INTERNATIONAL MULTI DISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
eISSN 2394-6334 Impact factor: 8.854 Volume 13, issue 06 (2026)

FORMATION OF EFFECTIVE METHODS FOR USING NON-STANDARD TESTS IN IMPROVING INDEPENDENT WORK IN HIGHER EDUCATION

Nurnazarova Gavkharoy Bakhtiyor kizi
Jizzakh State Pedagogical University
Specialty: Theory and Methodology of Education and Upbringing (Primary Education)
2nd year master's student
e-mail: gavharnurnazarova@gmail.com

Abstract: This article analyzes the pedagogical possibilities, methodological foundations, and effective methods of using non-standard tests to improve students' independent work in the higher education system. The study highlights the role of non-standard tests in developing students' critical thinking, independent decision-making, problem-solving, and creative approaches. Methodological mechanisms and evaluation criteria for organizing non-standard tests have also been developed. The experimental results showed that the use of non-standard tests increases the effectiveness of independent learning.

Keywords: non-standard testing, independent learning, competence, creative thinking, higher education, assessment, pedagogical technology, interactive method.

INTRODUCTION

Currently, large-scale modernization processes in the higher education system make the development of modern and innovative mechanisms for the more effective organization, control, and evaluation of students' independent educational activities one of the important pedagogical tasks. In particular, as a result of the gradual introduction of the credit-module system, the time allocated to classroom classes has been reduced, and the share of students' independent learning activities is significantly increasing. This requires students to work on themselves, conduct independent research, analyze problem situations, and develop skills for linking theoretical knowledge with practice. At the same time, the increase in the volume of independent work requires a new approach to their evaluation system. In particular, the widespread introduction of innovative pedagogical technologies into the educational process, the use of interactive methods, and the development and implementation of non-standard test tasks are recognized as one of the pressing issues of today.

Non-standard test tasks serve not only to determine the level of students' theoretical knowledge but also to develop their logical thinking, creative approach, ability to analyze problem situations, and independent decision-making skills. Through such tasks, students are not limited to a simple repetition of ready-made information, but also learn to apply knowledge in practical situations, develop various solution options, and justify their opinion. Furthermore, the use of innovative assessment technologies is an important factor in increasing students' learning motivation, involving them in the active learning process, and enhancing the effectiveness of independent learning. For this reason, the development and practical implementation of effective methodological foundations for using non-standard test tasks in the higher education system is becoming one of the priority areas of modern pedagogical science. Non-standard tests allow students to determine not only the level of their theoretical knowledge but also their logical thinking, problem-solving, creative approach, and reflexive activity. In this regard, they are one of the important pedagogical tools for increasing the effectiveness of independent learning, strengthening students' learning motivation, and improving the quality of education.

Decisions of the President of the Republic of Uzbekistan on the development of the education system emphasize the need to "introduce modern pedagogical technologies into the educational process, develop students' independent thinking, and strengthen the competency-based approach" [1]. Traditional test tasks often serve to determine the extent to which a student has memorized the ready-made knowledge. Non-standard tests, on the other hand, orient students toward analyzing problem situations, taking a creative approach, drawing logical conclusions, and applying knowledge in practice [2]. Modern pedagogical research emphasizes the significance of non-standard tests in developing reflexive and metacognitive activity. In particular, L.S. Vygotsky emphasizes that "in the educational process, the student's thinking activity and independent analysis must be developed" [3].

Additionally, non-standard tests serve to develop students' communicative competencies. D. Johnson and R. Johnson believe that "collaborative learning processes develop students' communication skills and the ability to solve problem situations together" [4].

In today's digital educational environment, opportunities for organizing non-standard tests through electronic platforms are also expanding. A. Bates notes that "digital technologies are an important tool in shaping an individual educational trajectory" [5]. Therefore, the development of effective methods for using non-standard tests to improve independent work in higher education is one of the most pressing pedagogical problems.

RESEARCH METHODOLOGY

In the course of the study, a number of modern pedagogical and empirical research methods were used to comprehensively study the problem and reach scientifically grounded conclusions. In particular, through the method of pedagogical observation, the activity of students in the process of independent learning, their participation in performing non-standard test tasks, and changes in learning motivation were regularly monitored. Using the comparative-analytical method, the effectiveness of traditional test tasks and non-standard tests was compared, and their impact on the quality of education was scientifically evaluated.

