Prospective Directions of Using Multimedia Technologies in the Training of Future Specialists

Vasyl Shunkov[1], Olena Shevtsova[2], Valentyne Koval[3], Tetyana Grygorenko[4], Liudmyla Yefymenko[5], Yuliia Smolianko[6], Oleksandr Kuchai[7]

[1] Candidate of Chemical Science, Associate Professor, Associate Professor of the Department of Biological and General Chemistry of the National Pirogov Memorial Medical University, Ukraine

[2] Candidate of Pedagogical Science, Associate Professor, Department of Art Education, Volodymyr Vynnychenko Central Ukrainian State Pedagogical University, Ukraine

[3] Doctor of Pedagogical Sciences, Professor, Department of Ukrainian Language with Teaching Methods, Pavlo Tychyna Uman State Pedagogical University, Ukraine

[4] Doctor of Pedagogical Sciences, Professor, Department of Ukrainian Language with Teaching Methods, Pavlo Tychyna Uman State Pedagogical University, Ukraine

[5] Doctor of Philosophy, Tutor, Chair of Theory and Methodology of Preschool Education, Municipal Establishment "Kharkiv Humanitarian Pedagogical Academy" of Kharkiv Regional Council, Ukraine

[6] Candidate of Pedagogical Sciences, Senior Lecturer, Nursery and Primary Education Department, T.H. Shevchenko National University "Chernihiv Colehium", Ukraine

[7] Doctor of Pedagogical Sciences, Professor, Department of Pedagogy, National University of Life and Environmental Sciences of Ukraine, Ukraine

Summary

The direction of development that is recognized as the main one in the course of reforms of educational systems in the leading countries of the world - the USA, Great Britain, Canada, Germany, France, etc. is singled out. The main task of the reform process is to train the staff needed by society in the right amount, in the minimum time and with minimal costs. It was found that a promising area is the use of multimedia technology in educational activities to create a design of a virtual computer environment by means of digitizing audiovisual information. The purpose of the application of multimedia technologies of education in higher education institutions is to prepare students for full-fledged life in the information society. This requires outlining the pedagogical objectives of multimedia learning technologies: intensification of all levels of the educational process, improving its efficiency and quality; implementation of the social order caused by the informatization of modern society (training of specialists in the field of informatics and computer technology; training of the user of multimedia technologies); construction of an open education system that optimizes the dynamics of the trajectory of self-education; systematic integration of subject areas of knowledge; development of creative potential of the student, his ability to communicative actions; formation of skills in organizing and conducting experimental research activities; culture of educational work; development and formation of information culture of students The effectiveness of the use of network and multimedia technologies in the training of future teachers depends on the level of conceptual development of pedagogical tools used in the organization of educational and cognitive activities of students; from the degree of adaptability of the educational and information environment of training a modern specialist to his professional environment; from the level of readiness of students to perform professionally-oriented tasks with the help of network and multimedia technologies.

Key words:
multimedia technologies, training of future specialists, perspective direction in education, purpose of application of multimedia technologies of education, institutions of higher education, preparation of students for full-fledged vital activity in the conditions of information society.

1. Introduction

The strategic direction of the evolution of educational systems in modern society is the intellectual and moral development of man on the basis of involvement in various independent activities in various fields of knowledge. Rapid updating of knowledge, in particular basic, in the field of technical sciences puts before the higher school the task of training specialists capable of:

- to adapt to rapidly changing realities, to independently acquire the knowledge and skills necessary for successful work, to apply them in practice to perform various tasks;

- think critically, be able to notice problems, choose rational ways to solve them, using modern technologies;

- properly work with information, process information, as well as effectively use information resources, including global, to perform tasks;

- be able to work in teams that bring together professionals from different fields of knowledge.

This direction of development is recognized as the main one in the course of reforms of educational systems in the

leading countries of the world - the USA, Great Britain, Canada, Germany, France and others. Thus the main task of process of reforming consists in preparation of the shots necessary to a society in the necessary quantity, for the minimum time and with the minimum expenses [13].

