FACTORS FOR THE FORMATION OF MULTIMEDIA COMPETENCIES IN IMPROVING THE METHODOLOGY OF TEACHING SPECIALIST SUBJECTS

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Abstract. *This article cites the advantages of multimedia applications in the formation of competencies of teachers and students in specialized subjects and the replacement of teaching methodology with modern innovative methods.*
Keywords: *method, competence, multimedia, ICT, information, technology.*

Introduction: The formation of competencies *(competence is derived from the Latin word "competo", meaning "I will achieve, I will comply, I will fit" - meaning a certain set of knowledge, skills, qualifications that a person possesses* [2].*)* in the subjects they study in students in the educational process is due to the implementation and organization of technical and computer tools, information telecommunication networks and electron educational technologies. Knowledge of the name of technical and software tools and tools that are found in everyday life in order to enter into interaction in society, not only in the native language, but also in foreign languages, forms a communicative competence. Being able to track the necessary information from Media sources, knowing about security measures, sorting information from media sources, and being able to use them effectively shape the competence of working with information in readers [P.3,18]. It is the science of Informatics and information technology that, as one of the fundamental areas of scientific knowledge, forms a systematic-informational approach to the analysis of the environment, studies information processes and serves to solve the problems of many specialties based on the use of Information Technology. At the moment, in all educational institutions, the need arises to improve the methodology of teaching this discipline. It is important to optimize the processes of delivery of subjects taught in various educational institutions in our republic in an effective, high-quality and understandable way to its audience and to systematically model them. Enough materials and experiences have been collected on such works, and electron educational resources are being created and created.

Materials:

One of the important issues is the construction of the digital learning process, which is relevant today, and the formation of a digital generation of students. The digital economy - serves as the primary source for setting these educational goals.

Digitization of the economic sphere significantly changes the educational system, focusing on the need to form a new set of digital competencies (digital literacy), regardless of profession or specialty.

To date, it assumes that we should not only be limited to the need to develop students ' digital competence, but also that we should pay special attention to the digital literacy of teachers in order to improve teaching methods.

"What is your competence?" we must ask each subject teacher and demand this literacy from them if necessary. [1] The core of digital technology is also ICT, IT and multimedia.

The development of educational process is directly related to the economy. Teaching any subject in the educational process on the basis of multimedia applications plays an important role in communicating the goals and phases of the science to students on the basis of real factors. When studying the technology of creating Multimedia applications, a scenario is developed that expresses how they are created. Each multimedia application is made up of separate components. The role and role of multimedia tools in the creation of such applications is incomparable. It is definitely evaluated by what technical tool and what software tool is used. The applications to be created are characterized by static elementality or Dynamic elementality, and technical tools and software tools are selected based on their type. Multimedia applications, on the one hand, provide relief first for the science teacher, and on the other hand, they also provide comfort for independent practitioners. Application creation processes are also complex and rely on certain laws.

The content of the work performed during the stages of creating multimedia applications is mentioned in Table 1.

Table 1.

Content of work performed at the stages of creating multimedia applications[1]

№	Stage name	Content of work to be done
1	Selection of sources	As a resource, it is advisable to choose a resource or electronic publications that satisfy the following conditions: Source or publication that is fully compatible with DTS; Convenient resources for creating hypertext; Source with full volume material; Sources with convenient forms.
2	Creating a list of Contents and concepts	The creation of a table of contents, that is, a list of concepts in which the material is the least in size and the content is complete, as well as necessary and sufficient for the study of science, is compiled and carried out by dividing into parts
3	Processing texts by parts	In accordance with the structure of the contents, indices and modules, the source texts are processed, the texts that are not included in the list are removed, the missing ones are written in the sources, a context Help (Help) System is created. Connections between materials and hyper appeals are determined. Thus, a project for the implementation of hypertext on a computer is prepared

[1] Information competence of a teacher refers to the knowledge of the subject, which, forming their competence for working with information, allows effective decisions in pedagogical activity and includes the following elements: motivation, need and interest in obtaining knowledge, skills and qualifications in the field of technical, software; a set of Social, natural and technical knowledge that reflects the system of modern information society; knowledge; methods and actions that determine the operational foundations of search activity in the field of software and technical resources; experience formed as a result of human and computer relations.

4	Electronic application of hypertext	Hypertext is converted into an electronic form. As a result, a simple electronic edition is created, which can be used for educational purposes. Many call this simple electronic publication an electronic textbook
5	Creating computer support	Work related to the computer is created, that is, the data is transferred to the computer in a specific case, it is determined in what form the computer response should appear. As a result, an electronic textbook is created, which is necessary for students, useful for audience classes and has a favorable property for teachers. At this stage, the electronic textbook becomes ready for the next perfection, that is, voicing and visualization with multimedia tools
6	Selection of material for the multimedia field	The explanatory styles of separate concepts and affirmations are changed, and texts are selected for replacement with multimedia materials.
7	Creating a sound field and launching it	Multimedia as well as voice texts are created in order to use students ' hearing skills to make it easier to understand and remember the material being studied, and in order to lighten the screen a little from textual information. Created voice texts are written on a dictaphone and applied on a computer
8	Preparing the material for visualization	To make it easier to understand and remember the material being studied, a visualization scenario is created with the aim of using the students ' ability to feel and to use the greatest amount of exhibitionism
9	Visualization of the material	Texts are visualized, that is, using animation, painting, graphics, computerized coverage of the created script

Teaching methods are very numerous and diverse, they are increasing, improving from year to year, new teaching tools are being created. Innovative technologies are the pedagogical process and the introduction of innovations and changes in the activities of the teacher and the student, in the implementation of which mainly interactive methods are fully used [3, P.26].

