Journal of Advanced Zoology
ISSN: 0253-7214
Volume 44 Issue S- 7 Year 2023 Page 2042-2046

Innovations İn The Higher School

Ilaha Vagif Gizi Shikhaliyeva*

*PhD in Pedagogy, Senior Lecturer, Department of Pedagogy, Baku State University, Azerbaijan
e-mail for the correspondence: shikhaliyevailaha1@gmail.com

Abstract

This paper describes in detail the innovations applied in higher education, its types, and application directions. First, the essence of the concepts of innovation, innovator, and innovation was clarified. Using the methods of analysis, synthesis, and observation, the sources and components of innovative education were identified, the directions of the process of formation of innovative educational technology were indicated, and the factors influencing the development of the innovative activity of teachers in the innovation process were identified. It also examines existing and expected innovations in pedagogical activities and ways to apply them in various fields. The qualities required for a teacher to be ready for innovation, the ability to develop projects, the mastery of the latest teaching methods, as well as the reasons for the existing shortcomings have been identified. The educational system at the Innovative University, the obstacles, and ways to overcome them to raise the scientific level of the University, and to develop its innovative infrastructure were identified. Important features of the Academic Innovative Universities were identified. Ways to build the operating system model and technology of TM in the conditions of application of the innovation are shown.

Keywords: innovation, innovator, university, teacher, activity, application, field, type, stage, model.

1. Introduction

"Innovation" can be seen as something new and its implementation. This expression was widely used in economics and later in various sciences. The terms "innovation" and "novelty" are synonymous and are often used in the same sense of meaning. Nazarov (2012) explains the essence of the word innovation as follows: “The word innovation is derived from the English 'innovation'. It means 'new introduced'.” So, we can talk about the creation and use of something new, that is a complex intellectual process and combines science, technology, economics, and management. In a broad sense, it is understood as a profitable use of innovations in the form of administrative, organizational, technical, and socio-economic decisions. People, who create

and apply innovation, are called innovators, and innovation and innovative development is impossible without these people.

The study of educational innovations is of great theoretical importance. Thus, each innovation process is probabilistic. It is not easy to predict the outcome of innovations, it is a risk (Tsekhmister et al., 2021). Modern innovation processes and innovation management are quite complex for an educational institution (Zhang & Aslan, 2021). Therefore, there is a need for competent consulting services in the field of innovation. This process involves goal setting, analysis, planned steps, pedagogical technologies, organization of innovation, expert supervision, in short, all the elements of innovation management. In order to avoid many mistakes in the design and modeling phase, it is expedient to substantiate the innovation from an analytical point of view and to develop an innovative testing program. An individual who is experimenting with an innovative testing program (Goryacheva & Kartavseva, 2021). This program needs to be analyzed by more experts.

In this way, we had the aim to identify the ways and directions of the process of formation of innovative education by studying the source and composition of innovative education. And following tasks were:

1. To study the essence of the concepts of innovation and innovation;
2. Identify the sources and components of innovative education;
3. To show the process of formation of innovative educational technology;
4. To identify the factors influencing the development of innovative activity of the teacher in the process of innovation;
5. To determine the directions of innovation management in the education sector

2. Materials and methods

Comparative analysis, analysis and synthesis methods were used during the research. This analysis is related to the topic of Akhmedov's (2009) “Innovative society. Source and composition of innovative education. Innovative university. The process of formation of innovative education system ”, Nazarov's (2012) textbook “Modern learning technologies”, the study of related articles, analysis of obtained results, analysis, and synthesis of arguments, as well as comparative analysis method. Methodical aids, dissertations, as well as the results of theoretical methods such as analysis, synthesis, generalization, comparison, and observation methods were used.

3. Results

We can mark the following types of innovations in education:

1. Existing innovations in the field of education organization and management;
2. Classroom - new technologies applied in the teaching system;
3. Existing innovations in the field of teacher recruitment, training and retraining. These types of innovations are divided into endogenous and exogenous types according to the scale of implementation. Endogenous educational innovations - with one or more areas of the education system and their various aspects: theory and practice, curriculum, learning and teaching, educational policy, educational technology, educational institutions and their administration, institutional culture, teacher education and others may be related. Exogenous educational innovations involve stakeholders, learners, parents, teachers, education administrators, researchers, and education policy professionals, and require their active support for these innovations.