Today, information technology is widely used in pedagogy as a science, as well as directly in the practice of the pedagogical process. They gained the most popularity in such activities as distance learning, assistance in the education management system, development of programs and virtual textbooks in various subjects, searching the web for information for the educational process, computer testing of students, creating electronic libraries, forming a single scientific electronic environment, publication of virtual magazines and newspapers on pedagogical topics, teleconferences, expansion of international cooperation in the field of Internet education.

2. Analysis of recent research and publications

Important issues related to improving the quality of student learning through computer technology are considered by many researchers. D. Ardac, S. Akaygun [2], J. Kiboss [16] R. Mayer and his colleagues [24] developed a theory of multimedia design, according to which materials that facilitate the selection, organization and integration of cognitive information are of particular value to pedagogical science. D. Ardac and A. Sezen [3] note that the computerized learning environment offers several opportunities that should be used to improve the learning process. V. Williamson and M. Abraham [31], studying the impact of computer animation on the quality of knowledge, they conclude that the use of animation improves the understanding of educational material by students. J. Russell and others [28] argue that the use of computer technology in teaching expands the means of visualization of scientific phenomena, and specific visualizations can help students better understand alternative concepts .

O. Kuchai, S. Yakovenko, T. Zorochkina, T. Okolnycha, I. Demchenko, & T. Kuchai emphasize about the problems of Distance Learning in Specialists Training in Modern Terms of The Informative Society During COVID-19 [18].

A. Kuzminskyi, O. Kuchai, O. Bida focus attention on the usage of Polish Experience in Training Computer Science Specialists in the Pedagogical Education System of Ukraine [21].

The essence of multimedia technologies and features of their application in the pedagogical process are insufficiently described in terms of information and require detailed analysis. Thus, different approaches to the classification of multimedia teaching aids are substantiated in scientific sources.

J. Brown proposes to classify multimedia teaching aids by methodological purpose:

- mentoring - to learn new material;
- training - to practice skills and abilities;
- control - to control the level of assimilation of knowledge;
- demonstration - to illustrate the educational material.

Multimedia as a form of presenting information of various kinds expands the possibilities of organizing educational activities. By increasing the share of information presented in a visual form, the teacher gets new opportunities to present educational material. Electronic libraries with ready multimedia resources are created in educational institutions, automated presentation of various didactic materials is provided. In the means of multimedia embodied their functional and methodological purpose [7].

O. Kuchai in his article lights up the conceptual principles of training future teachers by means of multimedia technologies and the use of multimedia technologies in the training of primary school teachers [19; 20].

T. Kuchai, O. Biletska, , T. Kravtsova, N. Bidyuk, V. Tretko & O. Kuchai give an emphasis to Usage of the Activity Approach in Teaching Foreign Languages in Higher Education Institutions [5].

V. Imber notes that multimedia training for future teachers expands the sources of obtaining and presenting new information; develops independence and creative thinking in the process of creating your own multimedia projects; intensifies the pace of learning; optimizes the individual approach to learning [12].

3. Research methods

To achieve this goal, the following research methods were used: theoretical (analysis of philosophical, pedagogical, psychological literature), that allows to justify the starting points of the study; interpretive-analytical method, on the basis of which sources are studied using synthesis, analysis, systematization and generalization.

4. Results

The practical implementation of these technologies in the training of future professionals is inextricably linked with the use of telecommunications, which allow in the shortest possible time to disseminate advanced pedagogical technologies, professional knowledge in various fields, to form students' communication skills, ability to work with information sources. A promising area is the use of multimedia technology in educational activities to create a design of a virtual computer environment by means of digitizing audiovisual information. Multimedia technology convincingly illustrates almost any known fact in the field of science, technology, art, helping to assess and summarize the known picture, and sometimes scientifically predict the

future development of even the whole field of human activity.

