

**WAYS OF UPGRADING MULTIMEDIA EDUCATION SYSTEM IN
MODERN COMPREHENSIVE EDUCATIONAL INSTITUTIONS OF
UKRAINE**

Summary. The article deals with the issues of teacher training for obtaining knowledge and skills of effective use of computers in their professional activity, didactic peculiarities of planning multimedia presentations, which are used in the education process; ways of using means of computer techniques in the education process of modern comprehensive educational institutions.

Keywords: *multimedia, reformation, studies, demonstration, creation, professional preparation facilities, abilities, presentation, sequence.*

Formulation of the problem. The development of education in Ukraine was always accompanied by the changes, transformations and innovations, which, at a certain historical period, grew into cardinal reforms. Being a social institute, school formed personality according to the requirements of the society at different historical stages. That is why school reforms have always been of high priority, as they directly influenced further development of society.

The National doctrine of development of education in Ukraine defines, among other priority directions, introduction of educational innovations, informational technologies; creation of industry of modern means of studying and education, total supply with them of all educational institutions. The necessity of realization of these tasks lies in accordance with the rapid development of modern informational society. One of the basic skills, developed to meet the needs of the society, is obtaining knowledge and skills to use computers effectively in their professional activities. Informatization of education is aimed at preparation of a person to such society. The main emphasis in this process is given to the

introduction of new means of education, which use possibilities of the modern computer.

The requirements to the professional training of teachers have substantially grown under the conditions of wide use of computers in the educational process. Beside the basic skills, needed for exercising pedagogical activity, a teacher needs to master fundamentals of work with modern computers, know how to apply informational-telecommunication technologies and possibilities of the Internet for reaching the defined studying-educational aims, learn new organizational forms of learning activities. That is why higher educational institutions feel the necessity of introduction special subjects for the realization of the assigned tasks, as well as applying possibilities of modern computers in the process of teaching all subjects. The introduction of multimedia means in the educational process of the higher school makes it possible for the future specialists to broaden their knowledge, encourages active studying, is an active means of activation of cognitive functions, and gives opportunities to study subjects with interest.

That is why the task of the higher pedagogical education, first of all, is forming a fully developed teacher, who can get students interested by the right motivating of students in their activity. The practical experience witnesses that pupils now are interested in everything, connected with computers. That is why future teachers need to know how to use multimedia means of education for arousing pupils' interest and activity in studying.

Analysis of recent studies and publications. The problem of improvement future teachers' training with the help of using new informational technologies, multimedia means of education attracted attention of many scholars. Particularly, the issues of forming computer literacy, informational culture of a teacher, perspectives and problems of applying multimedia means of education are considered by B. Bykov, D. Chernilevs'kyi, R. Gurevych, K. Elshyr, M. Kademia, A. Khutors'kyi, G. Kyedrovich, G. Kozlakova, Y. Mashbyts', I. Pidlasyi, Y. Polat, I. Robert, O. Spivakovs'kyi, S. Svyrydenko, I. Zakharova, M. Zhaldak Y. Zhuk, and others. One can find the justification of didactic principles under the conditions

of computer studying in the works of V. Sadykova, A. Solovov, N. Tverezovs'ka, A. Verlan', and others. The problems of professional training of junior school teachers are elucidated in the works by N. Bibik, L. Khomych, O. Savchenko, I. Shaposhnikova, G. Tarasenko, and others. The peculiarities of formation and development of the teacher's creative personality in the informational society were considered by V. Bodnar, B. Brylin, N. Kuz'mina, N. Moiseiuk, N. Nychkalo, M. Smetans'kyi, S. Sysoyeva, I. Zyazyun, and others.

The main material. The teacher's methodological preparation for the lesson with the use of multimedia means of education must consist of such stages: defining the appropriateness of use of multimedia means of education; the acquaintance with the content of multimedia means of education; defining the type and structure of the lesson; defining the place of the multimedia product in the lesson structure; teacher's self-examination of the preparation for the lesson. But first of all, one must understand that the key components of multimedia are video, slides, text, animation, audio, graphics; the term "multimedia" is used in three meanings: multimedia as a new approach to existence and storing information of different kinds; multimedia as equipment which allows operating different information; multimedia as the created program product with guidelines. The analysis of possibilities of multimedia means of education helped us to define didactic functions as follows: better illustration; development of students' cognitive interests; higher quality of their knowledge; providing individualization of studies; its intensification; facilitation of better remembering of studying materials. The peculiarity of multimedia means of education is interactivity, i.e. ability to react to students' actions, engage them in a dialogue, communicating on the "subject-object" level.

