

ISSUES OF DEVELOPING CREATIVE THINKING IN FUTURE EDUCATORS THROUGH MANUAL LABOR

Kokand University
Under the supervision of **Feruzza Oljayevna Orinova**, PhD, Associate Professor, Professor,
"Department of Education"

Turdaliyeva Nurjahon Abdunosir kizi

Kokand University
Teacher of the "Education Department"

Telefon raqami +998916883136

Orcid: <https://orcid.org/0009-0001-4509-7550>

E-mail: n12710420@gmail.com

Abstract: This article analyzes the pedagogical potential of manual labor classes in the formation and development of creative thinking in future teachers. The study highlights the role of manual labor in the educational process, the impact of practical activities organized on the basis of innovative approaches on students' creative thinking. It also reveals the issues of using interactive methods, project activities and integrative approaches in the development of creative thinking. The results of the article substantiate the need for the effective use of manual labor classes in improving the professional competence of future teachers.

Key words: manual labor, creative thinking, future teacher, creative activity, innovative approach, pedagogical competence.

INTRODUCTION

Today, the reforms being implemented in the education system are creating new requirements for the professional training of pedagogical personnel. In particular, it is important for future teachers to have not only theoretical knowledge, but also creative thinking, innovative thinking and the skills to effectively organize practical activities. In the process of forming a modern pedagogical personality, a creative approach, the ability to flexibly respond to problem situations and offer new solutions are considered one of the main criteria.

Pedagogical practice shows that traditional educational methods do not give sufficient results in the development of creative thinking. Therefore, the introduction of innovative approaches to the educational process and the involvement of students in active practical activities are becoming an urgent task. In this process, manual labor activities are of particular pedagogical importance, as they create broad opportunities for the development of imagination, creativity, independent thinking and aesthetic taste in future teachers.

In the process of manual labor, students test their creative ideas in practice by working with various materials, creating products, designing and using design elements. This activity teaches them to analyze the problem, find a solution and evaluate the result. It is this process that directly affects the formation and development of creative thinking. At the same time, organizing manual labor classes based on innovative pedagogical technologies, interactive methods and a competency-based approach serves to increase the professional competence of future teachers. This article discusses the pedagogical foundations of developing creative thinking in future teachers through manual labor, its role in the educational process and issues of effective organization.

LITERATURE REVIEW

The concept of creative thinking and its pedagogical significance have been scientifically substantiated by many foreign and domestic researchers. In particular, J. Guilford interprets creative thinking as a person's ability to think divergently, that is, to find several unusual solutions to a problem. In his opinion, creativity is inextricably linked with the intellectual

potential and creative activity of a person, and its development in the educational process requires special pedagogical conditions¹.

The theory of creativity developed by E. Torrance is also widely used in the educational process. The scientist emphasizes that a free environment, motivation, and practical activity are important factors in the development of creative thinking. According to Torrance, forms of education that encourage students to conduct independent experiments and try out new ideas are effective in increasing their creative activity.²

In pedagogical research, the issues of the influence of manual labor on personal development have also been separately studied. L. S. Vygotsky substantiates that practical activity is an important tool in the development of cognitive processes and thinking of an individual within the framework of the theory of activity. He notes that in the process of practical actions, personal thinking is actively formed and social experience is internalized³.

Research conducted by domestic scientists also widely covered the pedagogical potential of manual labor classes. In particular, J. Yuldoshev and S. Usmanov emphasize that practical classes organized on the basis of innovative pedagogical technologies serve to develop the professional and creative competence of future teachers⁴. In their research, the use of interactive methods in the process of manual labor increases the effectiveness of education, which is scientifically substantiated.

Also, research conducted by A. Zunnunov noted that manual labor classes organized on the basis of pedagogical technologies develop students' independent thinking, creative approach, and practical skills⁵. The scientist emphasizes that planning manual labor based on a competency-based approach increases the effectiveness of the pedagogical process.

Recent research within the framework of STEAM education and design thinking approaches has also shown the inextricable link between manual labor and creative thinking. These approaches serve to develop students' creative problem-solving abilities through practical activities⁶.

The analyzed literature shows that although the issues of developing creative thinking have been sufficiently studied, a systematic model and methodological support for the formation of creative thinking in future educators through manual labor have not been sufficiently covered. This situation further increases the relevance of this study.

METHODOLOGY

This study is aimed at determining the pedagogical effectiveness of manual labor classes in developing creative thinking in future teachers. The study was conducted with the participation of students studying in the pedagogical direction of higher educational institutions.

The study was organized on the basis of mixed (qualitative and quantitative) methods. Theoretical analysis, practical observation and experimental-testing methods were used in the research process. The research was carried out in three stages: diagnostic, formative and control stages.