Multimedia technologies are the main "building material" for society as a whole. In today's world there is a need to prepare people for life in a multimedia environment. This process should begin as early as possible, because the child's contact with the media is available almost from birth.

Today motivates the need to train specialists of all educational levels to work in the field of multimedia education and information technology. The formation of competence in the use of media becomes an important challenge that predicts familiarity with the broad context of civilizational change, taking into account historical, social, cultural, psychological and political aspects.

Experts use multimedia technologies as a tool that helps their own development, the formation of computer skills in solving problems, support for graphic art, music or even literature, etc. [25].

The purpose of the application of multimedia technologies of education in higher education institutions is to prepare students for full-fledged life in the information society. This requires outlining the pedagogical objectives of multimedia learning technologies: intensification of all levels of the educational process, improving its efficiency and quality; implementation of the social order caused by the informatization of modern society (training of specialists in the field of informatics and computer technology; training of the user of multimedia technologies); construction of an open education system that optimizes the dynamics of the trajectory of self-education; systematic integration of subject areas of knowledge; development of creative potential of the student, his ability to communicative actions; formation of skills in organizing and conducting experimental research activities; culture of educational work; development and formation of information culture of students [6].

The use of multimedia tools in open and traditional education predicts several basic methods of teaching. Typically, all of them can be divided into two main classes, according to the principles of student interaction with computer learning. Some educational products are developed to control the process of presenting information, therefore, students are offered only a passive role of the recipient of information. Other multimedia educational tools are interactive, as they involve the active role of the student, who independently selects units within the topic, determining the sequence of their study.

Intensive development of technology in the second half of XX century. led to the emergence of a number of new multimedia: video, satellite TV, computers, the World Wide Web. The 21st century is an era of information and communication. The main new attribute is a computer with Internet access, which allows a person to communicate with the whole world.

The rapid development of multimedia is changing the world in which we live and encouraging scientific reflection on the power of their influence. It is widely believed that familiarity with and understanding of the media, as well as the ability to use them, is a pass to active participation in most areas of our lives.

Multimedia technologies are an organic component of the human rhythm of life, an illiquid component of culture, a resource of communication, a symbol of modernity and transformation, which significantly changes the functioning of modern society.

Modern media civilization is generating a new model of society, changing everything around, including the school. First of all, the consciousness of young people underwent radical changes. Young people pay much less attention than before to printed sources of information, they are not accustomed to long reading of literature and listening to long lectures. This is the so-called screen generation, brought up on television, video clips, action movies and short messages. Young people find it difficult to perceive abstract concepts if they are not presented in the form of models and paintings. The generation brought up on visual media has a different structure of perception, a reduced sphere of concentration, which significantly affects the educational process and popular culture [9].

The theory of generations, which originated in 1991 in the United States, is noteworthy. The founders of this theory are considered to be economist and demographer N. Howe and historian, writer W. Strauss. After analyzing the history of the United States, N. Howe and W. Strauss identified the periods during which most people, regardless of age difference, are carriers of similar values, which are formed under the influence of social, political, economic, technological events and family upbringing. The theory states that the period of time during which members of one generation are born is about 20 years [14]. Today's youth is very different from previous generations. The modern teenager reads little, watches much more TV, navigates the Internet freely. Some philosophers believe that the teenager is now forming a so-called clip consciousness. He can not concentrate on any subject for more than 5-7 seconds, he presses a button, clicks and moves on to the perception of the next plot [8]. "Clip Consciousness" is the ability of laconic and color perception of the world around with the help of a short, bright image embodied in the form of a video clip, TV news, etc. This consciousness is characterized by a high speed of perception of images, lack of emphasis on detail. "Clipping" allows you to see only what is on the surface, without penetrating into the essence of the process or phenomenon. Its main characteristics are visuality, immanence, emotionality, associativity. Under the influence of its influence a person does not have time to comprehend the information that comes to him. It is also incapable of perceiving long thoughts, instead focusing on short, easy-to-remember pieces of information. This leads

to the fact that a person loses the ease of associations, vivacity of imagination, emotional perception and mobility of thought. Human thinking is impoverished and loses its creative potential [17].

