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INNOVATIVE MECHANISM OF DEVELOPMENT THE EDUCATIONAL MARKET AND LABOR MARKET IN UKRAINE

Modern Ukrainian employers noted a significant problem in practical skills of graduates, who are looking for the first job. Practice shows, the company (employer) has to invest for adaptation and retraining graduates at the new working place. At the same time, graduates are not always able and ready to do that. As a result, both sides unsatisfied with each other: graduates cannot find work and the employer doesn't want to hire inexperienced employees. Our research is aimed at creation a mechanism of integration of the educational market and the labor market in Ukraine in order to update the system of higher education in Ukraine in accordance with the requirements of the employers. To achieve this goal we investigated patterns and problems in the functioning of the educational market and the labor market in Ukraine, monitored the current situation and identified their specific features. Proposed by authors mechanism reflects vision of the integrative development both markets. Implementation of this mechanism will cause the adaptability and rising competitiveness of the domestic educational system according to the requirements of the labor market in Ukraine; actualization the connection "higher educational institution – employer" taking into account mutual interests; increase the effectiveness of youth employment and improve the labor market situation of some regions and country.

Key words: labor market; education; integrative development; mechanism.

Сучасні українські роботодавці помітили серйозну проблему браку практичних навичок у нинішніх випускників. Практика показує, що компанія-роботодавець вимушена вкладати значні кошти в адаптацію і подальшу перепідготовку випускників на новому робочому місці. Водночас результат розвитку персоналу не завжди виправдовує витрати. Виникає конфлікт інтересів: випускники не можуть знайти роботу, а роботодавець не хоче наймати недосвідчених співробітників. Наше дослідження спрямоване на створення інтеграційного механізму взаємодії ринку освітніх послуг та ринку праці в Україні для приведення системи вищої освіти у відповідність до вимог роботодавців. Для досягнення цієї мети досліджено закономірності і проблеми функціонування на ринку освітніх послуг і ринку праці в Україні, проведено моніторинг наявної ситуації. Запропонований авторами механізм відображає бачення інтегративного розвитку обох ринків. Реалізація цього механізму сприятиме підвищенню конкурентоспроможності вітчизняної системи освіти відповідно до вимог ринку праці; актуалізації взаємодії "вищий навчальний заклад – роботодавець" з урахуванням взаємних інтересів; зростанню зайнятості молоді та покращанню ситуації на ринку праці окремих регіонів і країни.

Ключові слова: ринок праці; освіта; інтеграційний розвиток; механізм.

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Problem formulation. Today 199 universities, 64 academies, 89 institutes, 243 colleges, 109 technical schools, 118 professional schools and 1 conservatory is acting in higher education sphere in Ukraine [1]. Although a large number of universities in Ukraine exists, the issue of direction's updating and methods for education is extremely important. And the main problem is the discrepancy between the quality of education acquired by the students (future employees) to the employer's expectations. It actualizes the need to reconcile requirements of higher educational institutions to the students and the employer's demands for the future staff. I. e. there are needs to develop practical (not theoretical) education. At the moment "the saturation' effect" is observed in the educational market of Ukraine. Applicants are lost in the numerous proposals in the education market. Modern education is focused on the theoretical knowledge. Employers have noted significant shortages practical skills among applicants seeking their first job. Thus, company has to invest for adaptation and retraining new staff (former graduates) directly at the workplace. As a result, both sides are unsatisfied with each another: graduates cannot find work and the employer claims against the university for the bad quality of employees.

Analysis of recent researches and publications. In our study the following research methods were used: a) systemic and structural-functional analysis to identify patterns of development the education market and the labor market in Ukraine; b) situational approach, dialectical and comparative methods, content-analysis of documents and information in order to monitor the education market and the labor market in Ukraine; c) SWOT-analysis and ABC-analysis to identify strengths, weaknesses, opportunities and threats, as well as justification of influential factors at the educational market and the labor market in Ukraine.

Ukrainian scientists, who have researched this problem and ways to solve M. Honcharenko [2], A. Diakiv [3], A. Kassanov [4], A. Martyakova, A. Mudryi, S. Snihova [5], I. Chaika [6] and L. Yurchuk [7].

The theoretical value of research is to justify the current trends and perspectives of development of the education and the labor market in Ukraine. The practical significance of the results lies in building an integrative mechanism for the coordinated development of the education market and the labor market in Ukraine.