Additionally, during the study, specially developed questionnaires were conducted among student respondents, examining their attitudes toward non-standard tests, difficulties in completing assignments, and their opinions on the significance of this methodology in the educational process. While the practical effectiveness of the developed methodology was determined through experimental work, the results obtained using mathematical and statistical analysis methods were processed, and their level of reliability was clarified.

Experimental work was conducted in groups consisting of first-year university students. During the study, students were divided into experimental and control groups.

In the experimental group, non-standard test tasks were systematically used to organize independent work, while in the control group, activities were conducted based on traditional tests and reproductive tasks. This made it possible to compare the results between the two groups and determine the effectiveness of non-standard tests. Within the framework of the study, non-standard test tasks were developed in various innovative forms. In particular, situational tasks directing students toward analyzing real pedagogical or life situations, case tests requiring decision-making based on a problem situation, and modeling-based questions serving to connect theoretical knowledge with practical activity were used. Additionally, logical chains aimed at determining the consistency of students' thinking processes, analytical tasks that develop analytical thinking, and "find the mistake" tests that enhance attention and reflective activity were developed. These non-standard tasks served not only to determine the level of students' mastery of ready-made knowledge but also to develop their independent thinking, creative approach, and ability to react to problematic situations. In particular, the interactive and

problem-based nature of the tasks increased students' activity in the lesson process and strengthened their interest in independent research.

During the evaluation process, a number of students' essential competencies were identified as the primary criteria. In particular, the student's ability to correctly understand the problem, the ability to analyze the situation, logical and consistent thinking, the ability to substantiate their answer based on evidence, and a creative and innovative approach to the task were evaluated as the main indicators. Additionally, special attention was paid to students' independent decision-making skills, reflective activity, and the level of their ability to apply knowledge in practical situations. In the course of the study, non-standard tests were developed in accordance with the "analysis", "evaluation", and "creation" stages of the Bloom taxonomy. B. Bloom emphasizes that "the educational process should lead the student to a high level of thinking activity" [6].

RESULTS

The results of the experimental work showed that the use of non-standard test tasks yielded significant positive results in the development of students' independent educational activities and learning competencies. During the study, it was determined that the use of non-standard tasks encourages students to be active, strengthens their participation in the lesson process, and increases their need for independent thinking. In particular, tasks based on problem situations had a positive impact on the development of students' skills in analyzing, comparing, and applying knowledge to practical activities.

At the beginning of the experiment, the share of students who showed high results was only 21%, but by the end of the experimental work, this figure increased to 49%. This confirms that non-standard test tasks are an important pedagogical tool for increasing educational efficiency. In the control group, mastery indicators were relatively low, and the growth rate remained at around 8–10 percent. These results showed a significant difference between the experimental group and the control group. Based on the results of the conducted analysis and monitoring, it was established that a number of positive changes were observed in the students. In particular, the level of students' independent and free thinking increased significantly; they began to strive to solve problems independently rather than relying on ready-made answers when performing tasks.

The skills of analyzing problem situations, developing solutions appropriate to the situation, and drawing logical conclusions were also developed. In addition, there was an increase in the creative and unconventional approach to tasks. During the process of completing non-standard tests, students made more efforts to justify their opinions, put forward various ideas, and develop creative solutions. This contributed to the development of their analytical thinking and innovative thinking skills.

During the experiment, students learned not only to acquire knowledge theoretically but also to apply it in practical situations. In particular, non-standard tests organized on the basis of modeling and situational tasks developed students' ability to connect knowledge with real-life problems. As a result, positive shifts were observed in their professional training and practical competencies. Also, the results of anonymous surveys conducted among students during the experimental process confirmed the effectiveness of non-standard tests. 82% of respondents who participated in the survey noted that non-standard assignments increase interest in lessons and help organize the educational process more interactively and meaningfully. Most students noted that such tasks encourage active participation in the lesson and provide motivation for self-improvement. Furthermore, 76% of respondents stated that non-standard test tasks have a positive impact on developing independent thinking, logical reasoning, and quick decision-making skills in problem situations.

Students particularly noted that situational tasks and analytical questions allowed them to analyze their knowledge more deeply. This shows that non-standard tests are not only an assessment tool but also an innovative pedagogical mechanism that increases the effectiveness of education.

DISCUSSION

The results of the conducted research and experimental work confirmed that non-standard test tasks are significantly more effective in developing students' cognitive activity compared to traditional forms of control and assessment. These tasks encourage students not only to memorize ready-made information but also to think independently, adopt an analytical approach, deeply study problem situations, and connect knowledge with practical activity. Traditional test tasks are more reproductive in nature and serve to determine the extent to which the student has memorized theoretical information.

