

**METHODOLOGY FOR DEVELOPING PUPILS' CONSTRUCTIVE ABILITIES IN
TECHNOLOGY LESSONS**

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Abstract: This article examines systematic and practical approaches to developing pupils' constructive abilities in technology lessons. It highlights methods for fostering pupils' technical knowledge, creative thinking, independent decision-making skills, as well as their abilities in construction and digital technologies. The paper describes ways and methods for developing pupils' individual abilities through the use of interactive teaching methods applied in technology lessons. In addition, special attention is given to extracurricular individual work with students aimed at further enhancing their construction skills and providing pedagogical support.

Keywords: construction, creative approaches, practical methods, visual methods, practical activities, digital tools, ability.

Introduction

From the perspective of current global developments, one of the most important tasks facing the modern education system is the development of pupils' constructive abilities in technology lessons. Today, technology education requires the use of various teaching methods based on pupils' abilities in order to form and reveal their construction skills. During the learning process, it is essential to develop pupils' self-development, personal growth, critical thinking, self-regulation, and management skills.

Organizing lessons through engaging materials, digital tools, and project-based learning programs helps pupils not only acquire deep knowledge and skills but also develop their construction abilities using modern technologies, taking into account their individual capabilities. Conducting practical lessons with active pupil participation is of great importance in technology education.

Among general secondary school subjects, technology plays a significant role in preparing pupils for real-life activities. In this sense, technology lessons can be considered a "laboratory for preparing pupils for life." Modern schools are expected not only to provide knowledge but also to develop pupils comprehensively, foster socialization, and cultivate independent, critical, and innovative thinking skills. These opportunities are realized through education organized on the basis of innovative approaches.

In utilizing the educational potential of technology lessons, teachers must correctly organize lessons from a methodological perspective, clearly define educational objectives related to the content of learning materials, and motivate pupils to acquire knowledge. At the same time, the teacher's authority and professional image among pupils have significant educational value.

The use of visual aids related to construction is essential in organizing technology lessons. Learning through both auditory and visual perception ensures conscious and solid mastery of educational material, helps pupils understand its practical relevance, and stabilizes attention. Therefore, visual materials used in construction-related lessons must correspond to the lesson content, pupils' age, and level of knowledge, and effective methods for their use should be developed. In technology education, knowledge is firmly retained only when it is mastered through various practical methods and tools.

Literature review

The works of M.X. Shomirzayev, Innovative Pedagogical Technologies in Teaching Technology, and X.J. Abdisamiyevich, Technology and its teaching methodology, as well as related articles, discuss issues of construction, revealing pupils' abilities, methodological approaches to developing construction skills, and proper organization of technology lessons.

These studies address construction, technology education, contributions of leading modern scholars, ethical norms, primary technology education, types of practical work, manual labor, theoretical knowledge, interdisciplinary integration and continuity, visualization, interrelation of teaching methods, teaching pupils independent work, and the use of methods for creating didactic visual materials.

The term construction (from the latin constructio – structure, building) refers to the structure, schemes, shapes of parts and elements, their mutual arrangement, joining methods, interaction, and the materials used in production.

Construction is a technical creative process in which a person determines the structure, form, material, and operating principles of a product, device, machine, garment, or structure to solve an existing problem or create a new object.

According to the state educational standards, the following requirements are established for the professional training of future technology teachers:

Possession of a system of worldview knowledge, understanding of the fundamentals of humanities and socio-economic sciences, awareness of current state policies, and the ability to independently analyze social problems and processes;

Knowledge of national history, ability to express and scientifically justify opinions on spiritual, national, and universal values, and adherence to a national ideology and active civic position;

Holistic understanding of processes and phenomena in nature and society;

Knowledge of legal and moral norms governing relationships between individuals, society, and the environment, and ability to apply them in professional activity;

Mastery of methods for collecting, storing, processing, and using information, and the ability to make well-grounded independent decisions in professional practice;

Ability to independently acquire new knowledge, engage in self-improvement, and scientifically organize one's professional activity.

Thus, a technology teacher serves as a key provider of information about new techniques and technologies for secondary school students and must be a highly competent and professionally gifted specialist. This requires acquiring deep professional knowledge in higher pedagogical education institutions and applying it effectively in practice.

