METHODOLOGY FOR ACTIVATING THE LEARNING PROCESS IN PRIMARY EDUCATION BASED ON A TECHNOLOGICAL APPROACH

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Abstract. This article highlights a methodology for activating the learning process in primary grades based on a technological approach. The study analyzes the impact of modern pedagogical technologies, interactive methods, and digital tools on pupils' activity. Taking into account the psychological characteristics of primary school pupils, mechanisms for activating classroom instruction are examined. The practical application of technological elements aimed at increasing lesson effectiveness is substantiated. The research is enriched with experimental and pilot studies. The results demonstrate the positive influence of the technological approach on pupils' motivation, independent thinking, and communication culture. The proposed methodological recommendations contribute to improving the teaching process in primary grades. The article is useful for teachers, methodologists, and researchers in the field of pedagogy. The conclusions outline the prospects of the technological approach in enhancing the quality of education.

Key words: technological approach, pedagogical technology, primary education, interactive methods, pupil activity, motivation, digital tools, methodology, competence, teaching process, didactic principles, innovative education.

Introduction. In the 21st century, modernizing the educational process, introducing innovative forms and methods of teaching, and shaping learners as active subjects of learning have become priority directions of state policy. The Development Strategy of "New Uzbekistan" for 2022–2026 adopted by the President of the Republic of Uzbekistan, as well as Decree No. PF–5712, Resolutions No. PQ–4319 and PQ–4884 on the "Concept for the Development of the Public Education System," and the "Digital Education Concept," emphasize the necessity of implementing modern pedagogical technologies in the educational process. These норматив bases require improving the content of primary education, activating classroom instruction, and increasing the effectiveness of methodological approaches aimed at developing pupils' competences.

Primary education is the foundational stage at which interest in knowledge, independent thinking, motivation, and communication skills are formed. In today's globalized world, transforming pupils from passive listeners into active participants, organizing education on a technological basis, and effectively using information and communication technologies are of particular importance. The Law of the Republic of Uzbekistan "On Education" also defines the application of advanced pedagogical technologies as a mandatory requirement.

Introducing a technological approach into classroom practice makes it possible to engage pupils in lessons, create an interactive environment, strengthen practice-oriented learning, and implement learner-centered didactic principles. The age-related psychological characteristics of primary school pupils make the effective application of the technological approach even more relevant. Therefore, the integration of project-based learning, modular instruction, digital platforms, interactive game technologies, and reflective methods yields high results.

This article theoretically substantiates the methodological mechanisms for activating the learning process in primary grades based on a technological approach,

analyzes the results of practical experience, and presents effective methodological recommendations.

Literature Review. An analysis of scientific sources on implementing a technological approach in primary education shows that the theoretical foundations of this direction have been developed by scholars from different countries, including Russian, American, and Uzbek researchers.

The Russian scholar **V. P. Bespalko**, who made a significant contribution to the theory of pedagogical technologies, interprets the technological approach as a didactic system oriented toward clearly defined outcomes, pre-designed and planned at each stage. According to him, when the educational process is constructed as an algorithmic technology, pupils' activity increases, learning material is mastered step by step, and final results are guaranteed. Especially in primary grades, the effectiveness of Bespalko's "module–goal–result" model is highly valued.

The psychological foundations of the technological approach were developed by the Russian scholar **N. F. Talyzina**, who considers education as a manageable process and emphasizes the importance of consciously organizing pupils' activity. Her studies substantiate a stage-based model of forming skills and competences, the application of age-appropriate pedagogical technologies, and principles for activating cognitive activity. Talyzina's ideas serve as a theoretical basis for applying interactive approaches, visual technologies, and game methods in primary education.

The internationally recognized American researcher **Benjamin Bloom**, known for classifying educational objectives, developed a system of goals that constitutes an important component of the technological approach. Bloom's taxonomy enables structuring the learning process from simple to complex and organizing pupils' thinking activity at different cognitive levels. In modern primary education methodology, clearly defining lesson objectives is based on Bloom's concept.

One of the founders of pedagogical constructivism, the American scholar **John Dewey**, substantiated the practical and creative aspects of the technological approach. Dewey's idea that "learning is a process of experience" lies at the core of modern pedagogical technologies. Game-based technologies, project tasks, practical experiments, and problem-based methods in primary grades are practical manifestations of Dewey's concept.

In Uzbek pedagogy, a major contribution to adapting the technological approach to the national education system was made by **N. Azizkho'jayeva**, who deeply analyzed the content of pedagogical technology, the structure of the teaching process, and principles for increasing pupil activity. According to her, a technologized lesson has clear objectives, content divided into sequential blocks, methods selected according to pupils' age, and results evaluated through diagnostics.

