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Prospects of the socio-economic context of scientific education development

Annotation: The article reveals the current problems of higher education and outlines further prospects of its development. The basic principles of new paradigm of education aimed at training of high-performing professionals, competitive at the job market. The ideas of internationalization of Higher Pedagogical Education has been actualized and, therefore, the development of transnational education that motivates strengthening the tendency of diversification of goals and Master course profiles. The urgency of developing educational environment of modern higher education through extension of research work has been emphasized.

Key Words: professional competence, diversification of Master degree goals and profiles, research staff, diversity of Master training schemes, integration of educational and scientific processes

Introduction: The two main contemporary world trends in the sphere of higher education can be distinguished such as: education development as the sphere of services, education development as the key link of scientific-technological and innovative politics.

Both these trends contribute to the further diffusion of higher education and that is quite logical process for if one wants to experience the accelerated economic development in that case one needs to possess a vast sector of higher education. If one wants to sell education as any good in a market one should strive for having as large sector of education as possible. These trends characterize the present-day epoch when one counts on the economic growth, technological competitiveness and market relations.

But the dominating role of such a context leads to the deformation of certain missions and functions of the higher education and thus generates some social problems.

The world socio-economic, political and cultural context in the sphere of education and science is also characterized by the two determined trends: globalization and a gradual transition from a post-industrial society to knowledge economy. The knowledge economy is coming to replace a post-industrial society or knowledge society. Knowledge society is identified as the highest development stage of the post-industrial and even the innovative economy. Hereby knowledge and human resources remain the principal factors of its development.

Recent scientific works are devoted to the research of mechanisms of effectiveness increasing of such foreign and national scientists, as J. Lane, P. Stephan, E. Berman, M. Nielsen, H. Neal, H. Thorp, A. Amosha, A. Mazur, M. Dudchenko, B. Malyskyi. The scientific countries' association with the high level of scientific and technological development has been in the searching of a new paradigm of scientific researches. The origin of new models of research organization must provide the breakthrough in the technology of new knowledge receiving that will give the economics a push to mastering of new technological horizons [11, p. 60].

The three principal peculiarities of the knowledge economy have been distinguished so far: knowledge as a product, “concrete knowledge is either created or it is not” (there cannot be a half knowledge or a third of knowledge) [7]; knowledge as well as social benefits is made accessible to anybody without exceptions; knowledge by its nature is an informational but not a material product therefore the information does not disappear after it has been used.

The two mutually connected processes are distinguished: globalization of knowledge (dissemination of knowledge all over the planet, free access to knowledge for anyone) and the coming into being of a special type of knowledge – global knowledge [5, pp. 327-329].

The equal access to knowledge and an increasing impact of the informational-communicative technologies [2, p. 13] also refer to peculiarities of knowledge society. That is why the formation of knowledge economy envisages the growth of expenses

upon all types of education. It means the increasing role of science and scientific activities not only a system of knowledge, but as a means of the further human resources development for the whole system of higher education.

In connection with the transition to the knowledge economy many countries stumbled upon the necessity of changing their education system and the volume of access to it. That, in its turn, produces a positive influence upon the development of the whole society itself. The central motive power of the globalization process hereby remains the higher education. The system of higher education and science in its turn suffers and undergoes tangible alterations provoked by the developing world processes. No matter how skeptical to the Bologna process the representatives of various countries remain today in the epoch of globalization of education realizes that their self-sufficiency and self-isolation do not make them competitive on the educational services market. The two aspects of the Bologna are, firstly, the joining to it is quite voluntary and secondly, it does not envisage the unification of the Europe's higher education system and supports their variety within the frames of the inner structure and creates the so-called “bridges” between and among various countries with different education systems preserving their peculiarities at the same time. While taking part at the Bologna process, Ukraine, like many other countries has to concede with some national peculiarities of the education system on the one hand and on the other hand – become really competitive in this sphere. Beyond any doubt, some great complications in the process of education system transformation are quite noticeable since they are conditioned by multileveled nature of the process itself by lack of funding and financing and a comparatively short period of time as far as its duration is concerned. Nevertheless, it is quite evident that the main aim of any period of the education system development must become a combination of the best national practices alongside with the best European experience.

Results of research work: All the above mentioned aims are significant for the development of the students’ scientific activities system development. In our view, however, the greatest influence is produced by a transition upon double-leveled education system, extra charge of credit units for participating in the scientific research

activities as well as unification of education standards in various countries of the world.