Innovations are divided into two groups according to their area of use:

1) within the school;
2) out of school.

According to İ.Ahmadova, “Traditional education, as a system of knowledge acquisition, lags behind the real needs of modern science and industry. Innovative education, as an integration of science, teaching process, production, implies learning in the process of acquiring new knowledge.”(Akhmedov, 2009)

Educational innovations have the following sources and components;

1. Educational competencies. This is a new way of assessing learning outcomes. The goal is to develop a content competency model in the context of the dynamic development of modern life, including the rapid development of public life and the world of technology. The development of this model requires the joint efforts of educators and employers.

2. Educational technologies;

-Concrete description of the planned learning outcomes ("specialist standard" model);

-Didactic base, creating a comprehensive learning environment (information-educational space), covering the means and methods of training;

-Diagnostic system of the current state of the training process-intermediate and final results.

3. Organizational structure of innovative education:

-Involvement of academic advisors (tutors) in the teaching process, advising students in determining the list of subjects studied in individual education;

-Establishment of a system of acceptable units (credit system) for estimating the labor costs of students in each subject;

-Expansion of the powers of the faculties in the organization of the teaching process (provision of the teaching process with the necessary teaching materials in print and electronic format);

-Use of "Assessment score-rating system" in mastering of teaching subjects by students.

For those working in the traditional system, it is enough to master the technique, which is a complex of teaching skills. Already, this will allow it to be fully implemented and at the same time achieve certain successes. Aliyev et al. (2008) writes: “Currently, the deep penetration of information and innovation technologies into all spheres of our lives, the application of online learning, including e-learning technology, ultimately leads to the creation of knowledge management systems in institutes and universities.”

However, a teacher's professional training is not enough to carry out innovative activities. At the same time, it is important for the teacher to be ready to go his own way. We can say that the innovative activity of the teacher is an event that reflects the creative potential of the teacher. If we look at the application of this term to the general educational process, then we can talk about its relative youth. And this explains the existence of different approaches to explaining this concept. Mardanov et al. (2003) believe that: “Innovation processes are also reflected in the management structures of educational institutions. For example, the recently accepted system of governance in educational institutions is aimed at replacing the system of public administration.”

On the one hand, pedagogical innovations are understood as various innovations aimed at changing the technology of education and training to increase their effectiveness. But sometimes this concept is given a different meaning. Ismayilkhanov (2019) writes: “Innovative activity has a significant impact on the implementation of all tasks related to the educational process, the favorable and expedient solution of various issues in the field of education and quality assurance.”

Innovation involves not only the creation and dissemination of innovations, but also changes and transformations in the way of thinking and acting in relation to these innovations. In any case, it is something progressive, useful, advanced, modern and positive.

Mehrabov (2010) considers that “since the application of innovations in pedagogical processes is related to crises and contradictions in education, it is of great scientific importance to identify such innovations in order to identify this crisis environment in time, analyze and eliminate its causes.”

The process of applying various innovations to the educational process largely depends on the teacher's own potential. How to determine a teacher's readiness for innovative activities? In this case, personality potential

is associated with the following parameters:
Have a creative ability to create and produce new ideas and ideas, as well as to design and model in practice;
Preparation for something different, new, picturesque and agile thinking, as well as character endurance, different from existing ideas;
Education and development from a cultural and aesthetic point of view;
The desire to develop their activities, as well as the availability of internal methods and tools to ensure it.
Novruzova (2012) writes in this regard: “During the application of new technologies in teaching, positive qualities such as innovations in teacher-student relations, ability of students to cooperate, humanistic meetings, intellectual freedom, free and independent thinking, free will to solve problems, sincerity are revealed.”

