

Ways To Develop Students' Innovative Activity

Beketov Nurseit

Doctor of Philosophy (PhD) in Pedagogical Sciences, Acting Associate Professor at Department of Exact and Natural Sciences in Primary Education at Chirchik State Pedagogical University, Uzbekistan

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Abstract: This article provides an in-depth analysis of the theoretical–methodological foundations for developing students' innovative activity and of modern pedagogical approaches. It highlights the role of the startup ecosystem, incubation and acceleration programs in forming innovation competencies, the advantages of participating in international grants and competitions, and effective ways to increase students' engagement in research projects. Foreign experiences are systematically examined, and specific recommendations are developed for their implementation in higher education institutions of Uzbekistan. The article also offers a comprehensive analysis of the integration of education, science, and industry, the introduction of digital technologies into the educational process, and the development of innovation infrastructure.

Keywords: Innovative activity, startup, incubation center, acceleration, digital technologies, grants, research, higher education, innovation ecosystem.

Introduction: In the 21st century, innovation is recognized as the main driver of economic growth, social progress, and technological advancement. Globally, the education system stands at the center of state policy as a sphere that directly influences indicators of international competitiveness. In particular, higher education institutions play a decisive role in training specialists who possess innovative thinking, can approach problems creatively, and are able to solve complex challenges. In this regard, developing students' innovative activity is not only a means of improving the quality of education but also an essential condition for strengthening the country's scientific and technological potential.

In the "Development Strategy of New Uzbekistan for 2022–2026" and the "Concept for the Development of Science until 2030," adopted by the President of the Republic of Uzbekistan, enhancing the scientific and innovative potential of youth is identified as a top priority. In this context, special attention is paid not only to students' theoretical knowledge but also to their readiness for practical innovation activities.

World experience shows that forming innovative activity from an early stage—namely, during the student years by developing new ideas and implementing them through startup projects—is one of the key factors of future professional success. For

example, higher education institutions such as MIT and Stanford University in the United States and KAIST in South Korea are considered leaders in cultivating students' innovative potential through startup incubation, technology parks, international competitions, and industry collaboration.

In Uzbekistan, significant reforms have been carried out in recent years to create an innovative environment within the higher education system. Universities are establishing innovation centers, startup platforms, and digital laboratories, and students are actively participating in international grants and acceleration programs. Nevertheless, there remains an urgent need to use existing opportunities more effectively, to widely involve students in research and technological development, and to further incentivize their innovative activity.

Therefore, this article analyzes, from both theoretical and practical perspectives, the ways to develop students' innovative activity; examines modern approaches and foreign experience; and develops recommendations for applying them within the context of higher education institutions in Uzbekistan.

Innovative activity is a set of processes related to developing, testing, and implementing new products, services, technologies, or organizational solutions. Developing innovative activity in students forms their

skills in independent thinking, resolving problem situations, and working in teams.

Factors shaping students' innovative potential:

1. A culture of creative thinking;
2. Involvement in research activities;
3. A mentoring and tutorship system;
4. Opportunities to join the startup ecosystem.

In developing students' innovative activity, modern approaches are required to be comprehensive, systematic, and multi-faceted. In today's global economy, higher education institutions function not only as providers of knowledge but also as key centers that generate innovative ideas and put them into practice. Therefore, fostering students' abilities in creative thinking, analytical approaches, and creating new technologies has become an important direction of higher education strategy.

Creating an innovation ecosystem is regarded as the central element of modern approaches. This ecosystem includes startup incubators, technoparks, acceleration centers, research laboratories, and university–industry clusters. For example, MIT Media Lab in the United States enables students to transform fundamental scientific inquiries into practical products; the Skolkovo Innovation Center in Russia offers grant and investment mechanisms for young researchers; and KAIST University in South Korea has developed special preparatory programs to help students enter the international technology market.

The widespread use of digital technologies also takes students' innovative activity to a new stage. Technologies such as artificial intelligence, big data analytics (Big Data), blockchain, the Internet of Things (IoT), and virtual and augmented reality (VR/AR) enable students to model complex problems and develop prototypes of new products and services. For example, through collaboration with residents of IT Park in Uzbekistan, students can develop their own startups and gain the opportunity to succeed in both domestic and international markets.

University–industry cooperation is an important component of modern approaches, as it allows students to create innovative solutions that meet real market needs. Such cooperation is carried out not only during internships, but also in joint research projects, technology transfer centers, and startups based on industrial orders.

In the context of Uzbekistan, the following measures are of great importance for developing students' innovative activity: (1) expanding the system of innovation grants and scholarships; (2) launching special state programs for young scientists and

startups; (3) organizing internationally benchmarked mentoring and consulting services at universities; (4) financing students' participation in international scientific conferences and competitions.

Overall, modern approaches do not limit the learning process for students to theoretical study alone; rather, they shape them into mature specialists who can generate new knowledge, apply it in practice, and operate successfully within the global innovation environment.

Developing students' innovative activity is regarded as a decisive strategic factor in contemporary global economic processes. In the 21st century, competition between countries is determined not only by resources or production volume, but also by intellectual potential, the extent to which research results are implemented in practice, and the capacity to create innovative products. From this standpoint, forming creative thinking among students within the higher education system, supporting their scientific and technological initiatives, and expanding their participation in solving socio-economic problems are among the priority directions of national development.

Foreign experience shows that for an innovation ecosystem to operate successfully, there must be organic collaboration among education, science, and industry, and effective mechanisms to support innovation between the public and private sectors. At the same time, it is necessary to build innovation infrastructure adapted to national conditions and to widely introduce technology parks, incubators, and accelerators as part of a developing startup ecosystem.

For Uzbekistan's higher education system, modern approaches, advanced pedagogical technologies, project-based teaching methods, and the use of digital platforms increase the effectiveness of the innovation-oriented educational process. As a result, achieving high positions in international rankings indicates not only an improvement in the quality of higher education, but also the strengthening of the country's position in the global knowledge economy.

Thus, developing students' innovative potential is not merely about enriching individual competencies; it is a strategic guarantee for the sustainable growth of the national economy, ensuring scientific and technological competitiveness, and expanding opportunities for international cooperation.

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