Purpose of the article is to build a model of the mechanism for the integration the education market and the labor market in Ukraine to improve their effectiveness.

To achieve this goal it is necessary to solve the following *tasks*:

- 1) to identify patterns and problems of the educational market and labor market in Ukraine and its regions;
- 2) to monitor the education market and the labor market;
- 3) to build a model of the mechanism for the coordinated development of the education market and the labor market in Ukraine.

The *subject of our research* is an integrative mechanism of the education market and the labor market in Ukraine. *Object of our research* is the education market and the labor market in Ukraine.

Main material.

1. Problems of the education market and the labor market

According to research Foresight "Education-2030", there are trends in the education, which are prerequisites for its development in the future [8]:

1. *Increasing the percentage of the elderly population (aging population).* Soon half of citizens will reach retirement age. But they are active enough, competitive and able to develop, i. e. they are part that does not neglect anything for the sake of a job, which is a source of additional income. It should be noted that, according to the Pension Codex, the retirement age is increased. This corresponds to the global trends. Over the next 10 years a radical increase in numbers of pensioners will take place in Ukraine. To work they will need not only to raise their education but to retrain and to rise skills in gaining new knowledge suitable for these formats.

2. *“Moving to the East”*. In the nearest future China and India will be a largest consumer market that will require high-skilled specialists. According to experts’ opinion, the main turnover and circulation of money will be concentrated in these markets by 2030. In this regard, there is a need to adapt to the demands of globalization, including adaptation of educational standards to the requirements of labor market.

3. *Accelerated and dynamic IT-development that influence on the socio-economic systems*. Nowadays information environment is an invaluable resource that determines the social development. All entities have to meet the needs of customers in the global access to all informational resources, in order to ensure survival in a competitive environment. The IT-development is going on in parallel to the development of society. And as realities show, IT accompany all processes. Thus, there is a reasonable need in specialists in any domain, which are knowledgeable in modern IT-tools and able to self-improve in getting new IT-knowledge and adaptation of existing ones. As it has been proved, IT brings the work to a new qualitative level. In this regard, it is reasonable the deep penetration distance-learning technologies and Internet technologies in educational sphere. We can conclude that the convergence of educational standards with practical activities will be gradually non-separated from the labor process.

4. *The proliferation of international standards*. Nowadays International Education Standards, based on the English language and the Anglo-Saxon model, are dominating over the traditional national educational system. As the practice of outsourcing shows, TOEFL and IELTS will become the qualitative criteria of foreign language’ skills. The same situation is in other areas: accounting, project management, certification standards MBA etc. This is due to the globalization of education. Therefore, the strategic goal of higher education in Ukraine is a focus on quality and competitiveness.

5. *Implementation of the “culture of openness”*, that provides an effective action mechanisms of transparency, accessibility and reliability of information. Any user on any market (labor, resources, finance, real estate, education etc.) wants to have guaranteed exact information, not exaggerated PR.

6. *Strengthening connection “higher educational institution – employer”*. The modern university is not only the center of knowledge’ and culture’ transmission. It is the competitive service-center. It means the university sells itself:

a) knowledge (intangible assets and intellectual resources) as well as training-books and methodical materials, scientific researches and so on. Ideally, university has to sell knowledge directly to consumers (students). Publishing activity of university is impractical and expensive. Bench-marking showed that in 2012 a U.S. sale of e-learning materials has exceeded printed sales;

b) the shares of companies created by students. Innovative students’ entrepreneurship (junior firma) has nice perspectives. There are examples of successful models in EU and U.S. For example, there is business model Singularity University, founded by NASA and Google: University receives 1 % of income from each business created by his students. Thus, the university becomes a holder of shares. The model can be implemented in such way: the university invests students’ projects and takes business-risks. Instead, university receives a guaranteed income for development, improving the quality of education and strengthening reputation in the educational market;

c) current learning model. Now situation is paradoxical at the educational market in Ukraine. Mostly students pay for education; the quality of the product “knowledge” is not guaranteed; the main result of the studying is to get a diploma; next step is graduates’ hiring, where they must retrain according to the practice;

d) “sale” of students. This is the project “hiring by recommendation”, where university assumes all risks (especially own goodwill) for the next work of graduates.

