



SPECULATIVE DESIGN METHOD AS AN ADVANCED TECHNOLOGY FOR CREATING FUTURE SCENARIOS

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Abstract

On June 28, 2024, at a videoconference meeting chaired by President Shavkat Mirziyoyev, dedicated to the review of work in the field of youth policy, discussion of new tasks and proposals, he touched upon the issues of developing the existing higher education system in our country, and noted that further increasing the scientific potential of higher education institutions, expanding the scope of training scientific and scientific-pedagogical personnel are among the most important issues.

Therefore, today, great importance is attached to the development of our country's education system, its harmonization with the requirements of the times. In this regard, it is important that the system of training specialists, education and knowledge provision is closely linked to the requirements of reforms. This article will discuss the speculative design method that increases the quality and efficiency of future personnel.

Keywords: Scenario, futurology, speculative design, modular lessons, project approach, multidisciplinary approach, seminar lessons, brainstorming, design fiction, speculative prototyping, systems thinking.

Introduction

Today, the educational process should not be limited only to the acquisition of facts and existing knowledge, but should also be aimed at developing the ability to imagine, analyze and consciously respond to possible futures.



This approach was formed at the intersection of modern design, futurology, critical thinking, and creative pedagogy, and serves to shape students' visions of the future and develop a system of thinking aimed at finding solutions to complex social, cultural, and technological problems.¹ Speculative design ensures that the student moves beyond the role of a learner and becomes an active participant in the challenges of the future.²

This approach is of particular strategic importance for the education system of Uzbekistan. In the context of globalization and the digital economy, the country's education is being directed towards the formation of competencies in line with international standards. The speculative design method creates new pedagogical opportunities in developing 21st century skills in students, such as adaptability, creativity, reflection, and moral responsibility. This method develops not only the ability to think individually, but also the ability to look at the future of society from the perspective of social responsibility.

The modern educational paradigm has put on the agenda the need to prepare a person for the future, to teach him to think in a complex, uncertain, and dynamic environment. Such requirements require expanding the scope of students' thinking, especially in the context of digital transformation, ecological crisis, technological progress, and social change. The use of the speculative design method in achieving such didactic goals is of particular scientific and practical importance.

The concept of speculative design was introduced in the early 2000s by Anthony Dunne and Fiona Raby, which focuses design activity not only on solving practical problems, but also on imagining possible futures for humanity by analyzing social, cultural, and ethical implications.³

–In their seminal work, “Speculative Everything: Design, Fiction, and Social Dreaming,” Dunne and Raby (2013) describe speculative design as a method that “questions the status quo through unrealistic but possible futures.” This approach engages students’ critical and creative thinking through “what if” questions.

–Through this method, students are involved in the process of thinking about “what could be?” questions, imagining alternative futures, modeling ideas, and debating. The integration of speculative design into education is achieved through

¹ Candy, S. Design and Futures // The Futurist. – 2018. – No. 2. – P. 35-52.

² Бурдые П. Социология политики. – М.: Изд-во Института экспериментальной социологии, – 2017. – 798 с.

³ Coulton, P., Lindley, J., Cooper, R. Imagining the unknown: Speculative Design, Fiction, and Ethics // Journal of Design Research. – 2016. – Vol. 14, No. 4. – P. 331-345.

the following main technological approaches:

– 1) First, forms of integration into curricula are an important step in systematically introducing speculative design into the educational process. This is methodologically implemented in the following formats:

– modular lessons: through short-term but deep conceptual blocks of lessons on a specific topic, students develop critical thinking, conceptual generalization, and vision of possible futures. Each module is structured around a social or technological problem and is enriched with narrative, visual, and communication tools;

– project approach: students develop future scenarios based on a global problem in small teams or individually. They express this scenario in the form of design elements, infographics, multimedia or prototypes, and finally discuss, analyze and evaluate it. This approach is based on the principles of “Constructivist Learning” and turns the student into an active creator of knowledge;

– seminar classes: a convenient format for students to conduct open, reflective discussions about current trends, global risks and future socio-economic situations. Through this form, students develop the skills to compare different approaches, evaluate positions, and express opinions about moral and cultural consequences;