B. Shalaginov focuses on the fragmentary-clip consciousness of the student, which is formed from random fragments of aesthetic and life impressions, which, relatively speaking, get lost in his head in a chaotic manner in a certain, very strong, but completely unstructured substance. There are natural elements that are beyond the control of not only the teacher but also the student. Their sudden manifestation is unpredictable [29]. There is no doubt that working with a computer at school is of great interest to children and increases the motivation to learn. The use of computer technology creates the possibility of access to large arrays of previously unavailable modern, fresh information, the implementation of "dialogue" with the source of knowledge. And the combination of color, animation, music, sound language, dynamic models, etc. expands the possibilities of presenting educational information. In this regard, the modern teacher must be able to work with the student, given his "clip" hypertext consciousness, he must be well versed in the global information environment, be able to independently form images and symbols, bringing them into the Internet and screen. The teacher must be able to organize the educational space of the lesson so that the learning process takes place at the level of modern opportunities and needs of the young generation of the early XXI century. To do this, the teacher must have modern technology, have the ability to create learning situations based on the use of computer and Internet resources [8].

Today, information and communication technologies (ICT) and multimedia, integrated into the teaching and learning process, are influencing the traditional learning system. Previously, in the process of teaching and learning, as a rule, one media device was used as a means of teaching and presenting educational content in a linear manner. Nowadays, multimedia allows you to use several media elements. Learning materials come to the multisensory environment, thanks to multimedia elements (text, graphics, animation, sound and video). "Multimedia offers a great alternative to traditional learning. Exploring and learning about the world at different rates, each student has the opportunity to learn about the full potential at its discretion" [30]. The combination of multimedia technology and learning material is stored on a storage device and displayed on a computer or stored as a web file on the Internet. Students have access to these modules and are free to participate in the learning process anywhere, anytime. Thus, the mode of study is student-centered [23].

Multimedia technologies are changing the way people communicate, generating radical changes in the education system and influencing the way students present information. Users have the opportunity to apply

multimedia technology in the audience in many ways. Due to their multisensory ability, multimedia can serve as a learning tool for presenting and presenting concepts and ideas based on different types of media (text, images, sound, animation and video). The analyzed technologies modernize the use of traditional teaching methods, such as "chalk and blackboard", using a multimedia learning strategy.

The evolution of multimedia technologies has enabled students of all specialties to participate directly in learning, making them active participants in their own learning process rather than passive listeners. Using multimedia technologies, they can create multimedia applications as part of a project. "Multimedia Design" is an application that offers a new perspective on the process of learning a designer, presenting information and knowledge in a new and innovative way. According to this approach to learning, the emphasis shifts from the traditional content of learning to the practical creation of projects or learning.

When preparing multimedia projects, students build the knowledge presented by teachers in a multisensory way. The educational process becomes more meaningful for them. Finally, by creating multimedia projects, students improve their critical thinking, problem-solving, and communication skills and apply them in a group or team that is in demand in real-life situations. Thus, multimedia allows students to participate independently in the learning process.

The influence of ICT, in particular multimedia technologies, on education has had a significant impact on instructional and developmental methods and methods of communicating information to students. This activated the evolution of new concepts and innovative teaching techniques in the educational process. It also encourages students to learn better. Multimedia technologies develop students' self-esteem, as well as creative abilities [1].

Modern multimedia tools optimize the learning of all disciplines. Despite the obvious advantages in the use of multimedia, their use in teaching is limited by lack of technology, untrained teachers, lack or inconsistency of software. Therefore, the number of teachers who use multimedia tools is relatively small.