Non-standard tests, on the contrary, activate students' thinking processes and develop their skills in analytical thinking, logical observation, a creative approach, and finding innovative solutions to problems. In this regard, they serve as an effective pedagogical tool that further activates the student's cognitive activity in the educational process. During the study, it was observed that students who used non-standard test tasks mastered the educational material more deeply, sought to make independent decisions when performing tasks, and participated more actively in analyzing complex situations. In particular, it was found that their cognitive activity increased significantly due to the fact that situational tasks, analytical questions, and tests based on modeling elements forced students to think. It was also observed that non-standard tests develop students' reflexive activity.

In the process of completing the tasks, students attempted to analyze their own thinking strategies, identify errors, and correct them independently. This had a positive impact on the formation of competencies for self-control and self-improvement. The results showed that the use of non-standard tests serves not only to increase the level of students' knowledge but also to develop their intellectual potential, creative thinking, and independent learning competencies. Therefore, non-standard test tasks are of great pedagogical importance as one of the modern and effective forms of assessment in the higher education system.

Anderson and Krathwohl note that “modern education should orient the learner toward analysis, evaluation, and creation” [7]. One of the most important and priority features of non-standard test tasks is that they provide an opportunity to evaluate not only the student's final answer or result but also their thinking process, problem-solving stages, and thinking strategy. Through such tasks, it is observed how the student approaches the issue, how they analyze the situation, how they identify logical connections, and the consistency of thinking in the process of justifying the solution. In traditional test tasks, a correct or incorrect answer is often taken as the primary criterion. In non-standard tests, the student's response process, analytical approach, attitude toward problem situations, and creative thinking are of particular importance. Therefore, such tasks allow for a deeper determination of the student's intellectual potential and cognitive activity. In particular, situational tasks, case tests, logical chains, and analytical questions activate the student's thinking activity. During the task, the student will be forced to understand the problem, analyze available data, compare various solution options, and choose the most optimal solution. This contributes to the development of critical thinking, a reflexive approach, and independent decision-making competencies. Additionally, non-standard tests develop students' skills in justifying their opinions, proving them with evidence, and expressing conclusions in a logical sequence.

Through such tasks, the student not only demonstrates their knowledge but also demonstrates their own way of thinking and individual approach. In this regard, non-standard

tests are an effective pedagogical tool that allows for a comprehensive assessment of a student's cognitive activity during the educational process. U. Tolipov and M. Usmonboyeva emphasize that “pedagogical technologies serve to increase student activity and develop independent activity” [8].

The results of pedagogical and psychological research confirm that non-standard tasks serve as an important pedagogical tool in developing students' reflexive thinking activities. Such tasks direct students toward analyzing their educational activities, evaluating the results of the work performed, and independently monitoring their knowledge and skills. As a result, students develop important competencies such as self-management, monitoring their activities, and working on mistakes. In the process of performing non-standard tasks, students not only apply ready-made knowledge but are also forced to analyze their own thinking strategies. They reflect on how they performed the task, which method they used, what mistakes they made, and how they can be eliminated. This contributes to the activation of reflexive activity and the development of students' skills in self-improvement. Additionally, non-standard tasks develop students' skills in independently setting goals, planning activities, evaluating results, and, if necessary, making adjustments to their own activities. In particular, problem situations, analytical tasks, and case-tests encourage students to think deeply, which increases their need for self-analysis. Furthermore, the development of reflexive activity also has a positive impact on students' learning motivation. As a student begins to realize their achievements and shortcomings, they take a more conscious approach to the learning process, strive for independent research, and increase their sense of responsibility for their educational activities. In this regard, non-standard assignments are an effective pedagogical mechanism that serves not only to increase students' knowledge levels but also to ensure their personal and professional development. Zimmerman believes that “self-regulated learning increases the effectiveness of independent learning” [9].

In addition, the use of non-standard test tasks further expands the possibilities of integration with modern digital educational environments and electronic platforms. As a result of the active introduction of information and communication technologies into the educational process, favorable conditions are being created for organizing, managing, and monitoring non-standard tests through various electronic systems. This allows for increasing the interactivity of the educational process, improving assessment mechanisms, and effectively monitoring students' independent learning activities.