Research methodology

This study focuses on organizing technology lessons in general secondary schools through creative approaches in order to ensure deep mastery of construction skills. Research methodology represents a scientifically grounded system of methods for studying, analyzing, and implementing the process of forming and developing pupils' competencies in practice.

The methodology emphasizes pedagogical approaches, technologies, and tools that support the development of pupils' competencies through subject-based learning. The effectiveness of competency development methods can be determined through experimental and pilot testing.

The research employs analysis, synthesis, comparison, generalization, review of methodological literature, analysis of regulatory documents, model development, diagnostic tests, statistical analysis, pedagogical experiments, questionnaires, interviews, observation, and other methods.

Effective use of digital platforms and tools in technology lessons requires teachers and pupils to master relevant pedagogical technologies and professional skills. Employing diverse teaching methods and visual aids to deliver subject knowledge ensures high learning outcomes.

Multiple teaching methods may be applied within a single lesson. Teachers' efforts and actions should aim to maintain pupils' attention, prevent fatigue, and sustain engagement. Teaching methods should facilitate such a level of knowledge acquisition that enables pupils to demonstrate creativity, imagination, and practical application of acquired knowledge based on the teacher's guidance.

According to the structure of the didactic process, teaching methods are classified into three groups:

Methods for organizing and implementing learning activities;

Methods for stimulating and motivating learning activities;

Methods of control and self-control.

According to the mode of knowledge transmission:

Verbal methods;

Visual methods;

Practical methods.

Verbal methods include storytelling, discussion, explanation, and lectures.

Visual methods include demonstrations, illustrations, excursions, films, and graphic work.

Practical methods involve exercises, laboratory work, and practical tasks.

Analysis and results

The research findings indicate that when construction activities are correctly and purposefully integrated into technology lessons, the level of creative thinking among pupils and teachers increases significantly. The use of digital games, visual presentations, problem-based tasks, and artificial intelligence-based support tools in technology lessons enhances future technology teachers' independent thinking, ability to propose innovative ideas, and skills of freely expressing their thoughts.

The study highlights the role and importance of construction in developing pupils' abilities in technology education. Based on the results, the following conclusions were drawn:

Effectiveness of digital educational technologies: Digital technologies, including online resources, multimedia materials, and interactive programs, facilitate easy access to information search and analysis, thereby enhancing information competence.

Application of innovative teaching methods: Innovative teaching methods should be used to encourage active participation and increase pupils' interest based on their abilities, fostering independent thinking and problem-solving skills.

Challenges and solutions: Issues such as technological dependence, improper use of digital tools, and shortage of qualified personnel must be addressed by educational institutions and teachers to improve the quality of education and enhance construction skills.

Future prospects: The role of digital technologies and the development of construction abilities among technology teachers will become increasingly important in the future.

Educational institutions can effectively utilize digital tools to enhance future technology teachers' construction skills, develop their information competence, and strengthen innovative thinking abilities.

Conclusion and recommendations

In conclusion, based on the conducted research, construction can be considered one of the most effective tools for developing creative thinking among future technology teachers. The ability to draw technical drawings, create small-scale project models, assemble structures, and freely express ideas enables purposeful application of construction activities in the educational process.

Lessons organized through construction increase both pupil and teacher engagement, transforming them from passive recipients into active participants in the learning process. Therefore, developing pupils' construction skills contributes not only to improving their knowledge level but also to fostering creative thinking, design, building, and modeling competencies.

References



1. Sanoqulov X. R, Xodiyeva D.P. Satbayeva “Mehnat va uni o‘qitish metodikasi” darslik T.;TDPU. 2015
2. Matlab Tilavova “Texnologiya va uni o‘qitish metodikasi”. Toshkent “Muharrir nashriyoti”. 2019
3. H.O. Uzoqov, H.O. Jo‘rayev, SH. H. Qoliyeva, A.R. Jo‘rayev, M.N. Karimova, D.P. Nazarova “Texnik ijodkorlik va konstruksiyalash” o‘quv qo‘llanma “Kamolot nashriyoti” 2022 y.171-b
4. Vorobyov A.I, Limaniskiy A.S. Texnik konstruksiyalash va modellarni yasash. –T: O‘qituvchi, 1990-210b