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DEVELOPMENT OF INTEGRATION PROCESSES
AT THE PRESENT STAGE

Abstract. Higher education institutions play an important role in creation of the country’s human asset. Enterprises, in turn, build their business with the help of their employees’ potential who get education in higher educational institution of the country. Therefore, enterprises and high schools should work together to train personnel for the real sector of the economy by joint efforts. But, unfortunately, we have certain obstacles on the way to business cooperation and higher education institutions. Nowadays the integration of higher educational institutions and enterprises is a trend of objective development of specialists’ professional training. Over the past decade, the world experience in the field of scientific and technological development has shown that the integration of universities and businesses can effectively respond to globalization and economic crisis.

Transformation of these relations into a stable process is beneficial to both sides, but the question is whether the potential of the two sides is sufficient to make this link an integration process. In this regard, the author of the article reveals the answers to the questions: What is integration? Is there any difference between integration between enterprises and the integration between higher education and business. When studying this term, the author, studying the views of scientists gave her own author’s definition to the word "integration". The article considered mechanisms and functions of integration, identified obstacles and opportunities that arise in the integration process.

Keywords: integration, education, university, business, enterprises.

Integration of education and production is an objective trend in the development of professional training at the present stage. It is due to the increase of science intensity of production and complexity of the content of specialists’ professional activities. According to expert estimates, a young specialist trained in traditional, non-enterprise-specific curricula and programs [1] adapts socially and professionally only within two years of work at the enterprise, that is, becomes a member of the collective, having taking his place in it [2]. The matter is that adaptation out of link with the enterprise-customer (that is enterprise-consumer) is extremely complicated during training, and in many ways is objectively impossible.

The synergetic theory has convincingly proved that development is possible only in open systems, which constantly exchange energy, substance, information with the external environment. Processing, integration of various kinds of information lead to new forms of organization and regularity (which is the process of self-organization) [3]. The lack and incompleteness of the applied information leads to the death of the system. Therefore, in the first years of work, simultaneously with social adaptation, a young specialist is trained in professional field: he gets acquainted with the specific administrative scheme of management, perceives the decision-making procedure, gets acquainted with the tools and accessible set of standard for the given enterprise technologies and technological solutions.

With partially transferred to the territory of the enterprise-customer, target training additional opportunities reveal:
- constant access to information on labor market, which allows to clarify the structure of specialties and professions as well as amount of training;
- taking into account employers’ requirements on the content of specialists’ training: joint development of standards of professional education, curricula and programs;
- organization of students’ practice on equipment operating in the modern sector of industry;

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organization of teachers’ systematic training to familiarize them with the newest types of equipment and technological processes;

creation of independent assessment mechanism for quality of specialists’ training by independent expert commissions on the tests developed together with employers;

target training of specialists for a particular enterprise that increases opportunities for employment of graduates.

Such preparation gives the chance to educational institution to let out experts competitive in the labor market. Whether educational institution wants it or not, but in new socio-economic conditions it becomes a subject of market relations and, like all market subjects it is obliged to be guided by demand which is defined by the employer in the person of personnel customer, on his requirement. This is an indispensable condition for viability of educational institution and efficiency of its functioning. Therefore, the teaching staff is forced to carry out the work that is unusual for them: to study the labor market, clarify employers’ qualifications, monitor the changing structure of professions and specialties, make clear the specific interests of their social partners, and increase their own competitiveness. It is also a necessary condition for successful activity of educational institution.

For the first time the term integration was applied in the 1930s by German and Swedish scientists, and in translation from Latin (from Latin integration - restoration, replenishment from integer - whole) it means integration of any parts, elements into a whole one [4].

So far this term has become widely used in various fields: biology, physics, chemistry, politics, information, social, cultural spheres, mathematics, etc. The simplest and the most widely used meaning of this term is association, interpenetration.

Table 1 - Author's views on definition of the concept "integration"