Currently, opportunities for creating and applying non-standard test tasks are expanding through digital platforms such as Moodle, Google Classroom, Kahoot, Quizizz, iSpring, and HEMIS. Using these platforms, it is possible to develop interactive tasks that include situational tasks, adaptive tests, questions based on logical analysis, and modeling elements. This encourages students not only to memorize knowledge but also to apply it in practice, analyze it independently, and think creatively. Another important advantage of digital educational platforms is that they allow for the observation of students' individual learning activities, the analysis of task execution dynamics, and the provision of prompt feedback. Through electronic systems, the instructor will monitor the student's progress in completing the assignment, identify their errors, and provide the necessary methodological recommendations. This serves to ensure the transparency and objectivity of the evaluation process. Additionally, the integration of non-standard tests with digital platforms enhances the possibility of implementing a differentiated and individualized approach in the educational process. With the help of electronic systems, it will be possible to select tasks that correspond to the level of knowledge, interest and readiness of students. As a result, each student will have the opportunity to work independently in accordance with their capabilities and needs. Furthermore, non-standard tests organized on the

basis of digital platforms serve to develop students' competencies in working with information, using digital technologies, and self-education.

Therefore, the integration of non-standard tests with modern e-learning environments is one of the important factors in improving the quality of education in the higher education system. N. Muslimov and M. Usmonboyeva emphasize that “innovative educational technologies are an important factor in increasing the effectiveness of education” [10].

CONCLUSION

In conclusion, it can be noted that the use of non-standard test tasks in the process of organizing and improving independent work in the higher education system is of great pedagogical importance. These tasks are considered one of the innovative tools that serve to activate students' independent learning activities, develop their intellectual potential, and increase the efficiency of the educational process.

The research results demonstrated that non-standard tests encourage students to think independently and freely rather than merely repeating ready-made knowledge. Through such tasks, students develop skills in analyzing problem situations, developing various solution options, and drawing logical conclusions. At the same time, non-standard tasks have a positive impact on the development of students' thinking in a creative and innovative direction. Furthermore, the use of non-standard tests serves to develop a critical and analytical approach in students. In the process of completing assignments, students learn to deeply analyze the problem, reason based on evidence, and justify their views. This forms competencies that are important not only in their educational activities but also in their future professional activities. These tasks also served as an important tool in increasing the efficiency of the educational process.

The experimental results showed a significant increase in academic performance indicators, learning motivation, and classroom activity in the groups using non-standard tests. This confirms that non-standard tests serve to deepen the mastery of students' knowledge. Furthermore, non-standard tests allow for the transparency and objectivity of the assessment process. This is because such tasks take into account not only the final result but also the student's thinking process, problem-solving strategy, and the level of justification for the answer. As a result, the student's knowledge and skills are assessed more comprehensively. Another important advantage of non-standard tests is that they also serve to develop students' digital and information-communication competencies.

Non-standard tasks organized on the basis of electronic platforms, interactive systems and digital educational tools teach students to work with modern technologies, independently search for information and operate in a digital environment. Overall, the results of the conducted research confirm that the use of non-standard test tasks is one of the effective pedagogical mechanisms for increasing the effectiveness of independent learning within the higher education system.

Therefore, the widespread introduction of non-standard tests into the educational process, their integration with modern pedagogical and digital technologies, and their methodological improvement are of great importance as one of the current directions of modern pedagogical science.

REFERENCES

1. Decree of the President of the Republic of Uzbekistan No. UP-5847 "On the Concept for the Development of the Higher Education System until 2030." - Тошкент, 2020.
2. Ishmukhamedov R., Yuldashev M. Innovative pedagogical technologies in education and upbringing. – Tashkent: Nihol, 2016. – 172 p.
3. Vygotsky L.S. Mind in Society. – Cambridge: Harvard University Press. – 159 p.

4. Johnson D., Johnson R. Cooperative Learning Methods. - Minnesota: Interaction Book Company, 1999. – 112 p.
5. Bates A.W. Teaching in a Digital Age. Vancouver: BCcampus, 2015. – 528 p.
6. Bloom B. Taxonomy of Educational Objectives. New York: Longman, 1956. – 201 p.
7. Anderson L., Krathwohl D. A Taxonomy for Learning, Teaching, and Assessing.
8. - New York: Longman, 2001. – 352 p.
9. Tolipov U., Usmonboyeva M. Pedagogical technologies: theory and practice. – Tashkent: Fan, 2017. – 256 p.
10. Zimmerman B. Self-regulated learning and academic achievement. New York: Springer, 1989. – 308 p.
11. Muslimov N., Usmonboyeva M. Innovative educational technologies. – Tashkent: Sano-standart, 2018. – 318 p.