

ROLE AND PECULIARITIES OF THE INFLUENCE OF EDUCATION ON INNOVATION PROCESSES IN THE REGION

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«Soul of the «economics» is the constant striving to the new,
while the source of its power is in education»

LeeTane — President of the Academy of Science of China

This article analyzes the status and the ability to create innovation within the university environment conducive to the training of specialists experienced in current approaches to the implementation of innovations who possess knowledge in the field of intellectual property, which is inherent in the scientific research for the implementation in knowledge-intensive industries.

Socio-economical importance of education and its role in the scientific — technological progress and spiritual life of the society, development and qualitative improvement of the economy are well-known. In the current circumstances of knowledge economy formation competitiveness of countries in the economic sphere is reduced to competition in the field of science and technology and, consequently, to the competition in the field of qualified staff training. Today in order to achieve a rightful place in the world and ensure high economic growth rate, the country requires large investments in education, extensive professional improvement and training and broadening access to the knowledge.

Education as the widest field of social work should be rapidly developed and be far ahead of the economic activity. If education remains a conservative system, focused mainly on current benefits, it will never become driving force of the socio — economical progress. That's why, it is important to emphasize the importance of the educational system as a dominant factor of economic modernization. Education should to focus not only on the past and present, but also on the future, i.e. on the upcoming events.

Taking into consideration that the government of our country has chosen the way aimed at sustainable development of regions while the central government should become only a catalyst for innovation processes with indirect methods of leadership to support innovation clusters, particular attention should be paid to training highly skilled workers ready for the «knowledge intensive» labor.

According to the data published by the Rozumkov center, it is known that in terms of the level of scientific and technological potential Ukraine yields to EU countries on average only by four times, and in terms of the level of high-tech exports — by thirty-six times. This fact is the evidence of the insufficient use of scientific and technological potential, weak links between science and industry, as well as gaps in the issues of commercialization of the intellectual property (IP) and corresponding knowledge among scientists and manufacturers. In such circumstances, loss of a part of potential profits and competitiveness is inevitable.

In the aforementioned context, there arise topical issues of the accelerated implementation of innovation through governmentally approved national programs and local regional programs in top priority sectors of economics. It should be noted that in terms of leading experts on economic prospects and the level of economical and social development of any country, the latter is determined by the quality of the innovation system and the availability of the human capital. Considering the fact that in a globalized economy new technologies become more internationalized and depend less on political borders and locations while migrating across borders with the help of patented intellectual property objects and information flows using modern means of communication (including the Internet).

However, people and infrastructure are a relatively stable characteristic of a certain area, that's why they are the main resources of the territorial (regional) development. Supporting the idea of a well-funded priority of science and only its priority of development, we are misleading ourselves because competitiveness of the production lies in the consistency, balanced character of infrastructural



transformations, rather than in the low efficiency of research activities, which is traditionally viewed as «breaks» of the innovation pace. Attempt to build a functioning innovation system only on the basis of funded, and therefore productive science is doomed to fail. Most likely, the real cause of inhibition of the rate of innovation system is the lack of entrepreneurial activity.

The quality of human resources in accordance with the concept, developed by scientists of the National Academy of Sciences of Ukraine envision implementation of state innovation policy, which should begin with investments in people, especially in their educational training: implementation of European and world standards into national education system, access to education, quality of education; its continuous nature [2, p. 147 — 148].

A significant problem in the innovative development of the country is the fact that, unfortunately, both the enterprise level and the state level do not understand the decisive role of intellectual property in the economic development, in ensuring that new goods and services are available both to national and foreign consumers thanks to the intellectual property.

Protection of intellectual property is a key moment of innovation because it allows to obtain income from investments in scientific research and development work and get profit from innovations. At the beginning of the XXIth century, Intellectual Property (IP) played an extremely important role in the creation of corporate profits and competition. So, if in the 70...80s of the XXth century a patent performed primarily a protective function, in the 90's — patents became a means of stimulating competition, promoting innovative processes in new areas. Contemporary globalization processes unfolding in the new economy, where production factors are information and new technologies, increase importance of the intellectual property as a commodity and equity. In such circumstances, the country's place in the world becomes increasingly dependent on the efficient institutional system of intellectual property in which economic, legal and institutional mechanisms are in close interaction, providing innovative development.

