

## ENHANCING STUDENTS' CREATIVE THINKING THROUGH INTERNATIONAL ASSESSMENT PROGRAMS

*Aziza Amonova Saidulloyevna*

*Is a 3rd grade student of the  
Faculty of Primary Education of JDPU*

**Annotation:** This article describes the concept of creative thinking in a broad sense and mentions that this concept is important for students' future research. The PISA program, which is considered one of the international researches, requires creativity and the opinions are expressed about the further improvement of the quality of education

**Key words:** skill, creative thinking, divergent thinking, science, mathematics, problem, platform, domain,

### INTRDUCTION

The main task of education is to form the skills that the student will need today and in the future to lead a successful life in society. Creative thinking is an important skill that today's youth should have. These skills help them adapt to a world that is constantly and rapidly changing, requiring workers with "21st century" skills that go beyond simple literacy. In general, today's student is expected to work in the future in fields that do not even exist now, to solve new problems through new technologies. A number of researchers have tried to identify the mental capacities necessary for creative thinking. The importance of developing creative thinking at school is not limited to the labor market. School is important for young people to discover their abilities and skills, including creative talents. Also, creative thinking supports students' learning by interpreting events, experiences, and behaviors in a new and personally meaningful way. In order to increase the student's motivation and interest in the school, it is necessary to establish new forms of education that take into account the creative potential and enthusiasm of all students. This can especially help students who are not very interested in the educational process, and it will help them express their opinions and develop their potential. the concept of convergent and divergent thinking has greatly influenced research in this field. Analytic thinking is generally defined as the ability to use conventional and logical strategies to search, understand, and make decisions based on information gathered in order to find answers. Divergent thinking, on the other hand, is original by applying new approaches and forming unexpected combinations from existing information, as well as using the capacities of connections, thinking, and transformation, such as semantic variability and fluidity. is the ability to develop ideas.

## **REFERENCES AND METHODOLOGY**

Divergent thinking is also described as the ability to abandon ready-made instructions, to search for different solutions to problems, to resort to unexpected measures when all other means are exhausted, to look at problems from a different point of view, to abandon ready-made methods and try new ones. In general, divergent thinking is often about generating new, unusual, and unexpected answers. Creative thinking is often described in terms of divergent thinking, and most research to date has been devoted to studying the mental processes associated with divergent thinking. But the research is analytical or decision-making clearly shown that mental processes of similar thinking, such as the ability to do, are important for creativity. For example, the ability to generate new and valuable ideas may depend on the implementation of other processes, such as problem definition. In fact, it was found that the success of art students in defining the problem is closely related to the criteria of aesthetic value and originality of the pictures they draw. These criteria, in turn, depended on the long-term success of these students as artists. Schools can promote educational methods that support the mental skills and approaches necessary for creativity, and learning to form mental representations has been shown to improve student creativity in science, mathematics, and ICT.

The literature suggests that the more domains covered in an assessment of creative thinking, the better the coverage of the construct. However, some practical and logistical limitations of the PISA study affect the possible domains to be included in the PISA program. The first of these is related to the age of those being tested. Given that the target audience of the PISA study (15-year-old students) has limited knowledge and life experiences, the domains chosen for assessment should be based on knowledge and experiences common to all students in the world (such as drawing, writing or problem solving). The domain being tested (and related tasks) should also reflect a realistic expression of the creative thinking that a 15-year-old student can demonstrate in this context.

The second limitation is related to the time allotted for testing. According to the structure of the current PISA assessment, one hour is allocated to the test to assess students' creative thinking. This means that the number of possible domains must be limited so that a sufficient amount of data can be collected for each domain. Since the purpose of the PISA study is to provide benchmarks of test results at the country level rather than individual test results, different forms of tests can be used interchangeably. In this, students solve a diverse mix of tasks (with some accidental overlap) within the domain. However, ensuring that students obtain reliable indicators of national test performance in each domain requires that sufficient time be allocated to each domain's task and limits the number of tasks that can be covered in an assessment. A third limitation is the implementation of the test of creative thinking in the standard PISA

test-taking platform related to the obligation. PISA tests are performed on a standard computer, which does not have a touchscreen or an Internet connection. The platform currently supports various forms of response input, including multiple choice, text input, drag-and-drop, hot-spot (clicking on an area within a text or image), chat interface, interactive charts, and graphics. Although it is possible to add new functionality to the platform during the development of this assessment, such as a drawing tool, selection of assessment areas, the technical limitations of the platform must be taken into account when developing the same tasks. The development of an international program for the assessment of creative thinking can lead to positive changes in educational policy and pedagogy. The PISA Assessment of Creative Thinking in Research provides a clear, reliable, and actionable assessment tool to help policymakers make evidence-based decisions. The results also fuel debates in society about the importance and methods of developing this important skill through education. This activity in the international assessment program PISA is related to another project of the Organization for Economic Co-operation and Development aimed at supporting a new pedagogy for the development of creative thinking. The main task of education in creative thinking is to form the skills that the student will need today and in the future to lead a successful life in society. Creative thinking is an important skill that today's youth must have, and this skill will help them adapt to a constantly and rapidly changing environment that requires personnel with up-to-date skills beyond simple literacy. In general, today's students will work in fields that do not even exist in the future, fnew skills for new problems will allow them to solve increasingly complex local and global problems through an unusual approach. The importance of developing creative thinking at school is not limited to the labor market. School is important for young people to discover their abilities and skills, including creative talents. Creative thinking also supports student learning by interpreting events, experiences, and behaviors in new and personally meaningful ways.

### **Conclusion**

A number of educational research studies have explored different methods of teaching or learning that increase the likelihood of knowledge and skill acquisition. Research shows that creative thinking can be effectively developed by working together in a team environment that allows for the creation of knowledge and skills. In other words, schools act as knowledge and skill-generating organizations, where students are actively engaged in creative and regular activities infused with new ideas. When the process of creating knowledge becomes a purposeful activity that is an integral part of the educational process, that is, a type of everyday activity, Knowledge can also be created by "looking at the world with the eyes of questioning wonder." Looking at the world with questioning wonder is understood as the process of a student trying to understand the world, and it motivates students to put forward their own

opinions about various phenomena. Students' creativity is reflected in their creative thinking skills, especially when most of the creative thinking process involves "invisible" tasks.

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