УДК 37

J. F. Mammadov, A. Aliyeva, R. G. Guliyev
Sumgayit State University, city Sumgait, Republic of Azerbaijan
Sumgait Technical College under Sumgait State University, city Sumgait, Republic of Azerbaijan

DEVELOPMENT OF SCIENTIFIC — RESEARCH MANUFACTURE CENTER FOR PREPARING MULTI-SPECIALISTS IN THE HIGHER EDUCATIONAL SCHOOL

Introduction. One of actual problem of the modern world of education is using new innovative scientific and educational principals for rising higher educational level in the institutes and universites of Azerbaijan, also lifting social status of professors and teachers contingents and making education level of students till international level. In this connection, development of scientific-research-manufacturing center on the base of department "Process automation" of Sumgait State University which works as research, manufacture and commercial complex for output innovative projects is scientific-actuality problem.

Definition of "Process automation, informatics, information-communication technology, computing technic and control" scientific directions in different areas is one of important scientific-research work. It is depended on that preparation of specialsts in many scientific directions carry together with automation of technological process, application of information technology and computer technics.

At present new innovativ determining scientific and education specialty in the modern education systems formed. There are many specialties — medical informatic, bioinformatic, machining buiding, automation, control, robotisation of technology process in automobile building, automatisation of economical problems, automation control of ekology ekoloji process where using above consiederd scientific directions. Creation of new specialising scientific-research laboratory, a flexible manufacture and department with economical management for preparation of professional specialists and economical stimulation is actual problem. In connection on using computer sciences for solution of economical problems, for learning theoretical and practical knowledge, specialists on computer sciences and system analyze with application in economic areas must be prepared.

One of the areas what under special attention in Azerbaijan Republic is the education system. For development of the educational system, from side Azerbaijan Republic President were given the last orders (on the base of Azerbaijan Republic order from 22 may 2009 was determined the reform directions in the education system) by application of new innovative methods and projects, doing better of social status for professor and teacher collective and conducting high education school level till international status. In this connection, creation of flexible scientific — research — manufacture center with application of new innovative scientific and education principals, technology in the higher educational schools is actual problem at present.

As known in Sumgait that being industrial city of Azerbaijan there are scientific-research institutes, the higher educational school, technology parks and industrial manufactures which work in separate. But, some analyze of the existing modern scientific-research and technology process shown that theirs functions were realised by means of complex principals of education — scientific research — manufacture — business scheme. On the base of this principal it was solved creation of scientific — research and flexible manufacture center executing complex functions in Sumgait State University.

A porpouse of the material is development of a modern scientific-research laboratory, flexible maufacture cell and comercial department center working as complex system scheme on the base of department "Process automation" of Sumgait State University. For realization of this complex system scheme the priority scientific directions on the base of intellectual automation information system, automation and control of technology process, corporative information system, computer graphics, applyed program systems and others speciality, the scientific-manufacture functional structural scheme were offered, structural scheme provided union the existing speciality with computer sciences, it was planed economical functions of the scientific-research laboratory an flexible manufacture center working as complex system, also there were defined some principals of innovative project's application, international potent and sertificate getting, manufacturing and business.

Main part. At present there are many structures working by principals education-science-research-manufacture-business [1; 2; 3, p. 22]. For example, we can mark such structures as technology park, scientific park, business incubator, scientific-research design institutes and departments. The problems what were considered in [4; 5, p. 172], devoted creation and principals of working technology parks with application of ICT and others speciality in countris of USA, Auropen and South America. In the considered problems, influense of technology parks in thes countries on their economical development and their role in higher education system were shown. Their materials analyze shown that at embedding investition for organisation of technology parks had some problems with big financial expenses, they conducted not by areas and by that there were extra costs [6, p. 33].

