

**INNOVATION-ORIENTED WAY OF DEVELOPMENT OF A  
MODERN UNIVERSITY***Gulamov A.A.**Tashkent State University of Transport**Ozatbekov Y.F.**Tashkent State University of Transport**Ozatbekova O.N.**Tashkent State University of Transport*

**Abstract:** The creation of an innovative university and the formation of its infrastructure within the framework of the educational and scientific innovation complex. The formation of the university's scientific and educational policy, the development of the holistic innovation infrastructure of the university, the implementation of a full cycle of the innovation process, and the commercial development of the results of scientific research and development.

**The key words:** Innovative University, an innovative complex, the infrastructure of the university, the transformation of the university, personnel potential.

Uzbekistan strives to introduce innovative ideas, products, processes, and developments in various spheres of life, considering them as the driving force of its economic growth. The country has set itself the task of becoming one of the 50 leading countries of the world by 2030 according to the rating of the Global Innovation Index. These plans have become much more important due to the serious consequences of the COVID-19 pandemic for the population and economy of the country.

President of the Republic of Uzbekistan Sh.M. Mirziyoyev, in his Message to the Oliy Majlis date December 29, 2020, stressed that the most priority task should be to create broad opportunities for young people to set ambitious goals and achieve them. To do this, higher education institutions make every effort, to create the necessary conditions for the innovative development of the educational system [2].

In this regard, it is necessary to search for ways and develop methodological foundations for managing the innovative development of research universities in the context of the modernization of the higher education system of the Republic of Uzbekistan and the formation of an innovative economy based on knowledge.

The innovative development of a modern university is an objectively determined, purposeful, and irreversible, time — unfolding process of transition of the university from one state to another. This process is carried out mainly through a

purposeful change in the activities of the University through the introduction of qualitatively new elements, properties, and characteristics.

In Europe, for example, in response to these challenges, a single European University is being promoted to carry out joint educational activities on the Internet based on common standards, agreements, and smart education technologies [4,5]. The University of the National Technological Initiative "2035" operates in the Russian Federation, providing professional development for a person in the digital economy. And there are many such examples in the world's educational community.

One of the tasks of the successful creation of an innovative university is the formation of its infrastructure within the framework of the educational and scientific innovation complex. The first stage of infrastructure formation is to obtain data on the actual state of the innovation activity infrastructure, its composition, level, and development trends of its components, conduct a comparative analysis with other universities of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan and consider the prospects for integrating the innovation infrastructure of the educational and scientific innovation complex into the innovation space of the republic.

TSTU (Tashkent State Technical University) He has embarked on the path of transformation of the university into an innovative type of university, which implies further expansion of the innovation infrastructure both to meet the internal needs of the participants of the university complex and to promptly meet the changing needs of the market. A developed scientific and innovative infrastructure should contain a technology incubator, a technology transfer, and commercialization center, a training center for the innovation sector, a resource center for innovation support, an intellectual property protection service; a center for promoting the creation of non-profit associations and partnerships for the development of science and education, a center for entrepreneurial competencies of faculty, etc. [7].

During the transformation of the university into an innovative university, an integral innovation infrastructure will be formed, within which it is possible to implement a full cycle of the innovation process and commercial development of the results of scientific research and development.

The university's participation in the formation of a favorable investment climate is possible through the support of the educational component of innovation activities. Training of specialists for innovative activities in various sectors of the economy, able to bring scientific ideas to marketable products, as well as to promote their profitable implementation. The task of the educational center of regional significance is not only to train specialists to work in the innovation field, but also to conduct research in the field of generalization of development trends inherent in this field,

Only the university and the center created on its basis will be able to organize an integrated system of training and retraining of both teaching staff in the field of innovative technologies and innovations, and specialists for the economy of the region. The creation of such a center in the structure of TSTU will allow us to work out new technologies and interactions in market conditions.

The socioeconomic development of the republic is connected with the functioning of the higher education system in it, as a system of reproduction of intellectual resources. The university of innovative type, with its intellectual potential, can solve the following tasks: to carry out primary, secondary, higher, and postgraduate professional education based on end-to-end multi-level programs for the system of continuing education in the priority for the region technical direction of personnel training in the field of transport. Based on the university, it is possible to organize the most qualitative professional development and retraining of specialists for the enterprises of the transport industry and coordinate the activities of organization of scientific and innovative activities in educational institutions.

Tasks of the Personnel Training Center for innovation:

- Introduction of innovations in the educational process of organization of scientific and innovative activities;
- Creation of an educational and methodological base;
- Monitoring of new trends (innovations) in the areas of training;
- Information support of training organizations taking into account the latest achievements of science;
- Providing a social order for training specialists for the implementation of the target programs in force;
- organization of scientific research on the subject for the implementation of national and international programs.

The formation of the scientific and educational policy of the university should be closely linked with the strategy for the socio-economic development of the republic. At an entrepreneurial type university, the organization of scientific and innovative activities should be aimed at solving the problems of the region and, first of all, its business structures. This dictates the development of the market and the growth of competition in the real sector of the economy [6].

Carrying out a systematic assessment of the resources that the country possesses and that need to be mobilized in the interests of economic development, and information support for the administration of the republic is possible based on the organization of scientific and innovative activities. such a center operating in the structure of the organization of scientific and innovative activities will allow the formation of a unified information space in the republic by organizing and supporting databases and systems for the collective use of remote databases. the results of the

center's activities can be used by universities, authorities, enterprises, and business structures within the framework of their activities.