The comprehensive analysis of technical, didactic, informational sides of multimedia by V. I. Imber made it possible to determine that multimedia means is a computer technology which lets reflect information in different forms of its manifestation (text, sound, video, graphics, animation, slides, cartoons etc.) online. Multimedia means of education are program products which combine different

information (text, sound, graphics, animation etc.) of scientific-cognitive character and are able to function online [4, 7].

The teacher's mastering multimedia technology is exercised through direct activity, which consists of three components: studying (skills of working with Microsoft PowerPoint); methodological (developing his own methods of conducting lessons using multimedia means of education); professional (re-training, training teachers with computer skills).

During organizing educational process with application multimedia means of education it is important to be guided by such pattern: creating conditions for unintentional enrichment of memory, bright impressions, emotional sensation, and eager activity (M. Skatkin); formation of such circumstances, which bring up values, mutual for all youngsters, so attractive, that they stimulate to return to them, forming micro groups, capable of doing mutual tasks (V. Okon'); constant stimulation of activity of subjects of education in obtaining knowledge, encouraging learning (I. Kharlamov); the main role in the process of providing rigorous knowledge mastering, learning skills and habits, developing intellectual capacity and creativity, belongs to the teacher (V. Slaktionin) [4, 9]. Hence, multimedia means by studying presupposes ways of realization of pedagogical activity which can be divided into two groups according to the pupils' role in designing and creating computer means of studying. The first group should contain the educational products, developed by teachers for representing studying material; the pupils play passive role of information data receivers while working with these products. The second group encompasses interactive educational means, as they presuppose pupil's active role, who, using them, chooses independently chapters of studying within the frame of the topic, defining the consequence of their learning.

Every high school teacher, irrespective of the level, type and form of the institution and his/her qualification, must know how to be oriented in the mass media sphere, receive information and operate it in accordance with his/her own needs and requirements of the highly technological society. It means: *create* text documents, tables, pictures, diagrams, presentations; *use* Internet-technologies,

local networks, data bases; *practice* polling, diagnostication, testing, searching necessary information in the Internet; *develop* own electronic products (lessons, demonstration material); *combine* ready electronic products (textbooks, encyclopedias, curricula, demonstration programs etc.) in his/her professional activity.

Correspondence of the teacher's level of competence in informational-communicative technologies to the above mentioned requirements should be determined by the local educational authorities. The local authorities may use other forms of moral and material stimulating with the purpose of encouraging teachers to obtain skills of informational-communicative technologies (monthly, quarterly differential additional payment for teachers according to the level, awarding bonuses, top priority supply with informational-communicative technologies means, etc.).

The most effective, from the point of view of development thinking skills, pupils' cognitive activity and skills of independent researching activity, are means which are designed and developed by pupils themselves by learning studying material. A high level of pupils' motivation for studying is observed in the cases when they are given possibility to present results of the projects, which are interesting for them, with the help of informational technologies (for example, presentations). Presentation is a word which has two meanings: 1. Action – displaying a new product (book, fashion collection, film), advertising, promotion action; 2. The document, created with the help of the computer program PowerPoint.

Presentation, as a computer document, is a sequence of slides which replace each other, i.e. electronic pages. Demonstration of such document can take place on a computer screen or on a big screen with the help of special devices – multimedia projector, plasma screen, multimedia plateau, TV, etc. The audience sees the interchange of pictures, which may have some text, photos, drawings, diagrams, graphs, video abstracts on each of them, and it can be accompanied by some music. Demonstration of presentation often accompanies a report of a

particular person. PowerPoint program, which belongs to the Microsoft Office suite, allows creating presentations with animation effects for some objects (text, photos, and pictures), sound accompaniment, demonstration of video abstracts and using hyperlinks for the change of the defined sequence of slides demonstration.