<table>
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<th>Authors</th>
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<tr>
<td>G.R Latifullin, A.S Nikitin, S.S. Serebrennikov Management theory: A textbook for high schools. 2nd ed. The 3rd generation standard.</td>
<td>Integration involves finding a solution that satisfies both parties without compromise or prevalence</td>
</tr>
<tr>
<td>The modern economic dictionary of B.A. Raizer, L.Sh. Lozovski, E.B. Starodubtseva, p. 479</td>
<td>Integration - association of economic entities, deepening of their interaction, development of ties between them. Economic integration takes place both at the level of national economies of the whole countries, and between enterprises, firms, companies, corporations. Economic integration is shown both in expansion and deepening of production and technological ties, combined use of resources, consolidation of capital, and in creation of favorable conditions for implementation of economic activity, removal of mutual barriers&quot;</td>
</tr>
<tr>
<td>V.N. Skvortsov &quot;Economics and management in the branch: education&quot;, Bulletin of Economics, 2014 (4)</td>
<td>Integration in education - the processes of association, synthesis or cooperation, occurring or carried out in education concerning objects of various nature</td>
</tr>
<tr>
<td>T.J. Galpin, M. Handon. Complete guide to mergers and acquisitions of companies: trans. from English. / T.J. Galpin, M. Handon. - M., St. Petersburg, Kiev: Williams, 2005. 240 p</td>
<td>Integration as a process of merging companies with the aim of risk diversification; restoration of destroyed organizational ties and their structural reorganization, reduction of transaction costs as a result of changes in the nature of relations between enterprises in the course of economic reform.</td>
</tr>
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Integration is expressed in internal growth on the basis of steady coordinated actions of subjects, it is carried out at all stages of economic cycle of their development.

Integration – the establishment of such relationships between organizations that ensure a long-term rapprochement of their general goals.

Integration provides conditions for better use of existing resources

Integration is the process of mutual adaptation, expansion of economic and production cooperation, amalgamation of national economies of two or more countries, internationalization form of economic life.

Integration - the combination of efforts, actions, opportunities

Integration is inclusion, involvement

Among the keywords connected with the general understanding of integration as the above-stated review of definitions of this term shows (see Figure 1) it is necessary to include the following, thus: at understanding of integration as states: a whole, a single, inseparable, coherence, connection.

At understanding of integration as a process: association, linking, rapprochement, adjustment, cooperation, unification, unity.

Figure 1 - General meaning of the term "integration".

Integration in the economy of an individual state is characterized as expansion and deepening of industrial and technological ties between companies, this can be expressed in the joint use of raw materials, energy and other resources, material and technical base, as well as in the merge of capitals and mutual assistance.
One can say that economic integration assumes existence of mutual aid of enterprises for obtaining maximum efficiency of business.

At the same time, restrictions on cooperation can be removed, barriers that hamper joint economic development can be eliminated, favorable conditions for doing business can be created. There can be a consolidation of capitals and association of enterprises. Integration as a process of deepening cooperation of economic entities in modern conditions is an objective law of social development. Taking part in integration processes, business unites efforts in the struggle for markets and resources, eliminating competition at intermediate stages of production and sales promotion. [5]

Studying authors' definitions of the word "integration", integration between higher education institutions and business is the process of making optimal use of available resources, mutual adaptation of subjects for training young professionals.

In economic practice there are various types of integration that differ depending on the purposes of cooperation, character of relations between participants, specifics of interaction and functional feature of subjects of integration. There are two types of integration - horizontal and vertical. At horizontal integration there is an association of homogeneous enterprises, the purpose of this integration - to increase production efficiency.

At vertical integration there is a merger of the companies engaged in the general participation in production [6].

Based on organization practice analysis of economic integration one can conclude that the classic manifestation of integration is association of organizations in the process of mergers and acquisitions which is characterized by "establishment of control over the ownership of assets and their management" and leads to formation of hierarchical systems of interaction through integration of organizations. This form of integration should be called classical integration.

At the same time, the growing global competition makes these difficult to manage structures not always effective and in today's economy there is a need to abandon the complex internal hierarchical structure and move on to other forms of integration that provide flexibility in management, that is, use a partnership form of integration. However, integration does not always imply an increase in assets through mergers or acquisitions. In the case the structure does not consist of sub-divisions that are part of one legal entity, but from formally independent economic entities, conditions may also be created for the implementation of integration processes. So, along with traditional integrated entities playing an important role in modern branch industries, there are also integrated entities in the information society, which consist of formally autonomous economic entities and have complementary properties that are not comparable to the sum of each properties.

The main distinguishing feature of the considered forms of integration is that the classical ("rigid") integration assumes establishment of complete control both over property and management of the merged assets [6], while at a partner ("soft") form of integration existence of control over behavior of formally independent organizations in the absence of legal control over their property takes place. At the same time each of options assumes that in the course of integration the character of relations between economic entities changes and there is a coordination of resources and key competencies and their further use.

The basic grounds for carrying out integration processes in the system of higher education include: motives, incentives, factors, conditions [7]. There are several reasons for the education system integration, among the most important are the following:

- increasing the level of technical and methodical equipment;
- introduction of innovations in educational process;
- ensuring accessibility and improving the quality of educational services;
- reduction of costs, including costs of missed opportunities;
- creation of reliable, mutually beneficial cooperation between educational institutions and industrial enterprises;
- flexible response to external influences, including state regulation;
- creation of effective systems of planning, coordination and control.

Specific reasons for integration are as follows [7]:

- strengthening of economic advantages (growth of service range, reduction of unit costs, increase of rendered services profitability);
- increase in market share;
- improving the quality of services provided;
- implementation of innovation policy;
- mobile response to market demands.

