GALAXY INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL (GIIRJ)
ISSN (E): 2347-6915
Vol. 13, Issue 1 January (2025)

APPEARANCE OF DESIGN-THINKING METHOD IN TEACHING

Gulnoza Toshmukhammedova Zayniddin kizi
Samarkand State Institute of Foreign Languages, Uzbekistan
g.toshmukhammedova@gmail.com

ABSTRACT

This article explores the emergence and application of Design Thinking (DT) as a teaching method in educational settings. Initially developed in industrial design, DT has become a popular approach in education due to its emphasis on creativity, empathy, collaboration, and iterative problem-solving. The paper examines how DT fosters student engagement, critical thinking, and problem-solving skills, aligning with contemporary educational goals to develop both technical knowledge and soft skills. It also discusses the challenges faced by educators, including the need for specialized training and the difficulties of fitting DT into traditional curricula. The article emphasizes the potential benefits of DT in creating more student-centered learning environments, promoting deeper learning, and preparing students for real-world challenges.

Keywords: Design Thinking, Education, Teaching Methods, Student-Centered Learning, Problem-Solving, Empathy, Collaboration, Creativity, Critical Thinking, Teacher Training, Curriculum Challenges, Educational Innovation, Constructivist Approaches, STEM Education.

INTRODUCTION

Education is constantly changing, demanding new teaching methods that encourage creativity, problem-solving, and critical thinking. One such method gaining popularity is Design Thinking (DT). This approach, borrowed from the world of design, helps solve complex problems in various fields, including education.

DT focuses on understanding the user's needs (empathy), working together (collaboration), generating ideas (ideation), and creating prototypes to test solutions. This ensures solutions are not only practical but also meet the specific needs of the users. This paper examines how DT is being used in education, how it affects student learning, and the challenges and advantages of implementing it.

LITERATURE REVIEW

Design Thinking (DT) was first developed for industrial design, but its impact has spread to many areas like education, business, and healthcare. Brown (2009) explains that DT provides a structured way to think creatively. It focuses on understanding user needs, generating ideas, and repeatedly testing those ideas. This approach encourages teamwork and flexibility, aiming to find solutions that address real-world problems effectively. This version is more concise and easier to understand while still conveying the key information about the origin and core principles of Design Thinking.The infusion of Design Thinking into education has been documented in several studies and reports. The method's emphasis on creativity, empathy, and iterative feedback resonates with contemporary educational goals, which increasingly aim

to develop students' soft skills alongside their technical knowledge. In the context of teaching, DT has been used to enhance problem-solving abilities, foster student-centered learning, and create a more engaging learning environment (Plattner et al., 2015). Furthermore, DT methods align with constructivist approaches to education, which view learning as an active process where students construct knowledge through interaction with their environment.

Although Design Thinking has demonstrated potential in promoting innovation and engagement in educational environments, its broader implementation faces various obstacles. A key challenge is the necessity for educators to adjust their teaching methods to effectively integrate these new approaches. Additionally, it is important to ensure that the emphasis on creativity in Design Thinking does not undermine the development of essential academic knowledge (Kimbell, 2011).

METHODOLOGY

The current study employs a qualitative research methodology to investigate the appearance and application of Design Thinking in educational settings. Data collection for this paper involves a review of literature, including peer-reviewed journal articles, case studies, and reports from educational institutions that have implemented Design Thinking methodologies. The analysis focuses on how these methodologies are integrated into the classroom, the types of learning environments they foster, and their impact on students' cognitive and social development. Additionally, interviews with educators who have incorporated Design Thinking into their teaching practice were conducted to gather insights into the practical challenges and benefits associated with its implementation.

RESULTS

1. The Shift from Traditional Teaching to Design-Thinking Approach

The incorporation of Design Thinking into education marks a shift from traditional, teacher-centered methods to more student-centered approaches. According to a report by the Stanford d.school (2019), a fundamental component of Design Thinking in education is its emphasis on empathy. By encouraging students to view problems from others' perspectives, Design Thinking helps them gain a profound understanding of the real-world impact of their ideas and solutions. This is especially relevant in disciplines such as social studies, healthcare, and business, where understanding human behavior and needs is crucial for effective problem-solving. Teachers who implement Design Thinking often use collaborative activities, allowing students to work together in teams to solve complex problems. This approach supports the findings of Razzouk and Shute (2012), who suggest that the teamwork inherent in DT develops communication, collaboration, and negotiation skills, all of which are vital for success in today's professional environments. Additionally, framing design challenges within real-world contexts allows students to apply their academic knowledge to practical situations, fostering deeper learning and making education more meaningful and relevant.