Papers devoted principals of works of scientific — technology parks and theirs departments in the higher educational schools of the developed countries [7, p. 1077]. In theirs materials, it was given solution of the worked out

© Mammadov J. F., Aliyeva A., Guliyev R. G., 2022

Репозиторий БГПУ

scientific-research, manufacture of the innovative projects and commercial problems, functions of the working departments in the common structure of the technology park. There were given some information of professor-teachers members functions, characteristics of innovative projects and success in the technology park of the higher educational school. Analyze of the existing materials shown that at building and development of technology park, big investments and application of complex economical management problems in many cases influence a negative on quality of education process. That is way any universities department's workers stay without scientific — research — manufacture and commercial works and by that they cannot realize theirs potentials. In many case students which study in the higher educational university also cannot get necessary knowledge of scientific direction.

Because we can do the following results of the written:

1. It is need application of great investing for scientific — research — manufacture and business functions for the used scientific-technology parks in the higher educational school.

2. It is necessary big area for full functions of scientific-technology park in the higher educational school.

3. The scientific-technology park in the higher educational school must provide specialty and business preparing of students.

4. Union of some scientific profiles in the scientific — technology park in the higher education school do management of this system more difficulty.

5. Practical knowledge of students is provided on low level.

For elimination of deficiencies on the base of "Information technology and programming" department of Sumgait State University with application of computer and information technology in many specialities like physic, energetic, geology, ecology and others, creation of flexible scientific-research-manufacture and business comples system is necessary. By means of this complex, conducting scientific-research works, development of projects in the flexible manufacture cell, doing experiments and them embeded in the manufacture, ouput of products to the local and international markets, doing exibition and getting international patents for projects at students studing by specialitis of the department "Information technology and programming" of Sumgait State University are possible.

Result. 1. Professor-teachers and young researchers students can get possibility to execute own scientific-research works in the scientific-research laboratory on the base of computer profile's departments of "Engineering" faculty of the higher educational school.

2. Professor-teachers and young researchers students can get possibility to develope, to do experiments and to embeded own projects in the created flexible manufacture cell on the base of computer profile's departments of "Engineering" faculty of the higher educational school.

3. Scientific investigation between specialists of the departments of the computer's and others scientific profiles of "Engineering" faculty of the higher educational school can be provided.

4. On the base of computer profile's departments of "Engineering" faculty of the higher educational school, innovation project's patenting, presentation on the exibitions can be realised.

5. Teachers and young researchers can develope theirs professional level of own speciality knowledge.

6. Professor-teachers and young researchers students with own speciality can get additional knowledge by economical management, finance calculation and others scientific directions.

7. Professor-teachers and young researchers students can get international patents and sertification on own projects.

8. The created flexible scientific-research-manufacture center in the higher educational school can cooperate with scientific-research and scientific technology parks of foreign countries by areas of education, science and commerce.

References

1. О технопарках в России. Умное производство [Электронный ресурс]. — Режим доступа ; http://www.umpro.ru/ . — Дата доступа : 19.04.2022.

2. Инновационные структуры в России и в мире. Новосибирский государственный университет [Электронный ресурс]. — Режим доступа; http://www.sk.ru, http://www.metolit.by/ru/dir/index.php/1865 . — Дата доступа : 19.04.2022.

3. *Zouain, D. M.* Science and Technology Parks : laboratories of innovation for urban development — an approach from Brazil. / D. M. Zouain, G. A. Plonski // J. of University-Industry-Government Innovation and Entrepreneurship. — 2015. — 22 p.

4. *Lamperti, F.* The role of Science Parks: a puzzle of growth, innovation and R&D investments / F. Lamperti, R. Mavilia, S. Castellini // The J of Technology Transfer. — 2015.

5. *Faraco, R. A.* Social Networks and Knowledge Transfer in Technological Park Companies in Brazil / R. A. Faraco, C. Mussi, M. T. Angeloni // J. of Technology Management and Innovation. — 2014. — Vol. 9, № 2.— PP. 172—185.

6. *Prencipe, A.* Board Composition and Innovation in University Spin-offs. Evidence from the Italian Context // J. of Technology Management and Innovation / A. Prencipe. — 2016. — Vol 11, № 3. — PP. 33—39.

7. *Kirchberger, A.* Technology commercialization: a literature review of success factors and antecedents across different contexts / A. Kirchberger, L. Pohl // The J. of Technology Transfer. — 2016. — 1112 p.

Репозиторий БарГУ