All abovementioned means fundamental education changes. In the new system, which has developed the concept of “human capital”, communication takes place in financial terms. This

means that the financial tools come into education: long-term loans, long-term loyalty, insurance, institutions of venture market etc.

According to the Project of National Educational Strategy in Ukraine in 2012–2021, the main strategic paths of higher education in Ukraine are defined [9]. The main points of the educational market' development is innovative trends aimed at improving the competitiveness of Ukrainian higher education in the European space [10]: a) innovations in the content of education; b) innovations in the structure of education; c) innovations in the educational process; d) innovations in educational services; e) innovations in international cooperation.

According to the results of a nationwide survey, which was conducted by “Democratic Initiatives” supported by the Alliance USETI in Ukraine in the period 24.03–05.04.2011, Top-10 problems of higher education in Ukraine are presented at the fig. 1.

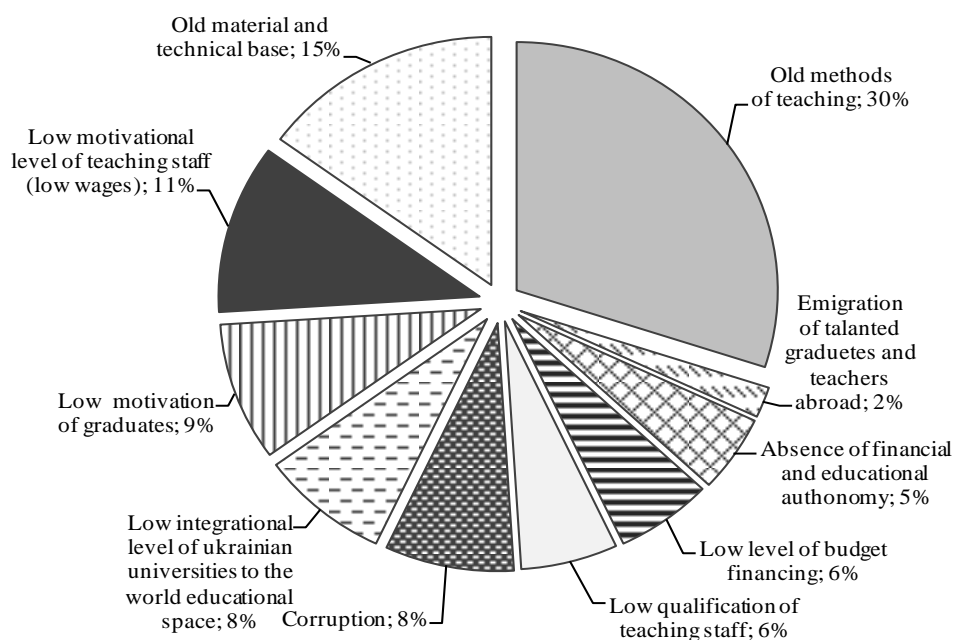


Fig. 1. Problems of higher education in Ukraine (created by authors) [11]

As survey demonstrates, the most important problem in Ukrainian educational system is outdated learning approaches. For students this problem leads to uncompetitiveness in the labor market. For employers this problem leads to additional costs for hiring (adaptation, training, re-training, etc.). For universities it's causing mistrust of students and impairment of higher education at all.

2. Monitoring of the current situation and dynamics

The numbers of higher educational institutions in Ukraine as for 2012–2013 academic year were 823, including 334 institutions with III–IV accreditation level [12]. Analysis of hired graduates

during this period shows that to find a job is difficult problem. The problem is rooted in the following factors: a) privatization of state property; b) a large number of higher educational institutions of different ownership; c) high requirements of employers for candidates-graduates; d) dissatisfaction graduates to its future work (low wages, absence of social security, housing, health insurance etc.). According to the data of State Statistics, the employment situation of graduates in Ukraine in 2010–2012 is presented in table 1.