2. Impact on Student Learning and Engagement

Design Thinking promotes active involvement, with its iterative process ensuring that students stay engaged throughout their learning journey. A study by Seidel et al. (2011) found

that students in hands-on, problem-based learning environments tend to retain information more effectively and are more driven to find solutions on their own. Within the Design Thinking framework, students are encouraged to prototype, test, and improve their ideas, which not only enhances their problem-solving skills but also fosters resilience and adaptability. The ideation phase, in particular, nurtures creativity, allowing students to explore a variety of possible solutions without the fear of failure. This promotes a growth mindset, which has been shown to improve academic performance and resilience (Dweck, 2006). Additionally, the continuous feedback loops inherent in Design Thinking enable students to refine their understanding, leading to deeper engagement with the material and an enriched learning experience.

3. Benefits of Design Thinking in Teaching

Research has shown that Design Thinking offers several advantages in the classroom. One of its key benefits is the enhancement of critical thinking skills. Students are encouraged to challenge assumptions, analyze complex issues, and explore innovative solutions. This is especially valuable in STEM education, where problem-solving and creativity are crucial. Additionally, the multidisciplinary nature of Design Thinking enables students to draw on knowledge from various fields, helping them apply concepts across different areas. Another benefit is the encouragement of collaborative learning. According to Razzouk and Shute (2012), teamwork is central to the Design Thinking process, promoting communication and interpersonal skills. In group settings, students learn to negotiate ideas, assign tasks, and work together to solve problems. This collaborative approach reflects real-world professional environments, where teamwork is vital for tackling complex problems. Furthermore, Design Thinking supports personalized learning, allowing teachers to adjust learning experiences to meet the unique needs and interests of individual students. By focusing on real-world challenges, students are empowered to take ownership of their learning, leading to greater motivation and engagement.

4. Challenges and Limitations

Despite its many benefits, several challenges impede the widespread adoption of Design Thinking in education. One major obstacle is the lack of teacher training. Educators may not be familiar with the principles and techniques of Design Thinking, which necessitates substantial professional development for effective implementation (Plattner et al., 2015). Teachers need to acquire both the knowledge and skills to facilitate Design Thinking activities, manage group dynamics, and evaluate student outcomes. Another challenge is the time limitations inherent in traditional educational systems. Design Thinking is an iterative process that requires time for exploration, testing, and feedback, which can be difficult to accommodate alongside the strict curriculum and standardized testing schedules common in many schools. Lastly, the focus on creativity and open-ended problem-solving may not always align with the expectations of standardized assessments, which typically prioritize factual knowledge and correct answers over innovation and process-oriented learning (Kimbell, 2011). This mismatch between assessment practices and teaching methods can create tension, hindering the successful integration of Design Thinking into the classroom.

DISCUSSION

The introduction of Design Thinking in education marks a major shift toward more student-centered, problem-based learning environments. By promoting empathy, collaboration, and iterative problem-solving, Design Thinking has the potential to cultivate critical thinking, creativity, and resilience in students. Research indicates that when applied effectively, Design Thinking can boost student engagement, enhance learning, and equip students with the skills necessary to tackle complex, real-world challenges. However, for Design Thinking to be successfully integrated into education, several key factors must be addressed. Teacher training is essential to ensure educators possess the skills required to guide the process effectively. Additionally, the challenges of time, curriculum, and assessment must be considered when incorporating Design Thinking into the classroom. Despite these obstacles, the advantages of this approach suggest its transformative potential for teaching and learning.

CONCLUSION

The appearance of Design Thinking in education is part of a larger movement toward more innovative, student-centered teaching methods. By promoting creativity, empathy, and collaboration, Design Thinking has the potential to transform how educators approach problem-solving and learning. As educational systems evolve, incorporating Design Thinking is expected to become a crucial element in preparing students for the challenges of the modern world. Future research and case studies will provide further insights into the most effective ways to implement Design Thinking across different educational environments, ensuring that its benefits are realized in various fields and contexts.

REFERENCES

1. Brown, T. (2009). Change by design: How design thinking creates new alternatives for business and society. HarperBusiness.
2. Dweck, C. S. (2006). Mindset: The new psychology of success. Random House.
3. Kimbell, L. (2011). Rethinking Design Thinking: Part I. Design and Culture, 3(3), 285–306. https://doi.org/10.2752/175470811X13045922949067
4. Plattner, H., Meinel, C., & Leifer, L. (2015). Design thinking research: Making design thinking visible. Springer Vieweg.
5. Razzouk, R., & Shute, V. (2012). What is design thinking and why is it important? Review of Educational Research, 82(3), 330–348. https://doi.org/10.3102/0034654312457429
6. Stanford d.school. (2019). An introduction to design thinking process guide. https://dschool.stanford.edu/resources
7. Toshmukhammedova G.Z. (2024). Ingliz tilini o‘qitishda dizayn-fikrlash metodining o‘rni. Perspectives of Philology and Practical Possibilities of teaching Foreign Languages – International Conference, 443-445
8. Zayniddinovna T.G., Khasanovna M.N. Game technologies in teaching. Galaxy International Interdisciplinary Research Journal, 11(6), 384-386