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WAYS OF USING VISUAL EDUCATIONAL TECHNOLOGIES IN DEVELOPING ARTISTIC THINKING OF FUTURE TEACHERS

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Abstract: This article explores effective ways of using visual educational technologies to develop the artistic thinking of future teachers. The study emphasizes the role of visualization as a didactic tool that enhances aesthetic perception, imaginative thinking, and creative competence in teacher education. Drawing on the theoretical foundations of visual thinking (R. Arnheim) and visualization concepts, the research analyzes the pedagogical potential of multimedia tools, including images, animations, video materials, and digital visual content. Special attention is given to the integration of visual technologies in teaching the course *Folk Pedagogy*, which serves as a key medium for transmitting national cultural values, aesthetic traditions, and artistic imagery. The findings demonstrate that the systematic use of visual educational technologies contributes to the activation of students' cognitive, emotional, and creative activities, strengthens motivation, improves comprehension and retention of learning materials, and fosters communicative and artistic competencies. The article concludes that visual technologies play a crucial role in shaping the artistic-emotional thinking and professional readiness of future teachers in a modern educational environment.

Keywords: visual educational technologies, artistic thinking, visualization, visual thinking, multimedia tools, folk pedagogy, aesthetic education, creative competence, future teachers.

Modern education systems are increasingly striving to integrate visual technologies into the teaching and learning process. Such technologies not only enrich educational activities but also create favorable conditions for the development of students' artistic thinking. In folk pedagogy, visual expression, aesthetic perception, and imaginative thinking have traditionally been formed through visual arts, national ornaments, applied decorative arts, folk tales, and legends.

The term "*visual thinking*" was introduced by the American psychologist **R. Arnheim**, who defined it as "thinking that operates through visual forms and visual operations" [1, p. 345]. The concept of "*visualization*" originates from the Latin word *visualis*, meaning "perceived through sight" or "visual." Visualization refers to the process of presenting information in a visual form in order to facilitate faster and more effective comprehension. In other words, it involves giving a visually perceivable form to any object, subject, phenomenon, or process by representing it externally in a graphic or illustrative manner [2].



Visualization primarily performs an *illustrative function*, serving to simplify learners' understanding of educational content. In this regard, it is aimed at fulfilling the following didactic tasks:

1. **Intensification of the educational process** – enabling the delivery of a large volume of educational information while maintaining high quality standards without increasing instructional time;
2. **Activation of educational and cognitive activity** – stimulating independent thinking, inquiry, and comprehension through question-based and exploratory learning;
3. **Development of critical and visual thinking, as well as visual perception** – strengthening learners' abilities to analyze, interpret, and generalize information received through visual channels [3].

In order to develop the artistic thinking of future teachers through visual educational technologies, a range of multimedia tools was employed during the experimental phase of the research. Multimedia tools typically include sound, animated computer graphics, video materials, and similar resources. The distinctive features of these technologies include:

1. **Integration of a multi-component information environment** (text, audio, graphics, photographs, and video) into a single digital format, ensuring a holistic and visually rich presentation of learning materials;
2. **Reliable and long-term data storage capabilities**, allowing large volumes of information to be preserved without distortion for extended periods (with guarantees spanning decades);
3. **Ease of information processing**, enabling users to perform operations ranging from simple tasks to complex creative activities conveniently.

To determine the didactic and methodological potential of visual technologies in developing the artistic thinking of future teachers, materials related to folk pedagogy were presented using multimedia tools during the experimental process. As a result of applying visual educational technologies, the following outcomes were achieved:

- diagnosis of students' psycho-emotional states and identification of zones of discomfort, as well as detection of harmony or dissonance between national values and globalization;
- reduction of emotional tension, enhancement of student openness, and creation of an atmosphere of cooperation and co-creativity;
- stimulation of learners' academic engagement during the enrichment and modification of educational content;
- development of communicative and speech skills;
- strengthening motivation for effective speech creativity;
- improvement in comprehension and long-term retention of learning materials;



- coordinated development of practical, cognitive, and aesthetic forms of activity [4].

The formation of artistic thinking in future teachers is primarily achieved through subjects of an aesthetic orientation. In this regard, the course “*Folk Pedagogy*” occupies a significant place, as it is aimed at developing learners creatively, fostering aesthetic appreciation of folk art, and encouraging an imaginative understanding of national culture. This process contributes to the formation of social activity, aesthetic taste, and creative qualities in the individual [5].

Mastery of this subject results in the development of a creative, unconventional thinker capable of imaginative reflection. The key competencies formed during the learning process subsequently serve as a foundation for shaping the artistic competence of future teachers and preparing them for creative professional activity.

In teaching the course “*Folk Pedagogy*,” visual educational technologies should be employed as central didactic tools. In doing so, the following considerations are essential:

- formation of imaginative perception through visual materials (photographs of national costumes, ornaments, decorative elements, and traditional customs);
- visual analysis of ethnographic art samples (textiles, embroidery, wood carving);
- development of expressive visual activity through animated folk tales, legends, and ritual scenes;
- interpretation of national images through slides, collages, and video lessons, guiding students toward independent interpretation;
- organization of learning activities based on visual-associative methods such as “creating a story from an image” and “transforming emotions into drawings.”

Through these approaches, future teachers develop artistic-emotional thinking, aesthetic perception, imaginative cognition, and both individual and social interpretative abilities. The use of visual educational technologies integrates the cognitive (knowledge-based), emotional (affective), and activity-oriented (practical expression) dimensions of the course.

In the process of developing the artistic thinking of future teachers, several stages of employing visual educational technologies were identified. Each stage has its own objectives and functions, forming a logical sequence. Therefore, the selection of multimedia tools was determined by the content of the topic, the condition of the educational environment, learners’ interests, and their individual characteristics.

Adabiyotlar ro‘yxati:



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