– 2) secondly, the multidisciplinary approach is a strong conceptual framework that enriches speculative design didactically. It embodies interdisciplinary integration, that is, representatives of different fields of knowledge are involved in a multifaceted analysis of the scenario about the future. In particular:

–design serves as the basis for the external aesthetics and visual structure of speculative expression. It allows the student to express their ideas in the form of a graph, object, or interface;

–through social sciences (sociology, political science, cultural studies), students evaluate the social consequences of the scenarios being created. For example, the impact of artificial intelligence on human rights, the impact of the urbanization process on social strata, etc.;

–through the technology component, the technical basis of the ideas being created is analyzed, how they relate to existing technological development trends. This is especially important for students in the STEM field, who have the opportunity to develop innovative thinking;

–and with the help of moral sciences (ethics, philosophy), students analyze the

moral foundations of ideas: Does it serve humanity? How do the consequences affect whom? The principles of Immanuel Kant's categorical imperative, utilitarianism, and bioethics are used in this;

–3) thirdly, pedagogical technologies play a special role in the use of speculative design in the educational process. These technologies serve to activate students' intellectual activity, reveal their creative resources, and develop reflective thinking:

brainstorming – a process that allows students to express their ideas freely, without any restrictions. At this stage, critical thinking is not practiced, only the generation of ideas is important. Later, these ideas are grouped, based on and transformed into a scenario;

design fiction – a means of telling stories about future objects, services or social structures invented by students. Through this technology, students express their scenarios in a combination of artistic, social, technological elements. Using this method, students expand speculative thinking and create unconventional future concepts;

speculative prototyping – a technology that expresses future scenarios in visual or physical form. In this process, students model their ideas: this can be a UI/UX interface, a mockup, a virtual reality (VR) module or a video based on the scenario. Through this, the student not only imagines the future, but also “experiences” it through intuition.

Speculative design technology not only enriches the content of the lesson, but also transforms the teacher's position from a "knowledge provider" to a "moderator of future discussions".⁴

The student is not a learner, but a creator of a possible world. This is a practical expression of the concept of transformative education, which is relevant in modern education.

Thus, through this method, students are taught to go beyond the framework of the existing reality, think about alternative futures, and determine their position on complex social, technological, and ethical issues.⁵

At the same time, speculative design is not only a means of creative expression,

⁴ Малпас, М. Критический дизайн в контексте: история, теория и практика / пер. с англ. – СПб.: БХВ-Петербург, – 2019. – 208 с.

⁵ Arada K., Sanchez A., Bell P. *Youth as pattern makers for racial justice: How speculative design pedagogy in science can promote restorative futures through radical care practices* // Journal of the Learning Sciences. – 2023. – Vol. 32, No. 1. – P. 76-109.

but also a transformative pedagogical tool for intellectual and professional development.

The speculative design method serves to develop critical and systematic thinking skills. Critical thinking is a thinking skill based on a person's critical approach to information, analysis of evidence, testing hypotheses, and evaluation of alternative positions. Speculative design develops these qualities, because it forces the student to work not with existing situations, but with the situation of "something could happen." In such conditions, the student:

identifies cause-and-effect relationships;

analyzes alternative scenarios;

learns to make decisions based on probability;

approaches complex, multifaceted problems systematically.

Systems thinking is a thinking model aimed at analyzing any situation from the point of view of a specific system, network, and interrelationships between elements, and through speculative design, students develop skills based on understanding the connections between real-virtual, technological-ethical, and individual-collective factors. This makes them not only knowledgeable, but also active subjects within complex systems. In general, the speculative design method is not only a didactic tool, but also a pedagogical strategy that allows you to form a transformative educational model. Its direct implementation in educational practice serves to form students as globally thinking, future-ready, creative and socially responsible specialists. Therefore, there is a need for the technology of creating future scenarios based on speculative design as an innovative educational methodology to be broadly scientifically and methodologically substantiated, tested on the basis of experience, and gradually introduced into the education system, adapting it to the national context.

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