P. Romer, one of the world's leading experts on economic growth, wrote: «Knowledge needed to provide people in the poorest countries with the necessities is a significant improvement of living standards that already exist in developed countries. If a poor nation invests in education and does not destroy the incentives of its citizens concerning acquisition of ideas from the rest of the world, it can quickly get the benefits that come from the publicly available global exchange of knowledge. If, in addition, the country creates incentives for private holders of ideas for the application of these ideas within the country (eg, protecting foreign patents, copyrights, and licenses, as well as allowing direct investments from foreign companies), its citizens may soon start working in the most modern field of industrial activity».

The program of economical reforms for the 2010...2014 years «Prosperous Society, Competitive Economy, Effective State» includes sections, which are assigned with a special role in the development of specialists training system related to issues of organizing and managing activities in the field of innovation, providing human resources. Objectives of this program encourage universities to create the innovative environment by building functional units involved into issues of transfer of technologies, commercialization of scientific developments and departments for the protection of the intellectual property.

Process of monitoring the real economy sector indicates at the feasibility of establishing such structures in Ukrainian universities, firstly, because universities have a certain authority. Thus, the authors of innovative developments and investors will be more willing to cooperate with them rather than with commercial entities. Secondly, because it is easier to carry out various activities, seminars, symposiums, round tables, etc. at the level of higher education institutions.

Work in these structural units of universities may be summarized as follows:

- Gathering information about all available developments at the university;
- Preliminary analysis;
- Selection of developments, which have the commercial potential;
- Search for investors;
- Provision of intellectual property objects patenting procedures;

Examples of the aforementioned types of work can be the work of the unit created for the protection of intellectual property in Lesya Ukrainka Eastern European National University. Thus, the active work at the university on the IP protection started in 1996, currently, the University has 72 patents for in-



ventions and utility models. In 2011, it submitted 20 applications for intellectual property objects and in 2012 there were 21 applications, and of this date of the current year we have -17 applications.

Essential improvement of this year is that we started the process of implementing patented developments in the real sector of the economy. The technology of cultivating plants in the artificial climate, which has been developed in the university, significantly exceeds quality indicators of the world known technologies of Holland.

Upon the completion of negotiations with Kazakhstan, Poland, Jordan and Taiwan corresponding licenses are to be sold.

References

1. Kuzhel, E. Innovative economic development : regional aspects. Problems and prospects of innovative activity in Ukraine / E. Kuzhel, V. Matyushenko // Proceedings of the Third International business forum. — Kyiv, March 2010. — p. 82 — 84.
2. Fedulova, L. Strategy of training for economics. Problems and prospects of innovative activity in Ukraine / L. Fedulova // Proceedings of the Third International Business Forum. — Kyiv, March 2010, — p. 147— 148.
3. Fedunova, L. Intellectual Property in the national innovation system .Scientific analytical report / L. Fedunova, G. Androschuk, V. Hustov // National Academy of Sciences of Ukraine, Institute of Economics and Forecasting. — Kyiv, 2010. — p.7 — 8.

PROSPECTS FOR IMPLEMENTING UNMANNED AERIAL VEHICLES DESIGNED AT THE NATIONAL AVIATION UNIVERSITY

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Over the past ten years the National Aviation University represented by the SPCUA «Virage» has been intensively involved in unmanned aerial vehicles (UAV) research concerned with the problems of UAVs development and application in the industries of the national economy. The objectives associated with the use of UAVs in the interests of the Armed Forces of Ukraine are attained. Accordingly, during 2012...2013 the National Aviation University represented by the Scientific Production Center for Unmanned Aircraft «Virage», (SPCUA «Virage»), participated in a number of scientific, educational and practical events implementing UAVs, performed aerial survey and captured photography/video, coordinate positioning, online broadcasting of images, etc. It should be noted that the air temperature ranged from -20°C to $+35^{\circ}\text{C}$, the wind speed reached 15...17 m/s and the altitude of launches was assigned 600m. The objectives for UAVs can be limited with two large groups:

— Real-time transmitting of the corresponding linear, flat and point images over a specified distance;

— Onboard recording of corresponding linear, flat and point images with further transfer of the recorded information to the services in interest.

According to the flights, it was determined that the need for «online» video accounted for below 80 %, broadcasting range totaled an average of

