



DESIGN THINKING AND ITS RELATIONSHIP WITH CREATIVE ABILITY

Ma'mura Shokirjon qizi Dadamirzayeva

1st Year Doctoral Candidate, Namangan State University

Email: mamuradadamirzayeva4@gmail.com

Phone: +998942717572

Abstract: This article explores the relationship between design thinking and creative ability. Creativity is central to design thinking, stimulating and facilitating innovation and the generation of ideas. Throughout the design process, a creative approach enables teams to produce novel ideas, re-examine problems from different perspectives, and discover innovative solutions that are user-centered and highly applicable..

Key words: *design thinking, creative ability, idea, effective development, creativity, design process*

ДИЗАЙН-МЫШЛЕНИЕ И ЕГО СВЯЗЬ С ТВОРЧЕСКИМИ СПОСОБНОСТЯМИ

Дадамирзаева Маъмура Шокиржон кизи

Докторант 1-го курса (PhD), Наманганский государственный университет

Email: mamuradadamirzayeva4@gmail.com

Телефон: +998942717572

Аннотация: Данная статья исследует взаимосвязь между дизайн-мышлением и творческими способностями. Креативность находится в центре дизайн-мышления, стимулируя и облегчая инновации и генерацию идей. В ходе процесса творческий подход помогает командам генерировать новые идеи, переосмысливать проблемы и находить инновационные решения, ориентированные на пользователя и обладающие высокой степенью применимости.

Ключевые слова: *дизайн-мышление, творческие способности, идея, эффективное развитие, креативность, процесс проектирования.*

Creative thinking and design thinking are intricately linked, with creativity being an essential component of design thinking. It is the ability to generate unique and novel ideas that have not been previously considered. Creativity involves not only creating new ideas but also combining existing ideas in new and innovative ways. While creativity amplifies the initial ideas that can lead to design, design focuses on applying these ideas in a structured and functional manner. Essentially,

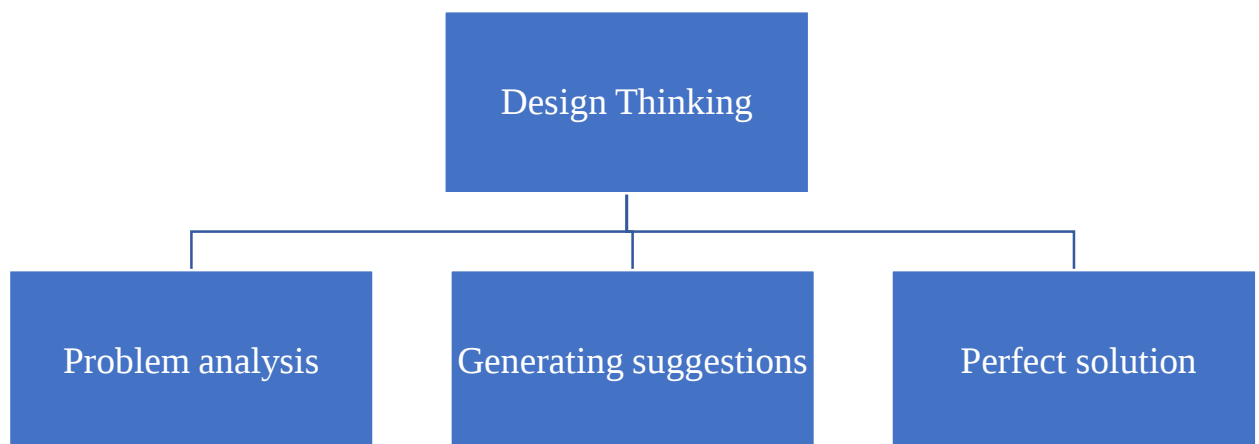


creativity is about creating possibilities, while design is about transforming these possibilities into a tangible product or experience.

