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DEVELOPING STUDENT CREATIVITY IN MODERN HIGHER EDUCATION: METHODOLOGIES, EXPERIMENTS AND TRANSFORMATIONAL STRATEGIES

In the context of globalization and rapid technological progress, modern society places new demands on higher education system. The traditional model focusing mainly on knowledge transfer is giving way to a paradigm that chiefly aims at forming a creative personality capable of innovative activity and adaptation in conditions of uncertainty. Federal Law No. 330-FZ “On the Development of Creative Industries in the Russian Federation” dated August 08, 2024, which came into force on February 05, 2025, summarized and updated the level of problems to be addressed by the relevant social institutions; specifically, those engaged in education are assigned an important role.

Universities play a key role in this process, as within their walls future specialists obtain their professional foundation and develop as creative personalities.

One of the originators of the theory of creativity, J. Guilford, identifies six key components of creative thinking:

1) The ability to detect and pose problems;
2) The ability to generate multiple problems;
3) Semantic spontaneous flexibility – the ability to produce a variety of ideas;
4) Originality – the ability to produce remote associations, unusual answers, non-standard solutions;
5) The ability to enhance an object by adding details;
6) The ability to solve non-standard problems using semantic flexibility, i. e., the ability to see new features in an object and find new uses for them[1].

Effective development of students' creative potential objectively requires a comprehensive approach, including:

1. Accounting for the psychological mechanisms of creativity;
2. Developing pedagogical technologies that stimulate creative thinking;
3. Creating an institutional environment that supports innovation.

In particular, the research conducted at Stanford University (Kelley T. Creative Confidence. – Crown Business, 2013) demonstrates that incorporating design thinking techniques into the classroom increases students' creativity by 37 % compared to traditional teaching methods.

It seems that the transformation of the educational process and the entire university towards developing the creativity of future specialists in various areas of social practice can be defined as the creation of a system of values, attitudes and practices that promote generation and implementation of new ideas while maintaining a balance between academic tradition and experimental approaches.

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[1] Guilford J. Three sides of intelligence [Text] / J.Guilford // Psychology of thinking. – M.: Progress, 2000. – Source: https://www.bibliofond.ru/view.aspx?id=870207

According to our observations, students who demonstrated high scores on creativity tests subsequently achieved significant professional success in more than 80 % of instances.

Modern practice provides abundant material reflecting the efforts of higher schools to facilitate formation of creativity in graduates. These are, for example: a) project-based learning (PBL) built on the implementation of interdisciplinary projects[2]; b) gamification (i. e., introduction of game elements) of the educational process, integrating story quests in training[3]; c) methods of activating creative thinking (E. de Bono's Six Thinking Hats Technology; SCAMPER-analysis; W. Gordon's Synectics), and others.

A number of universities are setting up special structures to foster creativity, such as: Entrepreneurship and innovation centers (MIT Innovation Initiative, Skolkovo Institute of Science and Technology); grant support systems (UMNIK Program (Russia); ERASMUS+ (European Union); co-working spaces, fablabs, hackerspaces. According to OECD[4] (2019), universities that have implemented such structures show 28 % higher rates of student startups.

Experience shows that student creativity development efforts usually face a number of challenges. These are primarily psychological barriers such as “functional fixedness” and “availability heuristics”.

Functional fixedness is a psychological phenomenon manifested by the fact that the use of an object in one capacity prevents its subsequent use in another capacity. In other words, an object (as well as knowledge, theory) that has some functionality in the current situation will seem useless in a new situation, while in fact it still has a number of latent functions. The past experience prevents detection and utilization of these functions.

The availability heuristic effect is an intuitive process in which a person, influenced by emotion, evaluates an event as more frequent or more likely to occur based on the degree of vividness and ease with which the associated events come to mind. Accordingly, creativity is sacrificed to either habit or emotional factor.

There are also purely emotional obstacles. They are the fear of failure, the “Impostor Syndrome”, when a person has the necessary competencies but perceives oneself as an impostor who fakes high performance in a new field.

There are also barriers of a social nature. These can include groupthink and the pressure of social norms. This requires no special explanation.

Universities have built a pool of methods to develop students' creativity and ways to overcome the barriers that arise on this path. These are, first of all, creativity trainings (Creative Problem Solving Program); Lateral Thinking Methodology (de Bono), various so-called reflective practices (keeping creative diaries, the mind map method), etc. A significant role is given to psychological support (counseling to overcome creative crises, Acceptance and Commitment Therapy (ACT). For

[2] For example, at MISIS, engineering students work together with designers to develop prototypes of “smart” materials

[3] According to a study (Kapp, 2012), gamification increases student engagement by 45 %

[4] OECD (2019). Measuring Innovation in Education. – Paris: OECD Publishing.

example, the Higher School of Economics has introduced a system of “Creativity Tutors” to help students overcome psychological barriers in the creative process.

Experience shows that the development of a creative personality in the university environment is a complex, multi-component process that requires: a) integration of psychological knowledge about the nature of creativity; b) development of innovative pedagogical technologies; c) creation of a supportive institutional environment.

Based on the experience of students' creativity development in the system of higher education and taking into account the current processes influencing all aspects of life of a modern higher education institution, one can conceptualize their prospective directions, at least in the first approximation. These are, first of all, digital technologies that promote creativity (VR-labs for experiments, AI-assistants for brainstorming), use of global educational networks (Online platforms like Coursera and EdX, International Student Collaborations, etc.). Accordingly, the grading systems need to be improved and updated. These could be: portfolios instead of exams, a “creative growth” index, life cycle portfolios, a system of “micro-credits” for creative achievements.

For many centuries, the higher education system has mainly fostered performers acting on the basis of previously learned competencies. Today the demand is for specialists capable of creative activity. This marks a new stage in the development of higher education.