

METHODOLOGY FOR IMPROVING STUDENTS' CREATIVE ACTIVITY IN THE PROCESS OF WORKING WITH INFORMATION (ON THE EXAMPLE OF PISA TASKS)

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Annotation

This article explores the issues of improving students' creative activity in the process of working with information. The study analyzes the essence of creative thinking, its role in modern education, and methodological approaches to developing students' creative skills based on PISA tasks. It also substantiates ways to foster learners' abilities to solve problem situations, generate non-standard solutions, and critically evaluate information through purposeful engagement with information sources. The article is of methodological significance for general education teachers and educational researchers.

Keywords

Creative thinking, creativity, information processing, PISA tasks, 21st century skills, problem situation, critical thinking, innovative education, students' creative activity.

INTRODUCTION

In modern education, working with information is one of the most important aspects of students' creative development. Working with information includes not only the search and reception of physical information, but also its analysis, comparison, and processing in a new context. It is these processes that activate students' creative thinking mechanisms. PISA tasks have a real-life context and require students not to repeat ready-made knowledge, but to develop effective, problem-specific, unusual and effective solutions from existing information. This serves to promote divergent, alternative ideas and the emergence of critical thinking in students.

In this regard, the development of a methodology for the creative development of students in the process of working with information is a scientific and pedagogical problem. This paper highlights the problems of students' creative production based on the integration of information work and PISA tasks.

RESEARCH METHODOLOGY

The following methodological approaches and methods were used in the research process:

Competency-based approach - developing creative thinking in students as a component of 21st century skills;

Activity-oriented approach - involving students in independent work with information, solving problem situations;

Systematic approach - organizing the stages of working with information in a sequential and interconnected manner.

The following research methods were used:

- Analysis of scientific, pedagogical and psychological literature;
- Study and modeling of the content of PISA tasks;



- Observation and analysis;
- Testing creative tasks in the educational process.

The PISA 2025 creative thinking assessment concept developed by the OECD, as well as scientific views of local and foreign scientists on creativity and information literacy, were taken as a methodological basis.

The methodology for developing creativity based on working with information includes the following stages:

- understanding the problem and determining the need for information;
- searching and selecting information from various sources;
- analyzing and restructuring the information received;
- developing a new idea or solution based on the information;
- evaluating and improving the proposed solution.

This methodology encourages students to think independently, increases their information literacy, and develops a culture of justifying their opinions. At the same time, the PISA-format tasks expand the opportunity to assess students' creative activity, since not only the final result is taken into account, but also the thinking process.

The main task of education is to provide students with 21st century skills for future success. The most important of these skills is creative thinking, which plays an important role in solving current problems for today's students and youth.

Creative thinking forms in students the ability to be creative, to find solutions to local and global problems. Creativity is a creative ability that characterizes the readiness of young people to generate new ideas and is reflected in their power. Creativity is manifested in a person's thinking, communication, emotions, and certain types of activities. Creativity develops the internal capabilities of a person. Creativity determines the sharpness of the mind, ensures the active involvement of young people in the educational process. Young people with creative thinking have new ideas, express their thoughts beautifully, make useful suggestions and recommendations, and discuss their ideas based on clear evidence. As society renews and develops, the demand for specialists with innovative and creative thinking skills is also increasing [1].

Skills necessary for the development of creative thinking

- Logical thinking.
- Formulation of hypotheses.
- Finding logical connections between events, objects, facts
- Overcoming stereotypes.
- Making decisions in unfamiliar and non-standard situations.
- Finding the right knowledge and appropriate methods

Creative thinking, while being a specific area with a societal impact, is also a more universal and generalized phenomenon than one might think. That is, in a broad or relatively narrow sense, every person has the ability to think creatively. In addition, according to the general understanding widely spread among psychologists and teachers, creative thinking, which is closely related to creativity and is understood as participation in thinking processes, improves a number of other separate thinking skills. In particular, it improves metacognitive skills, interpersonal and personal problem-solving skills, the development of a sense of equality, the acquisition of knowledge, future professional success, and integration into society. Creative thinking helps students learn by supporting them in interpreting experiences, events, and situations in new and meaningful ways.

PISA studies have a definition of creative thinking that is relevant for 15-year-old students around the world. In PISA 2025 studies, the term creative thinking is interpreted as working with



the creative competence of the younger generation, generating ideas that stimulate learning and lead to finding real and effective solutions, and increasing knowledge or expressive imagination [2].

M. Oripova defined scientific literacy in her scientific article as “the ability to use scientific knowledge to investigate and solve problems using scientific methods to obtain conclusions based on observations and experiments, to think about current problems, to have problem-solving skills when faced with personal, social, global problems, and to observe and test the ability to observe”. The PISA international assessment program has also fundamentally changed the meaning of the concept of “education”, which is widely used in pedagogical practice. The pedagogical scientist and international expert on education A. Shlyakher defined the concept of education as follows: “Education is not only a process of teaching students something, but also providing them with the necessary opportunities that help them move confidently and quickly in an increasingly complex and changing world.” Based on this, the functional tasks of both general education schools and teachers are changing accordingly. The change in the concept of “education” is also reflected in the content of educational literature and educational tasks. [3]

The interdependence approaches to creativity emphasize the importance of various internal resources for successful creative work, as well as the importance of the environment in which creative work takes place. Such approaches serve as an important scheme for assessing creative thinking within the framework of PISA studies. However, to gain a better understanding of students' creative thinking, it is necessary to contextualize these approaches in a way that is relevant to students' everyday school life. Several authors have identified the cognitive skills that are necessary for a person to think creatively.

RESULTS

The educational process based on working with information and enriched with PISA-format tasks significantly activates the creative activity of students. In particular:

- students have developed the skills of understanding the problem and determining the need for information;
- the ability to compare and critically evaluate different sources of information has developed;
- the activity of putting forward alternative ideas and developing unusual solutions has increased;
- students' skills in substantiating their opinions and drawing logical conclusions have strengthened.

Also, through PISA tasks, the opportunity to determine not only the final answer of students, but also the thinking process, stages of idea generation and assessment skills has expanded.

DISCUSSION

The results obtained show that the development of creative thinking is effectively carried out not only through separate exercises, but also through the proper organization of the process of working with information. PISA tasks confront students with real-life problems and encourage them to think outside the box.

In this process, the teacher plays the role of a guide, consultant, and moderator, rather than a traditional educator. Students, on the other hand, turn from passive listeners into active researchers. As a result, a creative environment is formed in the educational process, revealing the inner potential of students.

CONCLUSION

The educational process, oriented towards working with information, organized on the basis of PISA tasks, is highly effective in developing students' creative thinking. This approach forms



students' skills in solving problem situations, critical and creative evaluation, and developing innovative ideas.

Thus, the formation of creativity in students is determined by assessing their ability to create, evaluate, and improve ideas in four thematic areas: written self-expression, visual self-expression, solving social problems, and solving natural-scientific problems. Searching for a counter-solution. Finding an existing solution to a problem, then trying to find sufficient reasons not to do it, also teaches the development of creative thinking, learning to find and prove the shortcomings of existing solutions, and finding effective solutions. In conclusion, the participation of Uzbekistan in the PISA study will help improve the quality of education in our country.

Therefore, an educational process focused on working with information and organized on the basis of PISA tasks serves to reveal the creative thinking potential of students and to shape them as individuals who meet the requirements of the 21st century.

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