There is no generally accepted classification of presentations according to the content and design in the literature. Particularly, L. Y. Yastrebov [5] suggests classifying presentations according to the level of their “coloring” with different effects. He distinguishes such groups: 1. Official presentation – reports of different kinds in front of serious audience, in which strict design, consistency, one model of designing of all slides is necessary, distinct structure and allocation of report points is demanded. 2. Official-emotional presentation is used for two purposes: to transfer to the audience some official information and inspire them, persuade something. For example, such presentation can be prepared for parents’ meeting. 3. “Posters” is a presentation, which consists of illustrative materials only. Slides contain only illustrations with minimum subscripts; computer is used as a usual slide-projector. All the work on explanation the content is put on the speaker; the only model of designing is desired. 4. “Double action” – the slides of the presentation contain text information, combined with pictures. This information may explain the content of the slides or “broaden” it. 5. Interactive seminar is created for conducting seminars in the mode of dialog with the audience. It is acceptable to use different animations, moving pictures, photos which rotate, navigation objects and especially – ramification of presentation: depending on listeners’ responses, their reactions to questions and statements. 6. Electronic visual aids. Presentation material must be delivered comprehensively, detailed, as far as the listener doesn’t have a possibility to ask the speaker. Additional material can be contained in hyper-links or in special Remarks to the slide. If the presentation is intended for independent work, its interface, slides navigation, possibilities of ramification must be profoundly thought over and substantiated. “Information reel” must be demonstrated independently and irrespective of the speaker, at the same time, returning automatically to the beginning. All

demonstration is conducted automatically. The presentation contains materials of informational-advertising character, audio-visual aids designed for the quick comprehension.

Presentations can be classified according to the following features as well: 1. Quantity of media means: multimedia (sounds, pictures, video abstracts); text (with minimum illustration); combined. 2. Purpose: commercial (mostly advertising character); informational; studying, etc. Let's consider studying presentations as a separate group, taking into consideration their special role in the educational process. Among studying presentations at the English lessons, according to the aims of their applications, there can be: lectures (by teachers); report about the results of activities, project, investigation (pupil's work); test (both teacher's and pupils'). According to the way of demonstration of slides, presentations can be divided into: 1. For accompanying lectures, performance – with the recording of the lecturer's speech or oral accompaniment. 2. Slide-show – without speaker's accompaniment or with the recording of the lecturer's speech. 3. Combined – with the oral accompaniment, recorded voice, a part of which can be slide-show.

Besides, studying presentations can be classified according to the didactic features: teacher's and pupils'. At the same time, teacher's presentations are meant for: accompanying lectures (text, illustrations, and interactive means of communication with the audience); illustrating lectures, reports (only pictures, graphics, video); generalization, representing pupils' results, for example, for reports at the staff meetings, methodological meetings, etc.; setting problems, creating cognitive motivation of pupils, colleagues, etc.; checking or self-evaluation of knowledge and skills (i.e. tests); exercising the above mentioned functions, i.e. combined. Teacher's presentations, according to the purpose, can be: - problem settling (introduction to a topic); - informative: instructions, examples for pupils, forms of evaluation, consulting (is used by pupils independently during learning process); - diagnostic, controlling (is used for checking pupils' knowledge, self-evaluation at the end of a topic, chapter, lesson;

individually and independently after covering a chapter, topic and is available for them in the presence of a teacher or publicly available).

The role and place of pupils' presentations are not fully studied and that is why didactic possibilities of multimedia presentations as a powerful means of studying and development of pupils are underestimated, that is why they are used by pedagogues in the education process incorrectly. Pupils' multimedia presentations should be reasonably used both for presenting the results of their own investigations, projects, independent work, as well as for doing anticipatory tasks as a means of acquaintance with the new information. According to the number of pupils, who plan, design, develop, demonstrate presentations, there can be: individual; group; class presentations. One can define the advantages of multimedia presentations: • presentations can be made to be shown on the wall screen for a group of listeners in the classroom, used for individual watching on a computer; • presentations can be used for both lessons with the reporter's immediate participation, and without his/her participation (for example, for self-education); • allow adapting to the peculiarities of pupils' perception of the studying material; • time interactivity makes it possible for the pupils to define independently the beginning, duration of the process of studying, as well as the speed of covering the studying material; • interactivity by selecting the needed sequence of reflecting studying information provides with the free defining of interchange of using pieces of information; • content interactivity allows changing, supplementing or reducing the amount of the content information; • presentations are easily disseminated, can be demonstrated on practically any computer and are a useful means of audio-visual support of any report – performance at a scientific conference or a report in front of the class.

Conclusions. Thereby, high school resources may take into consideration peculiarities of studying, connected with different levels of general preparation of those, who are taught (the estimation of knowledge is necessary, as well as adapting the system for optimal rendering), those, who teach, the level of computer competence (simple and apprehensible interface is necessary). It is important to

provide such coordination of studying topics, so that covering one topic wouldn't affect others harmfully and wouldn't outgo studying of the parallel topics.

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