



 Research Article

## ANALYSIS OF THE USE OF MULTIMEDIA TECHNOLOGIES DURING PROFESSIONAL TRAINING OF FUTURE IT TEACHERS

Journal Website:  
<http://sciencebring.com/index.php/ijasr>

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

**Submission Date:** March 20, 2023, **Accepted Date:** March 25, 2023,

**Published Date:** March 30, 2023

**Crossref doi:** <https://doi.org/10.37547/ijasr-03-03-05>

**Muhabbat Ataxanovna Tayirova**

**Tashkent State University Of Economics Under The Tashkent Economics And Industry Technical School, Uzbekistan**

### ABSTRACT

Currently, the world is experiencing a new stage of computerization of various activities related to the development of multimedia. Using multimedia tools makes it possible to increase the intensity and efficiency of the educational process. Learning multimedia is especially important for teachers of computer science because they are the ones who form knowledge, skills and competencies in information technology, in particular, in multimedia in students. In the process of training future teachers of computer science at the University of Pedagogy, students develop separate parts of multimedia software and integrated training courses for individual subjects, including video, sound, graphics, and animation.

### KEYWORDS

Multimedia technologies, educational process information base, interactive interface, presentation of visual materials, imaginative thinking, multimedia equipment, electronic educational systems.

### INTRODUCTION

The rapid development of computer technology has brought the educational process to a new level, which allows for qualitative change in the

content, methods and organizational forms of education. Currently, the world is experiencing a new stage of computerization of various activities

related to the development of multimedia. Graphics, animation, photos, video, sound, and text in interactive mode create an integrated information environment that gives the user qualitatively new opportunities. The use of multimedia tools makes it possible to increase the intensity and efficiency of the educational process, creates conditions for self-learning and distance learning, and thus enables lifelong learning. In order for future specialists to acquire knowledge in the field of information technologies and the skills to apply them in their professional activities, it is necessary to study multimedia in the general professional sciences course of informatics education taught in higher educational institutions. Multimedia learning is especially important for computer science teachers, because it is they who further develop their students' knowledge, skills and competencies in the field of information technology, especially in the field of multimedia, and help other teachers in their development. [2].

"Methodology of Informatics", "Algorithmization", "Programming Languages", "Informatics", "Computer Graphics", "Web - design", "Database", "Computer support", "Network technologies", "Computer modeling", "Informatics teaching technologies and design", "Information systems", "Information security" multimedia technologies creation processes are taught. The created multimedia technologies are used in pedagogical practice and in the educational process.

It's easy to create and use HTML-formatted multimedia learning tools using scripts in

JavaScript. Knowledge of HTML language, as well as skilled use of Cascading Style Sheets (CSS) and scripting, allows the creation of educational and controlled computer programs. Hyperlinks, graphics, animations, announcer's speech, registration forms, interactive tasks, and effects are used in such multimedia technologies. At the same time, they are as close as possible to the specifics of the course at this university in terms of the content of the material under consideration and help students acquire the skills to create high-quality programs, which will undoubtedly be useful after graduating from the university. will be useful in their professional activities.

As an effective educational tool, the use of multimedia products plays an important role, which is effective in the following cases:

- 1) provides almost instant feedback (interactivity feature);
- 2) helps to quickly find the information that is difficult to find in a normal textbook;
- 3) significantly saves time by referring to hypertext explanations many times;
- 4) not only displays the text, but also narrates, shows and models;
- 5) allows you to test knowledge of a specific section quickly, but at an individual pace;
- 6) It allows updating the educational system using the Internet.