Table 1

**The number of employed graduates in Ukraine in 2010–2012
(created by authors) [13]**

Year	Total number of graduates	Graduated students	Hired graduates	Graduates, which studied by state or local budget cost	Percent to the total numbers of graduates, %	Percent to the graduates, which studied by state or local budget cost, %
2010	958 490	654 670	181 942	153 150	27,8	84,2
2011	920 877	626 549	170 285	147 926	27,2	86,8
2012	865 033	612 867	167 932	147 591	27,4	87,8

Analysis of the demand for labor by economic regions in Ukraine in 2011 showed, that the greatest demand is for workers in metropolitan economic region, which includes Kyiv, Chernihiv, Zhytomyr and Kyiv. The number of vacancies in this area is more than 17 000, mostly in Kyiv 11 400 (i. e. 66 % of the total demand for labor). The economic areas with high demand for labor include Black Sea region, Prydneprovskiy and Donetsk regions. The number of vacancies in these areas is 11 000, 8800 and 6700 accordingly. These economic regions include 73,7 % of the total demand for labor in the labor market of Ukraine. Analysis of the supply of labor by economic regions in Ukraine in 2011 showed, that the highest number of unemployed people lives in the North-East region, metropolitan region, Black Sea region and Carpathian region. Each of them has nearly 60 000 unemployed people. The lowest number of unemployed, there are in the North-West region (28,2 million people) [14]. In 2012–2013 the negative trend of dominance in labor supply over labor demand is maintained. Labor supply and labor demand in 2011–2013 is shown in fig. 2.

Based on the research we can see a clear trend of significant predominance of Ukrainian enterprises' needs in workers and the number of people, who are able and willing to work.

Despite the fact, that the number of registered unemployed, decreased by almost 14 000 people over the period, the proportion between supply and demand is still at the level of 2011 – it is about 10 unemployed per vacancy.

Given the annual number of graduates, it is clear that the preservation of such disparities will influence negatively on the economy.

To build a dynamic model of integrative development the educational market and the labor market we need to evaluate impact-factors. To do it we used the SWOT-analysis and ABC-analysis.

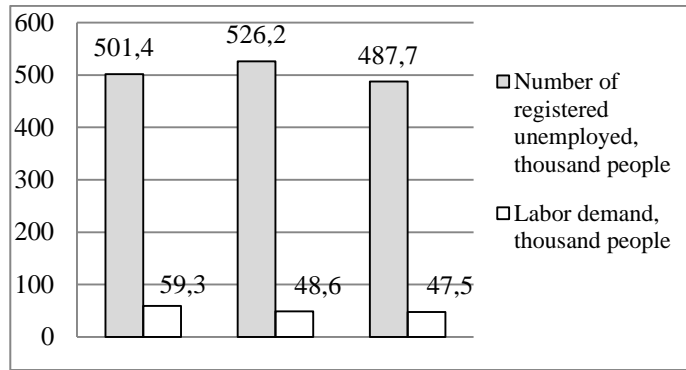


Fig. 2. Labor supply and labor demand in Ukraine in 2011–2013 (created by authors) [15]

To define the strengths and weaknesses of the educational market and the labor market in Ukraine we did a SWOT-analysis as shown in tables 2–3.

Table 2

SWOT-analysis of the educational market in Ukraine (created by authors)

<p>Strengths:</p> <ol style="list-style-type: none"> 1. High reputation of domestic universities. 2. High-qualified teaching staff. 3. Updating the learning process with innovations 	<p>Weaknesses:</p> <ol style="list-style-type: none"> 1. Studying is oriented on the theory. 2. Non-compliance the requirements of the university to students and the requirements of employers for candidates. 3. Obsolete scientific and technical basis, that does not fit today's market demands for professionals
<p>Opportunities:</p> <ol style="list-style-type: none"> 1. Opening new specialties (based on the monitoring of employer's requirements). 2. The perspectives of distance learning. 3. Opportunities for international exchange for students and teachers for updating and enriching experience 	<p>Threats:</p> <ol style="list-style-type: none"> 1. The demographic situation leads to a reduction in the number of students (future professionals) every year. 2. Ukrainian education cannot compete with modern universities abroad ("flow-out intelligence"). 3. Branching of higher education in Ukraine (a large number of small high schools that are not always qualitatively train specialists)

Table 3

SWOT-analysis of the labor market in Ukraine (created by authors)