Design thinking is an essential quality that students need to develop and refine to solve the growing problems in the digital world. In primary education, design thinking is more than just arts and crafts; it is a structured process that helps children develop critical thinking and collaboration skills in solving real-world problems. It clarifies that it is not merely arts and crafts and emphasizes key skills. As a method of thinking in design activities, design thinking is an analytical, innovative, iterative, and collaborative process in which people experiment, create, prototype models, gather feedback, and redesign (Razzouk & Shute, 2012; Wrigley & Straker, 2015). Compared to traditional thinking paradigms in various fields, design thinking incorporates collaboration, open-mindedness, and, most importantly, creativity, which plays a significant role in 21st-century skills. Considering that design thinking and creativity are inseparable during design activities, numerous practical efforts need to be undertaken to develop these skills among primary school students. At the heart of design thinking are:

- Mistakes, as they are a driving factor in finding the optimal solution to the problem.
- The core or culminating representation of the idea, embodied in a series of created images.
- Communication with the user as an important tool.
- Working in a team, shaping ideas based on creativity (brainstorming).

Design Thinking Stages:



According to some researchers (J. Guilford, K. Taylor, Ya.L. Ponomarev), creative abilities (creativity) are an independent factor not related to general abilities



and necessary for activating creative thinking and activity. Creative abilities are primarily:

- 1) Flexible thinking, which implies the ability to transition quickly and easily from one type of phenomenon to another.
- 2) The ability to evaluate and select one of many alternatives before testing.
- 3) The ability to "integrate" - that is, to combine newly received information with what was previously known, to incorporate them into the existing system of knowledge.
- 4) The ability to easily generate ideas. At the same time, not every idea has to be correct.
- 5) The ability to complete the work started. Here, it is not just perseverance, diligence, orderliness, and willpower to complete the work begun, but rather the ability to thoroughly think through, refine, and improve initial plans.

Creative abilities are the ability to generate new, original, and useful ideas, solve problems in unconventional ways, and apply existing knowledge in new contexts. Creative abilities are not limited to just art. They also play an important role in any field, including science, technology, business, and everyday life. Creative abilities can be innate, but they can also be learned and developed. Various exercises, games, and methods can be used to develop creative abilities.

Creative abilities include the following elements:

- Creative thinking: The ability to generate new ideas, combine existing ideas, and adopt new perspectives.
- Problem-solving: The ability to identify problems, analyze them, and find unconventional solutions.
- Imagination: The ability to envision, create new worlds, and see things that do not yet exist.
- Adaptability: The ability to adjust to changes, quickly adapt to new situations, and learn new methods.
- Risk-taking: The ability to try new things, not be afraid of mistakes, and defend one's ideas.
- Curiosity: The desire to learn new things, ask questions, and strive to expand knowledge.



Why is Creativity Important in Design Thinking?

It is the ability to develop unique and novel ideas that have not been explored before. Creativity is not only about creating new ideas; it's also about combining existing ideas in new and innovative ways. In design thinking, creativity is used to explore and generate a wide range of potential solutions to a problem.

Here are the key aspects of the connection between Design Thinking and Creativity:

- **Encouraging Divergent Thinking:** The "Ideate" phase of design thinking promotes divergent thinking, which helps generate diverse and novel ideas. Divergent thinking is one of the fundamental elements of creativity.
- **Supporting Convergent Thinking:** The "Define" and "Test" phases of design thinking support convergent thinking, which helps select the best ideas and transform them into practical solutions.
- **Iterative Process:** The iterative process of design thinking allows for the continuous refinement of ideas, which helps find creative solutions.
- **User-Centered Focus:** Because design thinking is focused on the needs of users, creative solutions are geared towards solving their real problems.
- **Collaboration:** Design thinking is often carried out in groups, which helps combine different perspectives and find creative solutions.

This scientifically-based explanation demonstrates the complexity of creative abilities and their connection to brain activity and cognitive processes. To develop creative abilities, it is important to increase brain flexibility, develop cognitive adaptability, promote divergent thinking, support intrinsic motivation, and combine knowledge and experience with new perspectives.

Design thinking is an effective methodology that creates a conducive environment for fostering creativity. It encourages divergent and convergent thinking, supports the iterative process, provides user-centeredness, and promotes collaboration. Scientific studies confirm the important role of design thinking in enhancing creative ability. Additionally, these resources will help you to understand the essence of design thinking and how it can be applied in elementary grades more deeply. Integrating design thinking into the educational process is an important step in preparing students for future success.

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