4. Discussions

Innovative education can take place in innovative universities. Ahmadov (2009) writes: “The activity of the Innovative University is based on 3 fundamental components: innovation component, educational component and research component. The effective organization of these components and the establishment of close links between the components can create conditions for the formation of innovative specialists at the Innovative University, and thus for the gradual development of the knowledge-based economy, the Innovation Society in the country.”
The technological support of the educational process must correspond to the modern level of science. Simultaneous implementation of the following processes is necessary to ensure the innovative development of educational activities:
1. Development of real projects for students on their future professional activities (various sectors of the economy);
2. Conducting applied and fundamental research;
3. Application of educational technologies that allow students to choose courses.
Mehrabov (2012) believed that “Educational institutions should help students to become entrepreneurs, innovators and true citizens in the future. In order to stimulate innovation, schools must provide our students not only with the knowledge and skills necessary for successful education at universities, but also with the knowledge and skills that will enable them to work effectively and live decently in the future.”
The role of scientific research in the preparation of teachers for innovative activities.
Najafov (2009) noted: “Developed countries are activating the study and establishment of innovation management as a key tool. These include the expansion of entrepreneurship departments in universities (Germany), the organization of training courses for engineers and scientists on the problems of scientific institutions (England), special courses on innovation policy and innovation management for managers (Portugal), for students, managers and small business owners. is observed by organizing trainings on entrepreneurship (Belgium).”

5. Conclusions

There are 5 ways to create innovations in educational institutions: 1) emergence of new experience belonging to the enterprise; 2) use of external experience; 3) scientific trials results; 4) experiment; 5) "trial and error" way.
According to statistics, at the stage of new ideas emergence, members of the staff of the educational institution are divided into the following groups, depending on the degree of motivation for innovation: 1) group of leaders (1-2%); 2) positive group (50%); 3) neutral group (30%); 4) negative group (20%).

Conflict of interests: The authors declare no conflict of interest.

References

1. Akhmedov I. 2009. The formation of innovative education in Azerbaijan. Science and Innovation, (1): 86-93. (in Rus.).
2. Aliev, A. G., Shakhverdieva, R. G. & Alieva, V. A. 2008. Problems of the formation of modern universities as centers for the development of science and innovation. In Globalization and ICT in education (pp. 297-302). Baku, Azerbaijan. (in Rus.).
3. Akhmedov, I. 2009. Innovative educational policy. *Azerbaijan School*, (5): 61-69.
4. Goryacheva, E. & Kartavtseva, O. 2021. Innovations in education in the process of distance learning based on digital technologies. In E3S Web of Conferences (Vol. 273, p. 12114). EDP Sciences. https://doi.org/10.1051/e3sconf/202127312114
5. Ismailkhanova, A. 2019. Modernization of innovative activities in the education system. In An international perspective on higher education in Azerbaijan, dedicated to the 96th anniversary of national leader Heydar Aliyev: problems and prospects of the republican conference (pp. 57-64). Azerbaijan University. (in Rus.).
6. Mardanov, M., Agamaliev, A., Mehrabov, A. & Gardashov, T. 2003. *Monitoring and evaluation of the education system*. Baku, Chashoglu. (in Rus.).
7. Mehrabov, A. O. 2012. The role of scientific research in preparing teachers for innovation. Higher Education and Society, (1): 37-39. (in Rus.).
8. Mehrabov, A. O. 2010. *Conceptual problems of modern education*. Baku, Translator. (in Rus.).
9. Nazarov, A. M. 2012. *Modern teaching technologies*. Textbook. ADPU publishing house. Baku. (in Rus.).
10. Najafov. Z. 2009. Formation of a national innovation system in Azerbaijan. *Science and Innovation*, (1): 86-93. (in Rus.).
11. Novruzova, G. 2012. The role of the use of new learning technologies in the formation of personality. Higher Education and Society, (2): 63-66. (in Rus.).
12. Tsekhmister, Y., Malatsai, I., Nechitailo, I., Yemelianova, O. V., Korol, O. & Statsenko, H. 2021. Current trends and current problems of training educational managers. Financial and credit activity: problems of theory and practice, 6(41): 556-563. https://orcid.org/0000-0002-0656-0370
13. Zhang, K. & Aslan, A. B. 2021. AI technologies for education: Recent research & future directions. Computers and Education: Artificial Intelligence, 2: 100025. https://doi.org/10.1016/j.caeai.2021.100025