The most important conditions for the effective use of multimedia in the formation of pedagogical skills include:

– development of software capable of performing the formulated tasks as clearly as possible;

– giving each student the opportunity to work on a personal computer;

– implementation of a humanistic model of learning, where the teacher plays the role of an accomplice in productive pedagogical activities;

– adjustment of target and semantic components of the process of formation of pedagogical skills;

– development of methods for using computer programs, which involves the use of computers in specific

activities (calculation, problem solving, accumulation and processing of information, design and modeling);

– actualization of self-education of pedagogical skills on the basis of active self-knowledge.

The effectiveness of the use of network and multimedia technologies in the training of future teachers depends on the level of conceptual development of pedagogical tools used in the organization of educational and cognitive activities of students; from the degree of adaptability of the educational and information environment of training a modern specialist to his professional environment; from the level of readiness of students to perform professionally-oriented tasks with the help of network and multimedia technologies.

The lack of proper interpretation of the role and place of multimedia in the formation of pedagogical skills of future teachers in the educational process of higher education institutions is one of the urgent educational problems. Pedagogical skills become a set of actions used by the teacher in a certain system, which help to achieve noticeable results in pedagogical activities.

The process of forming pedagogical skills of a teacher is complex and multifaceted. It identifies the most common periods of formation of the teacher's personality and the formation of professional and pedagogical skills, which cover the pre-university, university and post-university stages, each of which has its own characteristics. The purpose of our study is to study the university period of specialist training, in particular the process of forming pedagogical skills through multimedia.

The use of multimedia in teaching, as noted by O. Osin [26], enables:

– to fulfill the task of humanization of education;

– increase the efficiency of the educational process;

– to develop personal qualities of students (ability to self-education, self-education, self-learning, self-development, creative abilities, ability to apply the received knowledge in practice, cognitive interest, attitude to work);

– to develop communicative and social qualities of students;

– significantly expand the possibilities of individualization and differentiation of open and distance learning by providing each student with a personal educator, whose role is played by a computer;

– to characterize the student as an active subject of knowledge, to recognize his self-worth;

– take into account the subjective experience of the student, his individual characteristics;

– to realize independent educational activity during which the student is self-taught and self-developed;

– to form abilities and skills of work with modern technologies that promotes adaptation to social conditions which change quickly, for successful realization of professional tasks.

To fully realize the academic potential of multimedia technologies, students need the support of competent teachers. Using multimedia tools, students work on the learning material in different ways, choosing how to study the material, how to use the interactive capabilities of the multimedia program and how to build collaboration with their classmates. Multimedia teaching aids are promising and highly effective tools through which the teacher provides information to a greater extent than traditional sources of information; in an integrated form covers not only text, graphics, diagrams, but also sound, animation, video, etc .; selects types of information in the sequence that corresponds to the logic of knowledge and levels of perception of a particular contingent of students [4].

Multimedia systems are common in modern pedagogical practice, as they are a convenient resource for the development of lectures, seminars, laboratory and practical work. Thus, when planning a lesson, the teacher can provide text and graphic materials, visual demonstration of new material, short-term face-to-face interview, control measures for quick automatic verification, a workshop on computational tasks with the possibility of obtaining a hint. In addition, the educator has the opportunity to add to the content of each lecture or seminar new information about the object of study, found by him in the information resources of the World Wide Web and presented in the form of hypertext.

Currently, it is almost impossible to find a field of study that does not use a variety of multimedia teaching aids and multimedia textbooks, encyclopedias, reference books, etc., each of which is a hypermedia system that connects texts, photos, videos, animations, etc., related in content [6].

At the beginning of the XXI century, the development of computer technology has given teachers the opportunity to combine text, graphics, audio and video resources in computer programs [22].

According to the traditional field of study, the role of the teacher is to provide content and information to students. For decades, educators have used different types of instructional technology to convey information to students. Radio, film, television, and video are instructional media that were popular in the past, but have not been used effectively enough. The advent of multimedia and ICT quickly modified the learning scenario by introducing instructional technologies in educational institutions, especially in higher education: the use of multimedia, dialogue, multisensory forms by teachers instead of the traditional unified media format (text). This guarantees not only the acquisition of knowledge and information by students in a more efficient way, but also their more productive work.