The main incentives for modern integration processes are: expansion of positioning in the market, in this case, in the market of educational services, which in turn affects the strengthening of competitive advantages of educational organizations.

Among the most important factors affecting the integration processes in education are:
- organizational, which are shown in adaptation of organizations to political, economic and social transformations; economic, adapting educational organizations to changes in economic development of regions and the state;
- budgetary, branch policies;
- the level of effective demand; technical, adapting the education system to international, branch, social trends of development and introduction of fundamentally new educational technologies in education system; social, orienting the education system to implementation of social, educational reforms, adapting the education system to changing levels of consumer demand; demographic processes.

Thus, on the basis of the foregoing it is obvious that integration processes are shown in the joint use by educational organizations and business of resources and connections.

Subjects of the educational system that train highly qualified personnel enter the interactions with various subjects of the market system and for this reason are compelled to adapt both to state regulation and requirements of consumers of educational services, including employers.

**Integration process as six interrelated stages**

For carrying out analytical research of the integration processes happening between educational institution and the enterprise we suggest to structure integration process by means of allocation of six interconnected stages reflecting a ratio of theoretical concepts of integration process among themselves

1. **The purpose** of integration process which is based on incentive motives of obtaining benefits from integration is formulated.

2. Based on the formulated goal, the integration strategy is developed, so it is implemented within the framework of the main chosen business strategy of a firm and represents conscious behavior of the firm reflecting its internal and external relationships aimed at establishing or deepening the interaction between economic subjects based on the development of ties between them, joint use of resources, unification of technologies, information and capitals, creation of favorable conditions for implementation of economic activities, removal of mutual barriers.

3. An integration mechanism is used by the way that separate interested companies interact with each other in order to achieve a competitive advantage by strengthening their position in the market or creating an advantageous competitive position in the future. The existing integration mechanisms: internal development, formation of alliances and partnerships, mergers and acquisitions / affiliations.

4. An integration form representing the type of interaction used by the subjects of integration, related to formation (or without formation) of a new legal entity, change (or not change) of property rights, preservation (or loss) of enterprise’s independence in separate functional areas is chosen. The existing forms of integration: "soft" form and "rigid" form.

5. The type of integration is used, that is, interaction direction of subjects’ integration, related to degree of product homogeneity, stages of technological cycle integrating in the course of association. The existing types of integration: vertical, horizontal, conglomerate.

6. A concrete form of association is formed from diversity of integration forms of associations in the economy classified according to different characteristics.

The educational organizations when rendering educational services enter into multilateral integration ties, and it is expedient to consider solution of global tasks of domestic education reforming through a prism of integration approaches of management. The future is determined not by the high level of technology development, but by sociological constructs, in particular by finding of consensus in the social
The integration format of development leads to the fact that introduction of innovations in scientific, educational and production structures will allow to adapt educational processes to political, economic and social changes characterized by unevenness and uncertainty.

Integration of education, science and production is one of the main objectives of the Concept of education development of the Republic of Kazakhstan. In the current Law of the Republic of Kazakhstan "About science" it is determined that the main activities of the higher educational institution are, in addition to educational, scientific, scientific and technical and innovative ones. In the State program for development of education of the Republic of Kazakhstan for 2011-2020 the integration of education, science and production, as well as creation of conditions for commercialization of intellectual property products and technologies are recognized as tasks not less important than training of scientific and scientific and pedagogical personnel. In recent years, certain steps have been taken in the Republic of Kazakhstan towards the integration of science, education and production. However, the analysis of scientific organizations’ activities in the Republic of Kazakhstan shows that majority of projects on development of innovative products are initiative developments, but not regional or scientific and technical orders, i.e. developers themselves invent a product and subsequently have to look for its use and find buyers of these inventions. Meanwhile, the state order, in turn, is not directly related to the needs of business and is determined by the state bodies independently. This indicates the lack of links between science and enterprises [8].

According to the data of JSC "National Center for Scientific and Technical Information", from 2010 to 2017, Kazakhstani universities carried out more than 60% of the total number of registered R & D (Research and Development). This is due to introduction of grant financing according to competition results, when higher education institutions received the greatest number of approved applications for the submitted projects. At the same time, fundamental research accounts for 53.5% of all work, and applied research - 46.2%. Design-technological and development works make only 3%. As a positive fact, we can note an increase in the number of scientific studies carried out by higher education institutions at the expense of extra-budgetary funds (own funds). In 2011-2017, researchers in the university sector of science introduced 23 new developments into production, including the near abroad countries (Belarus and the Ukraine).