The demonstration method occupies the most important place in the methodology for teaching" Informatics and Information Technology", and the teaching methodology based on multimedia applications using interactive methods such as" webQuest"," experience exchange "and" rotation " has been somehow improved.

One day, whether we want or not, a wide path will be opened to the digital future, and communication and multimediacommunication will stand at the prospect of this future, as well as at the Central Link. We have seen and used different forms of communication at different times. Various forms of communication were also relevant in their day. Over time, they led to the emergence of new forms. But so far, the old forms of communication have not ceased to exist. For example, the appearance of the book as a result of the appearance of writing and printing, and its relevance so far. The evolution of electricity (Telegraph, Telephone, voice recording), media (cinema, television, radio), digital (computer, Internet) also in the field of multimedia is the result of the formation and development of each type of media and a new era, first of all, digital media.

The era of the formation of the digital world embodies several evolutions, the first steps of which are automation + digitization. We carry out the digitization process through digital

transformation. Digital transformation is a process that consists of applying innovative and digital technologies to a commercial process, increasing efficiency, optimizing costs, increasing productivity and ensuring that organizations are competitive. Similar digital transformation consists in changing the material worldview of people, business models and organizational processes, since it is necessary to adapt to the rapidly changing technological environment around the world and satisfy the requirements of modern customers.

Within the framework of digital transformation, a number of technologies can be applied. We can cite some such technologies: artificial intelligence, cloud technology, internet (IoT) items, block chain technology, etc. The role of multimedia technologies in the optimal use of a mixture of such technologies is incomparable. Now we will consider a number of related aspects of multimedia communication and digital transformation. In the development of today's modern education, the digital transformation of education is considered an important resource and assumes a radical change in the image of thinking of individuals. Such changes can be attributed to:

1. Updating training content;
2. Updating organizational forms and methods of educational work;
3. Assessment of educational results based on achievements and planned work;
4. Ensuring the integration[2] of new technologies in all important areas of human activity;
5. Making drastic changes in technology, culture and interaction processes.

Thus, we can express the stages of the implementation of digital transformation processes in education based on their evolution as follows (Figure 1):

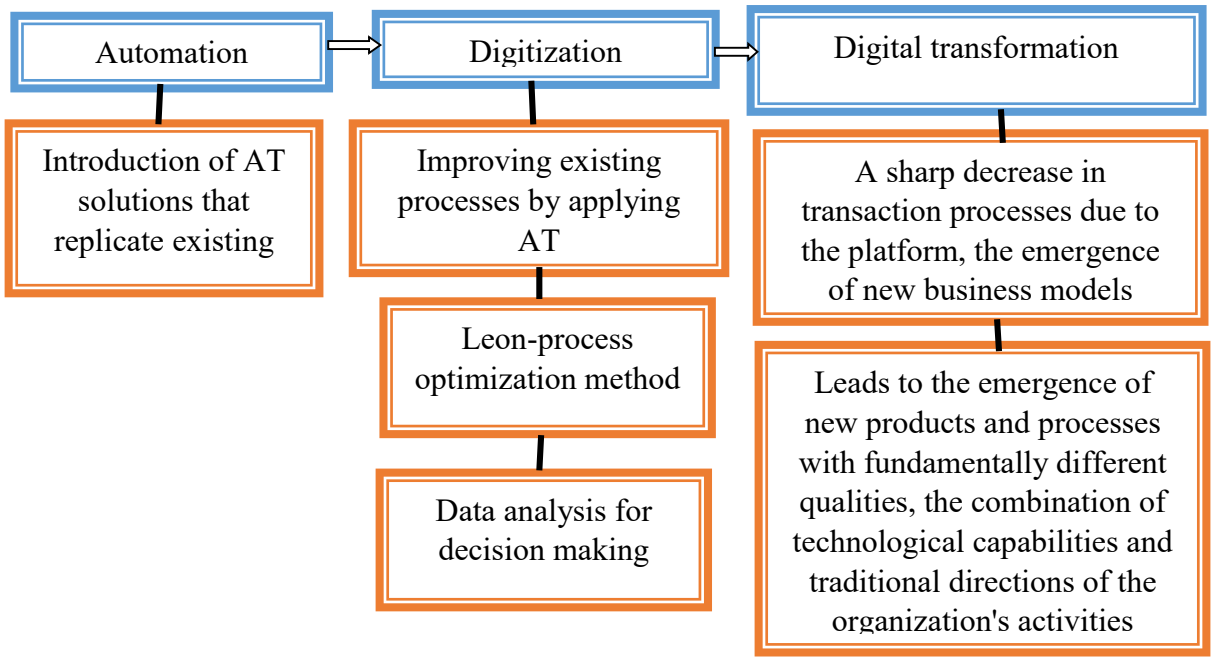

Figure 1. Stages of digital transformation of the educational process.