<p>Strengths:</p> <ol style="list-style-type: none"> 1. The demand for educated professionals not reduced. 2. Cooperation of universities with employers (especially budgetary organizations) 	<p>Weaknesses:</p> <ol style="list-style-type: none"> 1. The imbalance in the labor market. 2. The competition in the market due to mass layoffs
<p>Opportunities:</p> <ol style="list-style-type: none"> 1. Tendency to hire inexperienced graduates with the purpose to educate them for a specific organization reduces the number of unemployed. 2. The new Law of Ukraine "On Employment" fixes possibility to raise skills for students of universities and vocational schools in their free time 	<p>Threats:</p> <ol style="list-style-type: none"> 1. The economic situation in Ukraine leads to distortions in the labor market. 2. Closing a business (shadow economy). 3. Imperfect labor laws (no guarantees for the graduates' first job)

To identify influencing effect of groups' abovementioned factors on the labor market and the educational market we conduct ABC-analysis (table 4).

Table 4

The calculated table for influencing factors (created by authors)

№	Influencing factor	Importance	Rating	Score	Percent	Group
<i>Common factors (for both markets)</i>						
1	New law "On Employment"	0,3	5	1,5	15	A
5	Opportunities for international exchange for students and teachers for updating and enriching experience	0,7	5	3,5	35	A
9	The demographic situation leads to a reduction in the number of students (future professionals) every year	0,5	6	3,0	30	A
3	Ukrainian education cannot compete with modern universities abroad ("flow-out intelligence")	0,8	7	5,6	56	B
4	Branching of higher education in Ukraine (a large number of small high schools, that are not always qualitatively train specialists)	0,9	7	6,3	63	B
6	Imperfect labor laws (no guarantees for the graduates' first job)	0,7	8	5,6	56	B
8	Obsolete scientific and technical basis, that does not fit today's market demands for professionals	0,6	9	5,4	54	B
10	Cooperation of universities with employers (especially budgetary organizations)	0,7	9	6,3	63	B
2	Non-compliance the requirements of the university to students and the requirements of employers for candidates	1,0	9	9,0	90	C
7	Updating the learning process with innovations	0,9	9	8,1	81	C
11	Studying is oriented on the theory	0,9	9	8,1	81	C
<i>Influencing factors on the educational market</i>						
12	High reputation of domestic universities	0,5	7	3,5	35	A
13	High-qualified teaching staff	0,7	8	5,6	56	B
15	The perspectives of distance learning	0,8	8	6,4	64	B
14	Opening new specialties (based on the monitoring of employer's requirements)	1,0	9	9,0	90	C
<i>Influencing factors on the labor market</i>						
21	The demand for educated professionals not reduced	0,6	5	3,0	30	A
16	The imbalance in the labor market	0,8	9	7,2	72	B
18	The economic situation in Ukraine, leads to distortions in the labor market	0,7	8	5,6	56	B
17	The competition in the market due to mass layoffs	0,9	9	8,1	81	C
19	Closing a business (shadow economy)	1,0	8	8,0	80	C
20	Tendency to hire inexperienced graduates with the purpose to educate them for a specific organization reduces the number of unemployed	1,0	9	9,0	90	C

We need to structure all the factors into the three groups: 1) factors influencing both markets; 2) factors influencing the education market; 3) factors influencing the labor market. Then we define the factors' importance (on a scale from 0 to 1) and evaluate the impact of each factor (on a scale from 0 to 10, where 0 – no impact, 10 – factor is crucial).

Calculating results of the combined effect of influencing factors are presented in table 5.

To prevent future trend of increasing imbalances in the labor market it is necessary to develop an adaptive integrational system of the education market and the labor market in Ukraine considering the needs and requirements of all stakeholders.

Table 5

ABC-analysis of factors influencing to the educational market and the labor market (created by authors)

<i>Common factors</i>		
Group	Factors' evaluation	Percent in group of factors
A	5,33	24
B	8,00	36
C	9,00	40
Sum	22,33	100
<i>Educational market</i>		
A	7,00	29
B	8,00	33
C	9,00	38
Sum	24,00	100
<i>Labor market</i>		
A	5,00	23
B	8,50	38
C	8,67	39
Sum	22,17	100

3. Proposed mechanism of cooperation the educational market and the labor market in Ukraine

In 2012, within the project “University Ranking in Ukraine Compass 2012” survey was conducted “graduates through the employers’ sight”. The study was conducted through a series of in-depth interviews with representatives of leading Ukrainian HR-services, regarding to the quality of preparing graduates in Ukrainian universities. Employers assessed the quality of training Ukrainian graduates: 26 % of respondents indicated a worsening the quality of Ukrainian graduates for the last 5 years; 30 % of respondents indicated stability in the quality of Ukrainian graduates and 20 % of employers indicated improvement the quality of Ukrainian young specialists [2].