The important point is involvement of researchers from the world academic market, direction of investment on development of international cooperation in scientific and technical sphere of higher education institutions, programs of teaching and students’ scientific and educational exchanges.

Therefore it is necessary to emphasize that the state policy on supporting higher education institutions’ science is implemented through creation of research universities. Nazarbayev University, opened in the capital of Kazakhstan in the summer of 2010, has already become a national brand of domestic higher education in this sense, combining advantages of the national education system and the best world scientific and educational practice tested by decades. But, except Nazarbayev University, we have a number of successful universities, where since 2014 the process of institutional transformation has taken place. KazNTU named after K. Satpayev and research institutes of the national scientific and technological holding company "Parasat", KazNU named after Al-Farabi and Scientific Research Institute "Gylym ordasy", Kazakh National Agrarian University and JSC "KazAgroInnovation", Kazakh Agrotechnical University named after S. Seifullin and the National Center of Biotechnology have passed through the merge of scientific potential [9].

In the afterword, it must be said that the regulated and systematized integration of higher education institutions and business is the requirement of time. It is impossible to form a qualitative human capital of the country without strengthening the connection between higher school and business. In this regard, higher education institutions and companies considering their specific features, have to use the most suitable integration mechanisms to provide highly qualified employees to the labor market. And it is obvious that it will contribute to the dynamic development and intensification of the real sector of national economy.

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ЗАМАНАУИ ЖАГДАЙДА ИНТЕГРАЦИЯЛІК УДЕРІСТЕРДІН ДАМУЫ

Андат. Білім мен әндірістің интеграциясы – қанірі заманға кезектегі кәсіби дайындықтың объективті даму урдісі. Ол әндірістің тәлімдерін әдет беру және мамандардың кәсіби қызметінің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Замандықтан, тәлімдер әдеттің маңыздысы, сапаты жасауға әсер етеді. Заман.
туңшіліді, осы кәсіпқорына тән құралдармен әрнекті беру технологиялар мен техникалық шешімдердің қол жетімді жинақтығы мен танысдақы. Сондықтан білім бизнес тәжірибесі және де және мамандарды алға қытала емес, себебі университет кәбіретінен шыққан және мамандарды жұмыс үндісіне ендіруге біртұрлы ұқытып пен каржы жұмысқа. Осы мәселелерді шешу барысында жоғары оқу орнында таражына көп теменында-шаралар жасалатының болмайды, бірақ өзінің орай біздің таражына қоғам жоғары оқу орнындағы байланысы қандайдыру және сәлесін сақтамының таныматының құндылығы. Біздің де жоғары оқу орнының бір-бірімен байланыстың бірлесу мүмкіндіктер алады. Осы мәселенің орай таражының деген келісім? Кәсіпқорлығының арасындағы нәрселер таражының мен жоғары оқу орнында мен кәсіпқорлықтың нәрселерге таражының нәрселерін айырмашылығы бар ма деген сураққа қол-көrekқа аудару қажетті темәлді зерттеу бағынында автор сәлесінде мен алыс және жақын шетел қоғамдарының таражының тәріздіге көзқарасарының сарапты, өзінің авторлық анықтамасы берді.

Түйін сөз: интеграция, білім, университет, бизнес, кәсіпқорлық

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РАЗВИТИЕ ИНТЕГРАЦИОННЫХ ПРОЦЕССОВ НА СОВРЕМЕННОМ ЭТАПЕ

Аннотация. Для формирования человеческого капитала страны высшие учебные заведения играют важную роль. А предприятие в свою очередь строят бизнес с помощью потенциала своих сотрудников, которые получили высшее образование в вузах. Поэтому предприятия и высшая школа совместными усилиями должны работать над подготовкой кадров для реального сектора экономики. Но, к сожалению, у нас на пути к сотрудничеству бизнеса и высшими учебными заведениями имеются определенные препятствия. В настоящее время интеграция высших учебных заведений и предприятий - это тенденция объективного развития профессиональной подготовки специалистов. За прошедшие десятилетие мировой опыт в области научно-технического развития показал, что интеграция университетов и бизнеса может эффективно реагировать на глобализацию и кризис в экономике. Преобразование этих отношений в стабильный процесс выгодно обеим сторонам, но вопрос в том, достаточно ли потенциала двух сторон, чтобы сделать эту связь интеграционным процессом. В связи с этим автор статьи раскрывает ответы на вопросы: Что такое интеграция? Существует ли разница между интеграцией между предприятиями и интеграцией между высшим образованием и бизнесом. При изучении этого термина автор изучая возникновения ученых слово «интеграция» дал свое авторское определение. В статье были рассмотрены механизмы и функции интеграции, отмечены препятствия и возможности, возникающие в процессе интеграции.

Ключевые слова: интеграция, образование, университет, бизнес, предприятия.