The dynamic growth of the technical and economic characteristics of high-tech innovative products contributes to a significant increase in the computing power and intellectual potential of products, a rapid transformation of outdated standards and technological platforms of information and communication systems and networks. At the same time, the functioning of ultra-high-speed

[2]Translation from Latin means restoration, unification.News.mail.ru

networks, mobile devices and Information Systems is aimed at improving the quality of multimedia content and the quality of large-scale services provided to the population.

Digital transformation can be attributed to the fact that it is a new idea or technology that is being promoted by some companies that have developed in the world. The emergence of these new technologies and products can generate simple communication with consumers, but in order for a sufficiently fast and high-quality communication to be organized, an enterprise or institution must be comprehensively provided. Digital transformation requires a good and financially stable consumer. We can interpret this phrase as follows:

First of all, the educational institution in which the digital transformation should be carried out should be financially stable and have a high scientific potential, as well as provide foreign cooperation;

Secondly, an educational institution (consumer) that receives this transformation process is choosing who (what) he is and what environment he breathes from, as well as what development strategies;

Thirdly, the level of employment that is one of the global problems in the world, including in our Republic, affects how (negatively or positively) the working potential operating in this institution.

The multimedia competence of teachers, namely literacy and multimedia communications, provides technical and software harmony in the digitization of any informed society. Multimedia communications is the optimal use of external devices and channels in the process of encoding, receiving and transmitting information using local communication networks, as well as their visualization in various display devices.

Research results. Multimedia tools have been successfully used in all fields around the world. Especially in production and education, it is becoming a habit to have conversations through computers. Such dialogues are aimed at easing the work of new employees hiring managers. It is possible to distinguish well-prepared ones from among applicants for work, and the time of the managers is saved. The importance of using Multimedia vases in the educational system is great. A lot of multimedia training courses have been created in the world, and they are growing in popularity day by day. The main reason for this is that it is cheap and convenient to get an education using multimedia tools.

Conclusion. Based on the results of a study on improving the professional competence of future specialists in the conditions of informed education, the following conclusions were drawn:

1. Work on the creation and implementation of existing electronic educational literature in the system of continuing education of foreign and Republican countries was analyzed. In particular, the scientific theoretical study and analysis of Social, Psychological, pedagogical, methodological literature on the creation of multimedia applications has proven that pedagogical requirements, criteria, the structure, forms and types of educational literature should be studied as a whole integrated system.

2. Theoretical and pedagogical foundations for the use of multimedia applications in the educational process of Technical Higher Education have been developed, together with the provision of theoretical information, laws and concepts of scientific and practical significance regarding science in the creation of multimedia applications on the course "information technology", they were originally created based on the age and psychological characteristics of students, it is scientifically and methodically justified that there is consistent sequence-based

harmony that prevents repetition in interdisciplinary communication, and that modern information technology is created taking into account the rapid penetration of Education.

3. With the help of multimedia applications created for Technical Higher Education, a methodological system for conducting lectures, practice classes and laboratory classes was developed, the content of conducting lectures and laboratory classes was revealed.

4. On the basis of the created multimedia applications, pedagogical analysis, organization of testing work and carried out pedagogical experiment-testing were carried out. The metrics obtained after experimental testing using traditional textbook and multimedia applications have been found to be higher than those in the experimental groups ' control group.

5. Multimedia applications, the results of which were created by the test, have been proven to be effective in the technical higher education institutions of our Republic and their application in the educational process.

6. In the context of the information educational environment, the organization of educational and production practices on the basis of a mixed teaching model in the implementation of the processes for the development of professional competence of future engineers and builders, visual work with objects on construction sites through virtual tours, independent project activities are accelerated.

7. In the development of professional competence of future engineers, pedagogical conditions such as the organization of virtual joint activities on the basis of multimedia tools, innovative methods of teaching of professors and manufacturers and the assimilation of modern technologies of the construction industry are strictly taken into account.

Recommendations:

In conclusion, we can note that Multimedia Communication ensures the participation of students, teachers as a team in various projects, working in a team, making quick decisions, distributing responsibility among team members, saving time, developing a culture of competent treatment, the formation of multimedia tools and a culture of communication with project participants.

So, in our final conclusion, we can note that these actions are used in lesson and extracurricular processes, in further education, in training courses and training centers, and in various forums, contests and entertainment events.

1. The study of pedagogical requirements, criteria, structure, forms and types of educational literature for the creation of multimedia applications as a whole integrated system.

2. Pedagogical requirements, criteria for the creation of multimedia applications have been developed, but it is necessary to revise and scientifically improve them in terms of reforms in today's educational system.

3. Expanding theoretical data, laws and concepts of scientific and practical importance in the creation of multimedia applications on the course” Information Technology".

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