The focus in education is now shifted from the traditional format to the innovative one, where students become active actors and participate in their own learning process. Such changes are caused by the impact of ICTs,

especially multimedia technologies, on the teaching and learning process. Multimedia technologies are able to transform traditional materials into multimedia content, and thus improve student learning. In this context, there is a need to adjust the teacher's approach to learning, content preparation and transfer of educational materials in accordance with new phenomena. Educators interpret multimedia as part of a combination of resources that include media elements, instructional systems, and computer systems [Mai Neo, Ken Neo Tse-Kian & Ahmad Rafi Mohamed Eshaq. Designing Interactive Multimedia Curricula to Enhance Teaching and Lear // International Journal of Instructional Media 34. 2017. № 1. P. 51-59].

Over the years, educators have developed interactive methods to improve student learning, including creative ways to work with the classroom while keeping their students productive. These methods include simple electronic games created by teachers. The computer, the Internet, and various electronic technologies have added interest to learning and created new opportunities to combine resources for teaching in school [10].

Recommendations are formulated for teachers and educators who prepare future professionals for the use of multimedia in the educational process: the media should be treated critically; teacher's responsibility - joint understanding with students of the essence of multimedia technologies; the teacher must demonstrate to the pupils the manipulative technique and the fiction of multimedia; when working with children, you should not criticize multimedia technologies too harshly; educator must show how the world is changing for the better with the help of multimedia technologies [9]. Informatization of education develops on the basis of realization of possibilities of multimedia technologies, supports integration tendencies of process of knowledge of laws of subject branches and environment (social, ecological, information, etc.), combining them with advantages of individualization and differentiation of training.

It is necessary to characterize the peculiar requirements for multimedia learning, which should be observed during certain types of classes. Multimedia teaching aids used in lectures should illustrate the presented material with video images, animated videos with audio, visualize complex phenomena and processes with text, graphics, sound. In the course of laboratory classes the means of automation of student preparation for work, admission to work, execution of experiment (in particular with remote access), processing of experimental data, registration of results of laboratory work and its protection become important. Thanks to multimedia teaching aids, it is possible to vary the pace of the student's independent work, to model the components that create virtual laboratories, and to study various phenomena in a delayed time dimension.

Multimedia teaching aids used in practical classes should provide information about the topic, purpose and procedure of the lesson; control the knowledge of each student; inform about the correctness of the answer; present the necessary theoretical material or methods of performing tasks; assess students' knowledge; to provide feedback in the mode "teacher - multimedia learning tool - student".

The content and structure of multimedia teaching aids used in the course of independent work of students should correspond to the curriculum of the discipline with a simultaneous focus on in-depth study of the theory. Such tools should have a more detailed system of contextual reference books, comments and tips. When organizing open and distance education with the use of multimedia teaching aids, teachers should take into account the psychology of interpersonal relationships "teacher - student". It is proved that a positive or negative attitude to the teacher's personality is formed in the first minutes of his contact with students. If the teacher is perceived positively in a short time, then all the information provided by him will be evaluated by students properly, no matter how complex it may be.

Thus, the attention of students, their knowledge directly depends on the teacher's ability to organize classes. In order to properly organize multimedia information in the classroom, he needs to find out what is the main and secondary in the material, giving preference to the main; outline specific tasks; determine the ultimate goal and break down the stages of its achievement; focus on the meaningfulness and content of student activities; strive to intensify mental activity; learn to detect errors; monitor the performance of tasks.

In connection with the introduction of multimedia technology in education, the content of education is improving in terms of modernization of methodology and content selection criteria, due primarily to the need to focus in the educational process not only on students' knowledge, skills and abilities, but also on the development of their intellectual potential for the development of skills to independently acquire knowledge in terms of active use of modern technologies of information interaction, especially multimedia. Current approaches in the field of formalization of knowledge, structuring of educational material make it possible to eliminate the most important limitation caused by information overload. Unlike the traditional presentation of educational material in the form of linear structures, modern hypertext and hypermedia presentation of educational information helps to increase the amount of material, expanding both the topic and the range of its presentation, facilitating the search, interpretation, choice of aspect. The outlined direction of research predicts the restructuring of the content in accordance with the rejection of linear forms of presentation of educational material.