In works dedicated to the globalization influence upon the higher education system and its transformation [3, 5, 6, 8, 10, 11, 12] the following main tendencies of the process are made prominent: mass character and free access of everybody to the higher education; diversification in forms, levels of content; internationalization (globalization of education).

As some researches quite justly remark the internationalization of higher education of present is acquiring some traits of integration which envisages “every kind of rapprochement and bringing together of national educational systems, their intercomplementary feature, transforming the higher education into the world’s social system” [10]. In the process of internationalization the formation of new international educational surroundings is taking place, in which the most effective forms of the national interests of its participants could possibly be realized.

During all last European summits of EU beginning from Lisbon in 2000, the importance of education in the process of creating the European knowledge society has been underlined. At present the Euro commission of UNO initiated the realization of education Strategy in the interest of stable development which is the continuation of the Bologna process on the one hand and a logic accomplishment of the common socio-economic model of durable development formation – on the other hand. The model of steady development includes principles and demands, the conformity of which will be a necessary condition of solving global problems and has first and foremost a socio-natural character [5, p. 249-263].

According to this strategy “the education is the most significant instrument of effective administration and the development of democracy”. The strategy anticipates the transition from a simple transfer of knowledge, skills and habits necessary for the existence in an up-to-date society to preparedness to act and live in the swift and ever-changing conditions, to participate in planning of the social development, to learn how to foresee and to predict the consequences of the actions undertaken the possible consequences in the sphere of steadiness of natural ecosystems of social structures among them [7].

According to the new principles the education triad (knowledge, skills and habits, KSH) is gradually replaces (substituted) by a new one (knowledge, understanding, skills) [5, p. 469-470]. Thus, the process of globalization is gradually spreading throughout all countries of the world association and is influencing the development of different social institutions; the system of higher education is among them.

The university nowadays, preserving its general educational function, is becoming a center of knowledge accumulation, the place and the means of its transference and commercialization of scientific research activities. It is expected that universities nowadays will start playing the leading parting the development of society, and the regional economy in particular. Therefore, the necessity of constructing the system “higher educational establishment – state – business” [2, p. 56] which in its detailed variant looks like science education, production integration or as a tendency of university corporatization is underlined in many research papers [10].

Scientists remark that the high school practice of work confirms that the scientific sphere of Ukraine has accumulated many problems without solving of which no task is able to perform as to the innovation development of economics and activate innovation component in the model of socio-economic development of the country. In particular, there is no clear plan of the actions as to the further science development in Ukraine on the state level. The scientific work of scientific institutions is realized without any mission and plans of scientific researches, which are made on the basis of satiation of market oscillations. There are no real mechanisms of scientific research coordination and the idea of coordination sounds awkwardly to topics' removal but not to the necessity of measures implementing in the development of communicative ground between a collective, the subjects of which coincide [4, p. 59].

The system of the students' scientific-research activities at the higher educational establishments has an ancient and a fecund history. The following difficulties, however, emerged in preparing students for the scientific research activities:

- the lack of the system of technologies dealing with the training of students in the field of scientific activities;
- more and more Ukrainian scientists should be of middle age;

- methodical and informative unpreparedness of students for a self-reliant mastering of new knowledge low level of the molding pattern of the scientific research culture and motivation;

- the lack of scientific approaches in the working out of components of pedagogical system dealing with the students' scientific training.

As it is now evident many problems are common for scientific education in Ukraine and abroad. The solving of them, we presume, is in the following:

In the system of higher education as a whole it is:

- a tilting direction to the side of complex educational services, which in connecting with technical higher education establishments envisages humanization of education;

- humanization of technical education, which includes the development of communicative habits; the dexterity to working creative groups; group-projects competences; the ability to analyze the information of the word level; mastering of at least one foreign language, etc.

- the necessity of the creative innovative thinking by means of participatory in research activities.

At the same time some other activities are necessary:

- the formation of the corporate culture of the higher education establishment;
- the establishment of partner relations with the productive sector;
- the formation of serial-legal competence and habits concerning rational nature exploitation;

- fundamentalization of higher education, paying more attention to the role of basic training of specialists.