The main problem in Ukraine is the big gap between the theoretical and practical knowledge. According to the opinion of employers, young specialists are missing the ability to solve problems and skills to work with clients.

Unlike employers, graduates overestimate the importance of their computer skills and foreign languages’ abilities in comparison with the practical skills. 46 % of respondents miss foreign languages’ knowledge; 25 % of respondents miss practical skills; 13 % of respondents miss management skills, 9 % of respondents miss analytical skills. Only 8 % of graduates acknowledge, that they are not able to solve problem situations. A major obstacle is the absence soft skills: communicative skills, presentability, sociability and emotional control. According to this survey, the development of such skills is a standard part of the training program for new employees in many companies.

Thus, the main drawbacks of graduates (young employees), faced by the company, are: 1) missing practical knowledge and ideas about the real work in the companies; 2) missing special knowledge and soft skills.

According to experts opinion, it is necessary to increase the practical component in the educational process; to renew the technical and material base in higher educational institutions; to deepen the cooperation between universities and businesses (to involve practical specialists to the educational process: lectures, seminars, training for students and teachers at the enterprises and so on). Most companies pay attention to the mental skills of applicants such as the creativity, analytical skills, systematic thinking and self-development (54 %); personal qualities (stress-resistance, flexibility, initiativeness, responsibility etc. (51 %); level of practical skills (47 %) and level of general communicational skills (communication, negotiation, conflict resolution, teamwork, work with clients etc. (37 %). Also companies are interested in motivating alumni, their willingness to learn the job, to distinguish priorities [10].

According to the opinion of employers and alumni, the best evidence of the university's effectiveness is the practical value of education and its conformity to the labor market. In this case, unfortunately, indicators of scientific activity and the impact on public life fade into the background. Based on the analysis we propose an integrational mechanism of the educational market and labor market in Ukraine to update the higher educational system in compliance with the employers' requirements. In developing algorithm we paid attention to the mastering peculiarities of educational system. The proposed mechanism will be effective if the following prerequisites are met:

- updating of curricula and working programs according to the current requirements and trends in the labor market;
- the dynamic IT-implementation in the educational process;
- involving practical experts to the educational process in order to equip students with the practical skills;
- continuous updating the teaching methods, informational support the educational process with the implementation of scientific researches.

The proposed mechanism is schematically shown in fig. 3.

In our research we suggest upgrading educational system in Ukraine. Proposed mechanism includes three main aspects of the interaction of the educational market and the labor market: employer – student – higher educational institution. Bilateral connection “High School – Employer” can be seen clearly in this algorithm.

High school must provide: comprehensive and qualitative training; permanent monitoring of employers' needs; updating the educational process with innovations.

The employer must provide: reliable information on the staffing needs; cooperation with universities; internship in a company for students; assessment of graduates and giving full information about test results to their alma-mother.

It should be noted, that this interaction is not possible without government intervention, which is presented in the mechanism as coordinator and law compliance' guarantor. As a result, the positive effect is achieved: the decentralization of government in higher education in Ukraine and its transformation from a conductor to the coordinator.

Thus, built by us algorithm of integrative mechanism is aimed at adapting the educational system to the labor market' requirements in Ukraine. It leads to the effective communications between employers and graduates, promote the effective hiring of young specialists and thus reduces youth unemployment.