The development and application of creative systems of integration character used in modern multimedia technologies in the process of performing complex pedagogical tasks is considered promising. Multimedia

technology influences the realization of the possibilities of telecommunication network resources as a global environment of continuing education. Modern approaches to the use of web-technologies involve information interaction of participants in the educational process in different modes of operation of the World Information Network. Internet technology provides users with all the resources of global telecommunications, helps to organize educational activities using application and tool software and systems. It is possible to use in the educational process the information environment of science (databases, distributed information processing and dissemination of scientific information based on Internet technology) and culture (electronic libraries, virtual museums, art presentations, exhibitions). In this regard, it is necessary to substantiate the scientific and pedagogical principles of creating and using the global information environment of continuing education and the global information environment of pedagogical science on the basis of the formation of the Unified educational space (information-subject environment).

Multimedia is a necessary element of a properly organized learning process. The computer is used in many areas of youth education, because with it the student has powerful resources. With the help of a computer, students can not only edit a university newspaper, but also perform other functions [27]. Multimedia technologies enable teachers to diversify methods and organizational forms of learning. This area of research is characterized by the creation of pedagogical technologies and methodological systems of teaching, focused on the formation of skills to conduct educational activities using modern teaching methods and tools, means of information interaction and communication.

Modern multimedia are carriers of various values - both positive and negative. In their daily pedagogical work, teachers should use computer educational programs, the Internet or multimedia encyclopedias [15].

To take into account the individual capabilities of the student during classes, it is necessary to use the lock of the level of difficulty. Level A - a student who is positively different from others in education, performs the assigned tasks without error, in further work will receive more complex tasks. Level B - the student acquires new knowledge, makes insignificant mistakes, will continue to use the acquired skills and abilities. Level C - the student makes little progress during classes, the teacher helps him by offering exercises that facilitate the mastery of the basic program content [11].

Conclusions

Thus, multimedia learning technologies are widely used for students around the world. Scientists get positive results from the introduction of various technologies in education, including multimedia. The advantages of multimedia play an important role in the perception of scientific concepts and terms, the learning process, in shaping the attitude of students to learning.

Recent advances in multimedia technology are attracting the attention of scholars in the field of education.

Researchers focus on creating multimedia instructional environments, such as electronic classrooms, virtual classrooms, and interactive multimedia environments. A common component of these multimedia instruction environments is the projector. This is an easy way to convey visual information during lectures. By designing a lecture on the screen in front of the audience, the teacher gets the best results. Multimedia teacher support can be easily created thanks to the program "Microsoft PowerPoint", which has a high potential for creative learning and learning by students.

The use of multimedia technologies is closely related to increasing the competence of the future specialist. The use of multimedia technologies primarily contributes to the implementation of an individual approach to learning, giving the student or teacher the opportunity to work in an acceptable mode and rhythm; introduction of the principle of intensification of the educational process, "mechanizing" the process of developing individual skills, allowing multiple repetitions of operations. The use of multimedia in the educational process helps to implement the principle of clarity.

The use of multimedia technologies motivates a new paradigm in educational methods and strategies, which requires new forms of learning and innovative ways of transferring educational materials to students. The functioning of the Internet has expanded learning opportunities within a global perspective, giving students access to educational resources and information around the world. The use of multimedia technologies is limited only by the implementation of pedagogical learning objectives, and is identified with the formation of practical skills and abilities. Multimedia technologies contribute to the realization of pedagogical goals, integrating into the educational process and interacting with its components such as content, forms and methods of teaching. Multimedia technologies are an effective means of learning, because due to their multifunctionality there are conditions for the fullest possible achievement of pedagogical goals in the educational process.

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