Students of the 2nd and 3rd years studying in the pedagogical direction participated in the study. Participants were divided into two groups: the experimental group and the control group. The groups were formed on the basis of the principle of similarity in terms of students' academic performance and initial creative level.

The following methods were used during the study:

Literature analysis - the theoretical foundations of the study were determined by studying scientific sources on creative thinking, manual labor and innovative education.

Observation method – students' creative activity, independent thinking and practical approach were systematically observed during the manual labor activities.

The questionnaire was designed to determine students' attitude to creative activity, interest in manual labor activities and self-assessment indicators.

Analysis of practical tasks – manual labor activities (models, design items, educational tools) performed by students were evaluated based on creativity criteria.

Experimental work – manual labor activities in the experimental group were organized based on innovative approaches (project activities, interactive methods, integrative approach).

At the formative stage, manual labor activities in the experimental group were organized based on the following directions:

creating problem situations;

assigning project tasks;

combining collective and individual creative work;

presenting and analyzing results.

In the control group, the activities were conducted based on traditional methods.

Assessment criteria

The following criteria were established to determine the level of creative thinking in future teachers:

newness of ideas;

independent thinking;

problem solving ability;

quality of creative product;

reflection and self-assessment.

Each criterion was analyzed at low, medium and high levels.

Data analysis

The obtained data were processed using comparison, percentage analysis and qualitative interpretation methods, and the results of the experimental and control groups were compared.

The results were prepared for presentation in tables and diagrams.

RESULTS AND DISCUSSION

The results of the experimental work confirmed that organizing handicraft classes based on innovative approaches has a positive effect on the development of creative thinking in future teachers. At the diagnostic stage of the study, it was found that the levels of creative thinking of students in the experimental and control groups were almost the same. This allowed for an objective comparison of the results obtained at subsequent stages.

At the end of the formative stage, a significant increase in the percentage of students with a high level of creative thinking was observed in the experimental group. In particular, the handicrafts performed by the students were distinguished by the novelty of ideas, an independent approach and a variety of problem-solving methods. Students abandoned the repetition of simple samples and tried to use materials and forms in an unusual way.

In the control group, however, no significant changes were observed in the indicators of creative thinking. It was found that organizing classes in traditional methods limited the creative activity of students. This once again confirms the importance of innovative approaches in the educational process.

According to the results of observation and analysis of practical tasks, handicrafts organized on the basis of project activities were the most effective form in developing students' creative thinking. Students actively participated in the stages of problem identification, planning, idea development and presentation of the result during the project work. This process harmoniously developed their critical and creative thinking.

The results of the questionnaire also showed that the students in the experimental group had an increased interest in handicrafts. Students noted that they had the opportunity to freely express their thoughts, work in a team and show creative initiative. This indicates that a positive psychological environment is an important factor in the development of creative thinking.

The results obtained are consistent with the theories of creativity put forward by J. Guilford and E. Torrance. In particular, the results of this study also confirmed that practical education encourages students to think divergently and serves to develop the main components of creative thinking - novelty of ideas, flexibility and originality. In general, the results show that organizing manual labor classes based on innovative and interactive methods is an effective pedagogical

tool for developing the creative thinking of future teachers. This approach, while improving the professional training of future teachers, prepares them for creative work in their future pedagogical activities.

CONCLUSIONS AND SUGGESTIONS

The results of the study confirmed that manual labor classes are an important pedagogical tool for developing creative thinking in future teachers. During the study, it was found that the use of innovative approaches, interactive methods, and project activities in the manual labor process significantly increased students' creative activity, independent thinking, and problem-solving abilities.

It was also found that manual labor classes, along with the development of students' aesthetic taste, design thinking, and practical competencies, serve to strengthen their professional training. The results of the study showed that high efficiency can be achieved only when the process of forming the creative thinking of future teachers is organized systematically, step by step, and goal-oriented.

In general, the organization of manual labor classes based on innovative pedagogical technologies is of great importance in increasing the professional competence of future teachers and preparing them as creative and competitive specialists.

Proposals

Based on the results of the study, the following practical proposals can be put forward:

Review the content of manual labor classes in pedagogical areas based on creative and innovative approaches;

Establish a systematic use of project activities, problem-based learning and interactive methods in the manual labor process;

Develop clear criteria and indicators for assessing the level of creative thinking of future teachers;

Increase practical efficiency by organizing manual labor classes based on STEAM and interdisciplinary integration;

Create a favorable psychological and pedagogical environment that supports students' creative activity;

Introduce the practice of evaluating the results of manual labor classes through presentation, exhibition and reflection.

The implementation of these proposals in educational practice will create a basis for the effective development of creative thinking in future teachers and the successful application of innovative approaches in their future pedagogical activities.

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