In the system of scientific education it means:

- the preservation of the experience and traditions of national science;
- the use of foreign experience in the process of projecting the pedagogical system of scientific education at the higher education establishment;
- the amelioration of the optimum efficiency of the probation time, practices which include scientific research;

- the attention of students to the scientific research by means of taking part in the projects fulfilled by the higher education establishment;
- the significance of a scientific supervisor personality in the further provoking of students' motivation for the scientific research;
- the flexibility of the system of encouragement; the possibility of financial support or adding extra credit units (marks) for the scientific research performed.

It has been prognosticated that the trend of higher education internalization can be developed in the providing of “a rough working model” and the introduction of technology dealing with the conferment of common degrees after accomplishing learning curricula and programs which meet the requirements and a number of characteristics: the programs developed and approved together by a few of the higher pedagogical educational establishments; the candidates for master's degree of every of the higher educational establishments study part of the program in other higher educational establishments; the candidates' for master's degree staying in foreign higher educational establishments has a compatible duration; the periods of studies and testing span of time at a partner higher pedagogical educational establishments are completely automatically determined; the lectures and teaches in higher educational establishments – partners and at the same time take part in a procedure of enrollment for studies and final control activities; after accomplishing the whole program the candidates for master's degree receive the national grades of every country-participant or the degree which is granted conjointly by this countries. The coordinated introduction of mutually accepted pedagogical technologies which will become a reflection of anthropocentrism of the modern world culture has to become a necessary condition. Every of them must combine together the theoretical (objective) and individual (subjective) knowledge providing in this way a new type of relations between a pedagogical science practice lecturer and students, individually-creative trajectory of the development of every participant of the educational process.

As for the priorities of the higher education establishments, it should be mentioned, however, that the main task to be achieved nowadays is the realization of the State purpose-oriented technical and social program “Science at the Universities”

for the years of 2008-2017. The aim of the Program is the boosting and intensification of scientific research alongside with the extension and deepening of its interaction with the curriculum and educational process at the higher education establishments. The government considered and decreed the National Strategy of the education development in Ukraine for the years of 2012-2021. Among the tasks mentioned the introducing of new organizational-structural forms of the highly skilled specialists scientific training and especially the accomplishment of competitive scientific developments, the scientific-educational centers. The principle task of the strategy is a substantial providing of rational and efficient methods of approach towards the organization of scientific and innovative activities in the educational sphere. In particular, among the main competences the teacher of the 21st century should master is the competence of a scientist-researcher together with the capacity to study all his life through. The task of science volume increasing to 1,5% GDP and science transformation into the engine of socio-economic progress in Ukraine [4].

Conclusion and discussion: While promoting the demand for the higher education and the right for education guarantee marketization justifies at the same time the attitude towards knowledge (and education) as the attitude to any other goods. Knowledge, like any other good, is vended to the population. However, the question of overproduction of graduates from the higher education establishments as well as the question about the fact that knowledge cannot be considered only in the context market (goods) relations and remain obscure.

While prompting the expanding of research work at the higher education establishments with the purpose of obtaining new technologies and new products the second tendency provokes the attitude towards education and science as the one towards serving staff of the industrial sector. Rather obscure remains the question about quite an evident thing that education and science have their own, autonomous aims and therefore should follow their own socio-cultural mission (servicing function of economy composes only a part of it). Thus, the development of servicing function (to serve the demands of population and national economy) nowadays is a predominant trend in the sphere of higher education.

It is quite evident that it is time to change the attitude towards education and science, it is high time to realize that knowledge (and education) is not a commodity and science is not only a technology either. Even if we learn how to vend our achievements at the market of educational services and very likely become one of the leaders in the amount of sale it will not mean that our education is the best one. Will the commercially successfully higher educational institutions be able to brag anything else except a substantial account in bank?

While taking into account that science is gradually getting to know the laws of nature and production engineering is producing new things one should also understand: science and know how are closely interconnected with each other. And if our universities concentrate mainly upon the creation of new know how and ignore the science development, will they be able to be successful in technological creative work while being deprived of the basis modern scientific knowledge? At present the post-Soviet countries mainly generously “present” their scientists to the whole world over. Shall we not import scientists from other countries? It is necessary to concentrate upon the search for a rational balance between the missions and functions of our universities. That is only in the case when we want to treat the future with the highest responsibility possible. Taking into consideration the above mentioned facts the main conclusion can be made.

On the one hand, the contemporary socio-economic context of the world’s scientific research brings forward new challenge to the world system of higher, and in particular, higher scientific education. On the other hand, the same context also determines the new ways and methods of solving the arising problems.

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