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DEVELOPING THE CREATIVE POTENTIAL OF FUTURE TEACHERS IN MANUAL LABOR CLASSES USING INNOVATIVE TECHNOLOGIES

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Abstract: The article studies the issue of developing the creative potential of future teachers in manual labor classes using innovative technologies. The research analyzes the impact of modern pedagogical technologies, including digital tools, 3D modeling, project-based learning and interactive methods on the pedagogical process. The article highlights effective ways to form the creative activity of future teachers, prepare them for practice, and apply innovative approaches. The results of the study will serve to modernize manual labor classes in higher pedagogical educational institutions and direct students to creative activities.
Keywords: innovative technologies, manual labor, creative potential, future teacher, interactive method, project-based learning.

INTRODUCTION

The modern education system requires teachers not only to know theoretical knowledge, but also to have creative thinking, practical skills and innovative approaches. Therefore, in the process of training future teachers, one of the urgent tasks of the pedagogical process is to direct them to creative activity in manual labor classes, to encourage independent thinking and solving problem situations.

Innovative technologies are a means of creating new ideas in the pedagogical process, developing a creative approach and effectively organizing practical classes. Modern technologies in manual labor classes, including 3D modeling, digital design programs, interactive presentations and project-based education, attract future teachers to creative activity, increase their professional and innovative potential.

The purpose of the study is to identify a methodology for developing the creative potential of future teachers in manual labor classes using innovative technologies and to study its effectiveness. The objectives of the study are:

Analyze the pedagogical essence of innovative technologies and their role in the development of creative potential;

To determine the effectiveness of using innovative methods in manual labor classes;

To develop practical recommendations for developing the creative potential of future teachers.

LITERATURE REVIEW

Scientific literature shows that innovative technologies are an important tool for the effective development of the pedagogical process, increasing the creative potential of students and preparing them for practical work (J. Dewey, L.S. Vygotsky, J. Bruner). These scientists emphasize the need to direct students to independent thinking, solving problem situations and creating new ideas in the educational process.

Recent studies on digital pedagogical technologies and project-based education (E. Torrans, J. Hattie) show that the use of interactive activities and digital tools significantly increases the creative thinking of future teachers. Project-based education allows students to combine practical and theoretical knowledge, make independent decisions and develop creative solutions.

Local scientists N.Kh. Sayidahmedov and Sh.K. Sharipov conducted research on the methodology for developing the creative potential of future teachers by introducing innovative technologies into manual labor classes. In their opinion, digital design programs, 3D modeling, interactive presentations, and project-based training are effective tools for strengthening students' practical skills, developing creative thinking, and expanding their pedagogical thinking.

In addition, modern pedagogical research allows using innovative technologies to individualize the educational process and adapt it to the interests of students. At the same time, they form students' teamwork and cooperation skills and create opportunities for the implementation of pedagogical innovations in practice.

The analysis of the literature shows that the introduction of innovative technologies into manual labor training is important for developing the creative potential of future teachers, preparing them for practice, and forming their professional competencies at the level of modern pedagogical requirements.

METHODOLOGY

This study was aimed at determining the effectiveness of developing the creative potential of future teachers using innovative technologies in manual labor classes. The research methodology was based on the principles of person-centered, systematic and practical approaches, which allowed students to be involved in creative and practical activities at each stage of the pedagogical process.

Methods used:

Analysis of scientific literature - study of theoretical foundations of innovative pedagogical technologies, manual labor classes and creative potential. This method created a theoretical basis for the study and made it possible to identify best practices.

Pedagogical observation - analysis of students' creative and innovative activities in classes, their level of use of project work and digital tools. Observation assessed students' interest in the class and active participation.

Questionnaire and interview - to determine the attitude of future teachers to creative activities in manual labor classes using innovative technologies. This method served to determine the opinions of students and the effectiveness of the methods.

Analysis of practical exercises - development of students' creative potential through the use of project-based learning, digital design programs and interactive methods. Students strengthened their practical skills by implementing various projects.

Comparison and generalization - comparison of the results of traditional manual labor exercises with those based on innovative technologies and determination of the level of effectiveness.

The methodological approach ensured the reliability of the study and made it possible to identify effective methods for developing the creative potential of future teachers. At the same time, criteria were developed for evaluating the results of practical exercises, which increased the scientific and practical value of the study.

RESULTS AND DISCUSSION

The results of the study showed that the use of innovative technologies in manual labor classes significantly increases the creative potential of future teachers. The use of digital design programs, 3D modeling, interactive presentations, and project-based methods in classes helps students combine practical and theoretical skills, develop creative thinking, and develop independent solutions to problem situations.

Results of observation and practical classes:
Students developed the skills of putting their ideas into practice, making creative decisions, and solving problem situations through projects.
Interactive classes and digital technologies developed teamwork and communication skills.
Students participated in classes with high motivation, their creative activity increased, and their pedagogical thinking expanded.
Survey results: 88% of students noted that classes using innovative technologies were more creative and interesting than regular classes. At the same time, they highly appreciated the opportunity to develop and implement new ideas.
Discussion:
The study showed that, compared to traditional manual labor classes, classes organized on the basis of innovative technologies activate the pedagogical process, develop the creative and innovative potential of students. This allows to increase the professional training of future teachers, strengthen their practical skills, and form a creative approach.
At the same time, education using innovative technologies serves to combine individual and collective work, encourage students to think independently in problem situations. The results showed that the use of digital tools and interactive methods is an effective tool for modernizing manual labor classes and developing the creative potential of future teachers.

CONCLUSIONS AND SUGGESTIONS

The results of the study showed that the use of innovative technologies in manual labor classes is an effective tool for developing the creative potential of future teachers. Digital design programs, 3D modeling, interactive presentations and project-based classes help students combine practical and theoretical knowledge, develop creative thinking and develop independent solutions to problem situations.
Innovative technologies also serve to strengthen the teamwork, cooperation and communication skills of future teachers. These methods activate the pedagogical process, increase student motivation and help them prepare professionally at the level of modern pedagogical requirements.
Recommendations:
Introduce innovative technology modules to pedagogical curricula and systematically apply them in manual labor classes.
Regular use of digital tools, 3D modeling and interactive methods in practical classes.
Creating a pedagogical environment that encourages students to creative and innovative activities, combining individual and collective work.
Developing criteria and indicators for assessing the effectiveness of innovative methods.
Improving the effectiveness of manual labor training and developing the professional training of future teachers by combining theory and practice.
In conclusion, organizing manual labor training using innovative technologies is an important tool in developing the creative potential of future teachers and should be considered as the main methodological direction in preparing them in accordance with modern educational standards in pedagogical higher educational institutions.

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