The distinctive features of multimedia pedagogical software include[1]:

- information on the chosen course should be well structured and presented as complete fragments with a few new concepts;
- the main fragments, along with text and illustrations, should contain, if possible, an audio or video recording of the author's presentation of the material (you can call them live lectures);
- textual data can repeat a part of "live" lectures, the electronic device should allow printing the necessary parts of the text;
- illustrations representing complex models or devices must be equipped with a quick reference system that appears or disappears synchronously with the movement of the cursor over individual parts of the illustration (plan, drawing, map, etc.);
- it is recommended to use a multi-window interface when relevant information is presented in each window;
- the text part should be accompanied by many cross-references, in particular, a specialized explanatory dictionary can be connected to the electronic tool;
- video information or animated clips should accompany the course sections that are difficult to understand in the text presentation;

In recent years, interactive multimedia presentations created in application software environments (Prezi, MS Powerpoint, Focusky, etc.) have become very popular for teaching, testing and knowledge control. Their development does not require special knowledge in the field of programming, an experienced user

is able to implement his own methodological approaches to the study of the topic, embodying them in the electronic format of educational presentations.

Interactive process controls are programmed using the Visual Basic for Applications (VBA) language built into Microsoft Office. The development of modules - templates that implement feedback - allows you to easily connect them to a presentation for the average user who is familiar with the basics of programming. Slides with animation and interactive elements provide a new level of quality in information presentation. The insertion of voice accompaniment and video clips can be done both using PowerPoint functions and using special programs such as CamStudio, Bandicam, or HyperCam.

Materials for interactive presentations can be completed, corrected, burned to a CD. They provide a self-learning mode, and the ability to self-manage, but the hypertext navigation system must be structured in such a way that logic and structure are preserved in the mastering of the content, and there are no gaps in the mastering of the material. It is not inserted. By using controls an interactive presentation can be protected from changes in the process of working with it.

Our experience has shown that multimedia pedagogical software tools allow us to describe the most important concepts of the course in a way that provides quality advantages over traditional learning methods. Based on them, the combination of the mechanisms of verbal, logical and figurative thinking is carried out to increase



the ability to see and increase the cognitive activity of students. The traditional requirements for educational knowledge (remembering, repetition ability) gradually become requirements for basic information skills, such as searching for knowledge. They can use multimedia products at any stage of educational activity: learning new material, explaining a new topic, summarizing lessons and repetition. Each student will work at a pace that is convenient for him, without having to adapt to the teacher or other students. As a result, we created a comfortable environment for each student, which has a beneficial effect on the formation of self-education and social cooperation motives. If the students themselves participate in the learning process, control their actions and adjust the pace of work, they feel like leaders of the learning environment, not objects, and this greatly increases interest in learning activities.

Thus, it can be assumed that future informatics teachers will develop professional knowledge, skills and competencies in the field of multimedia in the following cases:

1) a comprehensive approach is implemented in the process of teaching multimedia: multimedia - as an object of learning, a learning tool and a tool for student activity;

2) the content of student education is carried out continuously on the basis of a system of courses corresponding to the goals and functions of training specialists in the conditions of multi-level training in higher educational institutions;

3) multimedia are learned indirectly by solving problems with the help of a computer, and the selection of tasks is carried out based on the needs of future professional activity.

## REFERENCES

1. Князева Г.В. Применение мультимедийных технологий в образовательных учреждениях [Текст] / Г.В. Князева // Вестник Волжского университета им. В.Н. Татищева. – 2010. – № 16. – С. 77-95.
2. Косенко И.И. Изучение средств мультимедиа в системе подготовки учителя информатики // Научные труды Московского педагогического государственного университета . Серия : Естественные науки . М .: Прометей , 1999. С. 29-30 .
3. Смолянинова, О. Мультимедиа для ученика и учителя / О. Смолянинова // Информатика и образование. - 2002. - № 2. - С. 48 - 54.
4. Кручинина Г.А. Готовность будущего учителя к использованию новых информационных технологий обучения ( теоретические основы , экспериментальные исследования ) / Под ред . В.А. Слостенина . М .: Прометей , 1996. 176 с .
5. Ismatullayeva, N. R. (2022). POSSIBILITIES OF USING THE INTERACTIVE BOARD IN FOREIGN LANGUAGE LESSONS. «O'ZBEKISTON-XITOI: TARIXIY-MADANIY, 77.