pictures are ‘glossed’ by the voiceover; or math – a proof fills the screen while the spoken explanation plays in the background). Sound used creatively, becomes a stimulus to the imagination; used inappropriately it becomes a hindrance or an annoyance. For instance, a script, some still images and a sound track, allow students to utilize their own power of imagination without being biased and influenced by the inappropriate use of video footage. A great advantage is that the sound file can be stopped and started very easily.

Video. The representation of information by using the visualization capabilities of video can be immediate and powerful. While this is not in doubt, it is the ability to choose how we view, and interact, with the content of digital video that provides new and exciting possibilities for the use of digital video in education. There are many instances where students, studying particular processes, may find themselves faced with a scenario that seems highly complex when conveyed in purely text form, or by the use of diagrams and images. In such situations the representational qualities of video help in placing a theoretical concept into context.

Animation. Animation is used to show changes in state over time, or to present information slowly to students so they have time to assimilate it in smaller chunks. Animations, when combined with user input, enable students to view different versions of change over time depending on different variables.

Animations are primarily used to demonstrate an idea or illustrate a concept. Video is usually taken from life, whereas animations are based on drawings. There are two types of animation: Cel based and Object based. Cel based animation consists of multiple drawings, each one a little different from the others. When shown in rapid sequence, for example, the operation of an engine's crankshaft, the drawings appear to move.

Graphics. Graphics provide the most creative possibilities for a learning session. They can be photographs, drawings, graphs from a spreadsheet, pictures from CD-ROM, or something pulled from the Internet. With a scanner, hand-drawn work can be included. Standing commented that, „the capacity of recognition memory for pictures is almost limitless”. The reason for this is that images make use of a massive range of cortical skills: color, form, line, dimension, texture, visual rhythm, and especially imagination.

There are problems in application of language learning programs, which are common for many educational establishments of Ukraine. Firstly, there is no sufficient material and technical basis which does not allow to use a personal computer for language learning (one PC – one learner) throughout Ukraine. Secondly, lack of necessary and adaptable to the curriculum software. Most multimedia computer programs tend to be strong on presentation but weak as far as pedagogy and even interaction. Thirdly, computers are available mostly in the faculties of the universities where there are fee-paying students who provide additional financial recourses. Furthermore, a lack of technical and theoretical knowledge is another barrier to the use of Computer-assisted Language Learning technology. Not only is there a shortage of knowledge about developing software to promote learning but many instructors do not understand how to use the new technologies. Most modern language learning theories stress the importance of teacher guidance rather than control, giving students control over what they do, how fast they do it and even the ability to find and correct their own mistakes. One of the main promises of CALL is the ability to individualize learning, but like with past language laboratories, use of the facilities in many cases have devolved into rows of students all doing the same drills. The only advantage to the multimedia in these cases has been better sound and color images. Managing a multimedia language center properly requires not only knowledge of foreign languages and language teaching methodology, it also requires a certain amount of technical know-how and budget management ability as well as the ability to combine all these into creative ways of taking advantage of what the technology can offer. Often a center manager needs assistants for technical problems, for managing resources and even the tutoring of students. Multimedia centers lend themselves to self-study, and potentially self-directed learning, but such is often misunderstood.

Literature

- Аскоянци П.Г., Чекаль Г.С., Сердюков П.І. (1998), *Основи методики створення та застосування комп'ютерних програм у навчанні іноземних мов.* – К: КДПШМ. – 108 с.
- Гаєвский А., Леонтьев О. (1998), *Справочник по программным продуктам.* – К: Диа Тайп. – с. 187–192.
- Кужель О.М., Коваль Т.І. (2001), *Використання персонального комп'ютера у вивченні іноземних мов.*//Нові інформаційні технології навчання в навчальних закладах України: Науково-методичний збірник, вип. 8: Педагогіка/Редкол.: І.І.Мархель (гол.ред.) та ін. – Одеса:Друк. – 242 с.
- Нилов О. (1997), *Английский без репетитора.*//Компьютерное обозрение. – №27. – с. 35–38
- Основні положення доповіді міністра освіти і науки України Василя Кременя.*//Освіта, 3–4 березня 2004. – №11. – с. 2.
- Ротмистров Н.Д. (1994), *Мультимедиа в образовании.*//Информатика и образование. – №4. – с. 89–96.
- Сердюков П.І. (1996), *Технологія розробки комп'ютерних програм з іноземних мов.* – К: Ленвіт. – 111 с.
- Gavalis B. (1998), *Computers and the EFL Class: Their Advantages and Possible Outcome.* English Teaching Forum, Vol. 35, №4. – 64 с.
- Warshauer M. (1996), *Computer Learning Networks and Student Empowerment.*//System, №24. – с. 1–14.

Быстрое социальное, экономическое и технологическое развитие нашего общества создает новые проблемы в системе высшего образования в Украине. Не достаточно дать студентам определенные знания, которое можна поместить в стандарты, книги, учебники и т.п. Необходимо развивать независимое, гибкое, критическое мышление у студентов.

Рассматривая систему высшего образования с этой точки зрения, роль мультимедийных технологий становится очевидной. Они – наиболее мощный источник познавательной деятельности студентов, развития их творческих способностей, интересов и навыков и других интеллектуальных факторов.

Abstract

Rapid social, economic and technological development of our society creates new challenges for the system of higher education in Ukraine. It's not sufficient to give a student certain knowledge, which can be put into standards, books, textbooks and etc. It is necessary to develop independent, flexible, critical thinking of students.

Examining the system of higher education in such a way, the role of multimedia technologies becomes obvious. They are the most powerful source of

cognitive activity of students, development of their creative abilities, interests and skills and other intellectual factors.

Key words: foreign language teaching, IT (information technology), information society.

Nauczanie języków obcych z wykorzystaniem technologii informacyjnych

Streszczenie

Szybki rozwój społeczno-gospodarczy, społeczny i technologiczny stwarza nowe wyzwania dla systemu szkolnictwa wyższego na Ukrainie. Nie wystarczy już dostarczyć studentowi pewnej wiedzy, która może być wyprowadzona z norm, książek, podręczników itp. Konieczne jest opracowanie niezależnych, elastycznych systemów informacyjnych, przygotowujących studentów do krytycznego myślenia.

Słowa kluczowe: nauczanie języka obcego, technologie informacyjne, społeczeństwo informacyjne.