

## ENHANCE STUDENTS ' KNOWLEDGE AND SKILLS WITH MULTIMEDIA TOOLS IN AN INNOVATIVE EDUCATIONAL ENVIRONMENT

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**Abstract.** *This article reflects on the importance of using multimedia systems in increasing professional competence of students of the direction of informatics and information technology.*

**Keywords:** *competitiveness, creativity, social competence, individual competence, multimedia, traditional teaching.*

**Introduction.** Today, the issues of improving the competitiveness of personnel on the basis of a competency approach to education, the development of creativity skills by forming their professional and personal qualities in them, as well as ensuring the quality of education and achieving efficiency are being researched as one of the relevant areas. From this point of view, the modernization of management activities on the basis of advanced foreign experiences, the formation of a healthy and creative environment in the professional activities of personnel, the development of creative skills and abilities, the improvement of pedagogical opportunities for the development of professional and personal qualities of leaders in management activities.

We answer the question of what competency is when we use the word competence. According to A.K. Markova, the following types of professional competence can be distinguished. special authority-to have a sufficiently high level of professional activity, the ability to plan its own professional development;

**social competence** - having accepted methods of collective professional activity and professional communication; social responsibility for the results of their professional activities;

**personal competencies** - skillful acquisition of methods of personal expression and self-development;

**individual competence** - mastering the technique of self-awareness and personality development within the framework of their profession; readiness for constant professional growth; the ability to defend oneself, the absence of professional aging; the ability to rationally organize your work (without overloading).

The combination of these types professional competence it is an indicator of the maturity of a person in professional activity, communication, the formation of the personality and personality of the owner of the profession. A different approach is possible to take into account professional and pedagogical competence.

Multimedia has such qualities as flexibility, interactivity, integration of various types of multimedia educational information. That is why we can say that multimedia is quite a useful and productive educational technology. The use of multimedia technologies in education has the following advantages in comparison with traditional teaching:

- allows the use of color graphics, animation, sound, hypertext;
- allows for constant updating;

- allows the possibility of placing interactive web elements in it, for example, tests or a workbook;
- allows for the possibility of non-linearity of the passage of the material due to the multitude of hyperlinks [4]

**Research Methodology.** The study used thematic scientific resources, educational and regulatory documents, methods of study and analysis of educational and methodological literature, pedagogical observation, social survey, comparative analysis of student activities, expert assessment, mathematical-statistical processing of research results. The study was conducted by Halda, who used software tools from simlab soft. With the use of Multimedia tools, students were given classes.

At the Fergana branch of the Tashkent University of Information Technology, students of the computer engineering group were taught classes in two groups control and experimental groups.

**Analysis and results.** In order to determine the level of effectiveness of the selected technologies in the teaching of the subject of information technology, various methods were used, such as observation, questioning, testing, a written survey, in order to study the effectiveness of students' work on themselves, a virtual survey was conducted. As a result of the survey, the following data were obtained: the majority of students preferred multimedia technologies, which showed the development of the ability to work on themselves - 60.7%, while 39.3% of the remaining students prefer traditional learning technologies. The results obtained can be seen in this table (Table 1).

*(Table 1).*

The direction in which the experimental testing is carried out	Research groups	Number of students	Rating (85-100)		Rating (70-85)		Rating (55-70)		Rating (0-55)		teaching quality	educational performance
			КОЛИЧЕСТВО	%	КОЛИЧЕСТВО	%	КОЛИЧЕСТВО	%	КОЛИЧЕСТВО	%	%	%
Faculty of treatment	Experimental group (used virtual reality technology)	32	8	25	14	43,7	10	31,3	-	-	68,7	99,9
	Experimental group (used traditional learning technologies)	30	6	20	14	46,7	8	26,7	2	6,7	66,7	93,3

The data presented in the table shows that the quality of training when using virtual reality systems technologies was 66.7 percent.

### **Conclusion**

In conclusion, this study proves that the use of multimedia technologies in education can positively affect the motivation and performance of students. The results show that the use of virtual reality technologies can be used to create an environment conducive to autonomy, which encourages students to take responsibility for their education and actively participate in the learning process.

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