To preserve the scientific potential, the university should create additional forms of funding for scientific work, including:

- ❖ at the expense of extra-budgetary funds of the university (creation of its Fund to support innovation and research);
- ❖ at the expense of budget financing of the Ministry of Internal Affairs of the Republic of Uzbekistan for the second half of the teacher's working day.

The Foundation for the Support of Innovation and Scientific Research on a competitive basis will finance projects of teachers, staff, and students of the university in several universal areas in which all employees of the university, without exception, can find a field of activity for themselves. Firstly, it is the development and application of new teaching technologies to improve the educational process. Secondly, any department of the university is considered a testing ground for the application of scientific knowledge and developments, starting from the highest level of university management – strategic management, management of the educational process, management of planning, and financial activities. Thus, research objects can always be found within the university's walls [3].

The university has developed scientific directions within which dissertations are being prepared. These directions are being implemented in the short term:

- ❖ in priority areas and solving problems relevant to TSTU and its structural divisions;
- ❖ training of highly qualified personnel;
- ❖ to create a foundation for participation in the competitions;
- ❖ for the implementation of projects funded by external sources.

It is important for the university that the teacher actively and with interest participates in scientific work by his internal needs. The university should encourage the interest of teachers in scientific work because without scientific research there can be no modern education, and with the introduction of innovations in education, the university feels confident in the market of educational services in an increasingly competitive environment.

Forming an innovative type of university is necessary:

- ❖ to teach teachers to work effectively in a team, attracting students, masters, and doctoral students to conduct research and thereby ensuring a close connection between scientific and educational activities;
- ❖ to plan the scientific activity of the teacher taking into account the scientific directions formed at the university. We proceed from the fact that in conditions of limited resources, the university staff should focus their efforts on the implementation of the main goals and objectives of the university, both at the moment

and in the future, to get real returns from the invested resources – scientific and financial;

- ❖ to reduce the teaching load of teachers by redistributing the latter towards scientific and innovative activities.

In the conditions of competition, the financing of scientific research at any level takes place on a competitive basis, therefore, a certain qualification and experience in project management are required from the head of the research team to perform scientific research better than others (win a grant, a project, a tender). The transition to a market economy forced us to plan scientific activities not on the principle of "producing what we can", but on the principle of "producing what the market needs". In October 2019, our country adopted a Concept for the development of the higher education system of the Republic of Uzbekistan until 2030, which is based on the development of a solid integration of science, education, and production for intellectual uplift, training of competition personnel, effective organization of scientific and innovative activities, development of international cooperation [1]. In the concept of scientific development, this means that scientific research at the university should be carried out by temporary creative teams created for specific projects from employees and teachers of various structural divisions of the university, employees of academic institutions, and undergraduates. By organizing temporary creative teams, the university will be able to involve almost the entire teaching staff in scientific activities, orienting departments and departments to develop scientific areas in demand by the university and the region and create a scientific reserve for the successful participation of university teams in grants with funding from external sources about the university. Such an organization of scientific activity will soon give positive results.

One of the important factors is the formation of one's human resources and ensuring the continuity of the process of its reproduction. The university as an innovative one cannot be realized without the active involvement of students in scientific activities, creating opportunities for them to generate ideas at the University. It is necessary to create a Student Innovation Center, which reflects all areas of training of specialists. Such a center will provide the necessary conditions for the development, testing, promotion, and introduction of technologies created by students under the guidance of teachers and university staff to the market. In the process of creating and developing such a center, it is necessary to solve two main interrelated tasks:

- ❖ formation of a favorable regulatory and legal framework for innovation activities when involving the results of scientific research in economic turnover, primarily in matters of protection, disposal, and use of intellectual property rights created at the expense of budgetary funds;

- ❖ building a developed infrastructure to support innovation activities and the rapid transfer of the results of scientific research with commercial potential to the

business sector for the production and market launch of new knowledge-intensive goods and services.

Innovative infrastructure is a kind of bridge between the results of scientific research and the market, government, and business. Realizing the importance of creating a national innovation system, TSTU as an innovative university is actively creating an innovative infrastructure. One of the main strategic priorities of an innovative university is the development of a dynamic scientific environment integrated into the real sector of the economy.

We believe that to develop the scientific environment and unite education and science into a single market, it is necessary: firstly, to create conditions for broad participation of university staff in research funding from external sources; secondly, to involve all departments in scientific work (under economic contracts) for the region; thirdly, to form groups foreign partners to conduct joint scientific research; fourth, to involve large industrial enterprises in the orbit of the university. By actively participating in the management of such enterprises, we continue to form an educational, scientific, and innovative complex, acquiring an additional testing ground for the application of our scientific research and the development of innovative projects. At the same time, it is a serious base of practice for our student's and graduates' employment.

Today, the concept of "innovation", applicable both to the technical and technological development of transport and to the system of higher transport education, is crucial in the development of strategies and planning for further development. However, to achieve the tasks facing the transport industry, we cannot but note that the trend in the development of engineering education, in particular engineering education for the transport complex of the Republic of Uzbekistan, must be innovative in essence, otherwise technical progress is unattainable.

Thus, the development of scientific research within the framework of the educational, scientific, and innovative complex is one of the main ones in the strategic development plan of the university being developed, since it allows solving the tasks of increasing competitiveness, increasing intellectual potential, increasing the income of the university and integrating a dynamic scientific environment into the real sector of the economy, i.e. innovative development of the national economy.

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