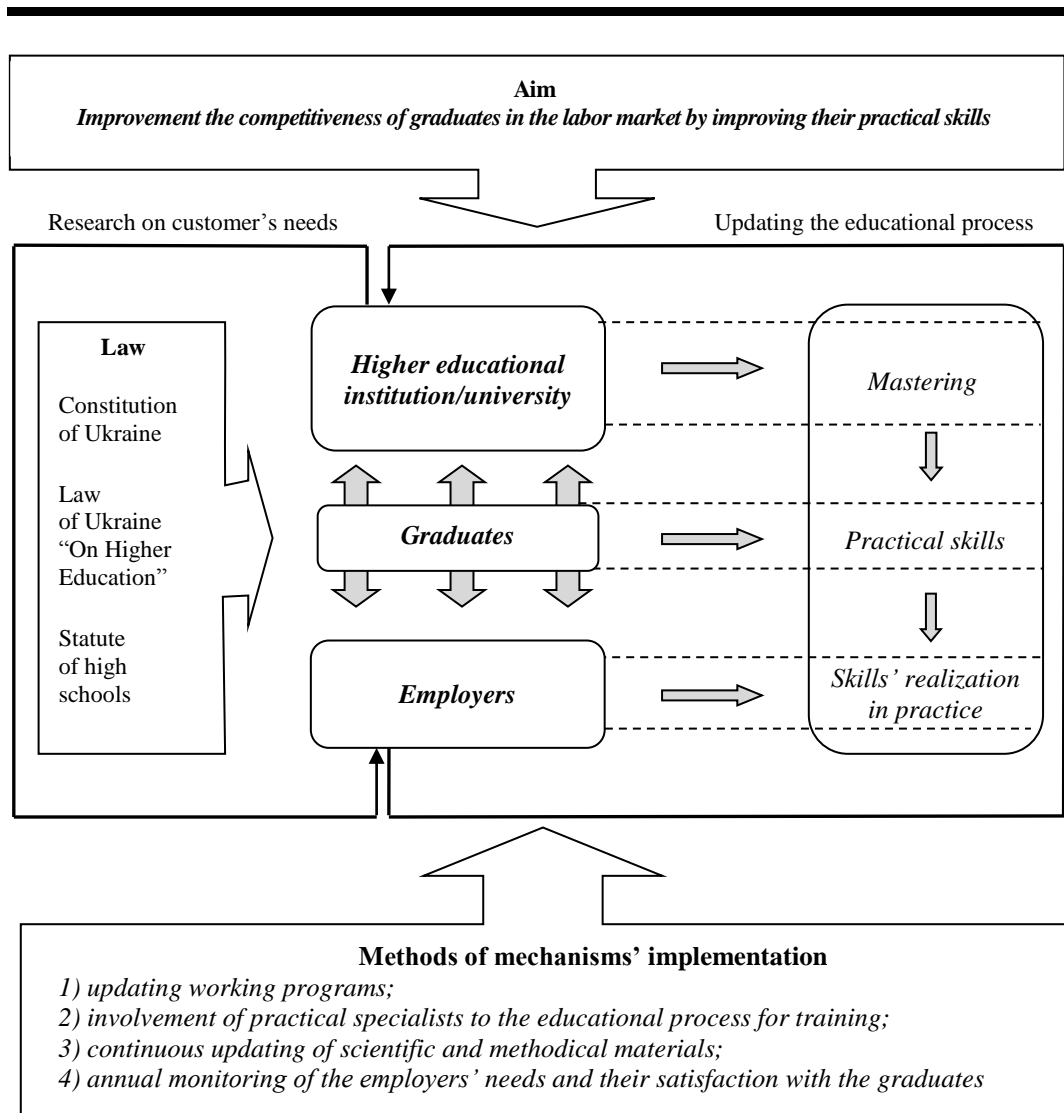


Fig. 3. The mechanism of interaction between the labor market and the educational market (created by authors)

Conclusions and further researches directions. The biggest problem of modern Ukrainian education is the outdated approaches. This problem affects all participants: employers, graduates and higher educational institution as well. For students it means the low competitiveness in the labor market. For employers it means additional costs for hiring and adaptation. For higher education institution it means distrust of applicants and alumni. 529,8 thousand graduates got higher education in 2012 [10], it caused the rising competition in the labor market. In order to prevent the further trend of increasing imbalances in the labor market, we developed the mechanism of integration of the educational market and the labor market in Ukraine taking into account the needs and requirements of all stakeholders.

The proposed scheme of interaction of the education market and the labor market covers three main aspects: employer – student – higher educational institution. The algorithm clearly demonstrates the connection “high school – employer”. Mastering is a basic step in the attitudes between the requirements of university to students and the requirements of employers to graduates. The proposed model aims at solving of several contemporary issues: 1) adapting the educational market to the requirements of the labor market in Ukraine; 2) constructive dialogue between employers and higher education institutions; 3) promotion students’ employment; 4) reducing youth unemployment.

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