The American scholar **Robert Gagné**, widely recognized for instructional design, developed the theoretical foundations of instructional design. His model of the "nine events of instruction" makes it possible to structure lessons as a technological system. For primary school pupils, Gagné's stages—gaining attention, stating objectives, using visual materials, providing practice, assessment, and reinforcement—serve as highly effective methodological bases.

The views of these scholars show that the main advantage of the technological approach lies in engaging pupils in active learning, the step-by-step formation of knowledge, the systematic organization of lessons, and an outcome-oriented process. These sources provide a solid theoretical and practical foundation for applying a technological approach in primary education.

Methodology and Results. This study aimed to determine the impact of a technological approach on pupils' classroom activity and learning achievement in primary grades. A total of 128 pupils from Grades 1–4 participated in the research. They were equally divided into two groups—experimental and control classes—

with 64 pupils in each. The study was conducted in three stages: initial diagnostics, experimental instruction based on a technological approach, and final assessment.

The research methods included pedagogical diagnostics, observation, questionnaires, and mathematical-statistical analysis. Initial diagnostics showed that the starting knowledge levels of the experimental and control classes were almost equal: the achievement rate in the experimental class was 48%, while in the control class it was 46%. Classroom participation was also similar: 52% in the experimental class and 50% in the control class, confirming that both groups had nearly equal initial conditions.

At the experimental stage, elements of the technological approach were introduced. Interactive platforms, digital tests, visual models, animations and multimedia presentations, online projects, and simulation tools were used. Pupils were able to complete tasks in real time, see immediate results, collaborate in groups, and analyze their activity through a digital assessment system. In the control classes, traditional lessons—oral explanations, board-and-notebook work, and written exercises—were continued.

The experiment lasted three months, during which pupils' activity, motivation, task completion speed, and achievement were regularly monitored. The results showed that pupils taught using the technological approach demonstrated significantly higher activity than those in traditional classes. Participation in answering questions, expressing opinions, engaging in group discussions, and independent inquiry improved both in quality and frequency. Average classroom participation in the experimental class reached 82%, whereas in the control class it was 58%.

Motivation also increased markedly. Questionnaire results indicated that 74% of pupils in the experimental class rated technological lessons as "very interesting," compared with only 41% in the control class. Competitive tasks, real-time results, and interactive rating systems enhanced pupils' interest in learning.

Achievement indicators also changed in favor of the experimental class. Final test results showed that pupils in the experimental class achieved a learning rate of 78%, while those in the control class reached only 61%. Thus, the technological approach increased learning achievement by 17%. A significant change was also observed in task completion speed: pupils working with interactive tasks completed assignments on average 23% faster.

During the experiment, the rate of independent expression of ideas nearly doubled, while the level of cooperation and exchange of opinions in groups increased from 35% to 67%. Timely task completion rose from 58% to 84%. These results prove the effectiveness of the technological approach in activating lessons in primary grades.

Overall, primary lessons organized on the basis of a technological approach increase pupils' activity and independent thinking and improve the quality of learning by an average of 15–20%. Interactive, visual, and learner-centered lessons engage pupils not merely as receivers of knowledge but as active participants in the learning process.

Conclusion. This study was aimed at determining the effectiveness of activating the learning process in primary grades based on a technological approach. The results show that the technological approach significantly increases pupils' activity, motivation, and learning achievement. Classroom participation in the experimental class reached an average of 82%, while in the control class it was 58%, indicating that lessons enriched with interactive, visual, and digital resources raise pupil activity by 24%.

Task completion speed also improved. Pupils working with interactive tasks completed assignments 23% faster than those taught by traditional methods, contributing to higher lesson efficiency and timely performance of tasks.

Learning achievement also changed in favor of the technological approach. According to final test results, the experimental class reached 78%, whereas the control class achieved only 61%, meaning that the technological approach improved learning quality by 17%. Moreover, indicators of independent thinking and participation in group discussions increased significantly: the number of pupils expressing independent opinions doubled, and cooperation levels rose from 35% to 67%.

Questionnaire results confirmed increased motivation: 74% of pupils in technological lessons rated them as “very interesting,” compared with 41% in the control class. This shows that interactive and learner-centered lessons enhance not only achievement but also interest and enthusiasm for learning.

The study also revealed that the technological approach supports the development of pupils’ creative thinking. Pupils act not only as recipients of information but as active participants, researchers, and creators. Their initiative, cooperation skills, and ability to make independent decisions strengthened during task performance.

In conclusion, the technological approach makes primary lessons not only effective but also engaging and interactive. It increases learning achievement by an average of 15–20% and activity by 24%. Because lessons are visual, interactive, and learner-centered, pupils perceive learning not as an obligation but as a natural interest and need. At the same time, the technological approach serves as an important tool for developing independent thinking, creativity, and cooperation skills.

The results indicate that introducing a technological approach in primary grades enhances the quality of school education and significantly strengthens pupils’ interest in learning, confirming the growing role of digital and interactive methods in the pedagogical process.

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