

# Cooperation of universities and employers within the preparation of graduates for their work in organizations

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**Abstract**—The discrepancy between competences of Universities graduates and the needs of employers is one of the current problems of the human capital development. In the conditions of transition to digital economy this matter rises especially sharply as the requirements to the human capital of the personnel of the enterprises, which has to include relevant and demanded knowledge and skills, experience of team work, communicative skills, loyalty to the organization and its organizational culture, etc. increase repeatedly. The existing mechanisms of the interaction of the universities and employers do not allow to consider the requirements to the human capital development in full. During this research the mechanism of the increase in the efficiency of cooperation of the universities and employers in the course of training of graduates for their work in the organizations on the basis of the mechanisms of target training, providing reliable employment and high quality of training of future personnel of the organizations, including development of skills of practical activities as well as the acquaintance to the personnel of the organization and its organizational culture during passing the traineeship and training, is developed on the basis of the application of the system and situational approach.

**Keywords**—*competences, human capital, universities, employers, universities graduates, target training, professional development, communicative skills, experience of practical work, educational modules, transition to digital economy*

## I. INTRODUCTION

Nowadays the personnel of the organization are considered as one of the types of the organization capital (the human capital) and the most important factor of economic growth on micro-, meso - and macrolevel [1]. The emergence of the human capital concept is certainly not accidental. It is connected with the fact, which became obvious: investments, made in such subject as the personnel of the company, allow the enterprise to receive benefits, repeatedly surpassing the volume of investments, and in certain cases they become one of the elements of its competitiveness. Therefore, the person with all his or her qualities, which are anyway applied at the enterprise (not only knowledge and working capacity, but also skill to communicate, ability to study quickly, health and many other factors) is considered already as the subject to investment [2, 3, 4].

The saved-up human capital makes up the basis for the new economy and it is recognized to be the dominant of the

social-and-economic development of modern society. Change of the human capital role, expansion of its structure and functions, its transformation from the expensive factor into the major productive and social factor of the development and functioning of modern society resulted in the need of the formation of a new paradigm of the development.

The modern human capital is the intensive productive and social factor of the development and activity of the subject, which is inseparably linked with the person, with his or her intelligence and mentality. It is formed due to the investments in upbringing, education, health, knowledge, entrepreneurial ability, information support, safety and economic freedom of the population and also in science, culture and arts.

The value of the human capital increases with the development of information revolution, which results in the creation of global information space, which is characterized by immeasurably great flows of information, opportunities of its use, huge impact on all the vital processes, consciousness and behavior of people. The digital economy is formed on this basis. The development of such economy is connected with the improvement of the human capital quality, including universal dissemination of knowledge and skills connected with transfer and processing of huge arrays of information in the electronic form.

During the human capital formation education sphere comes to the forefront as it allows to create the necessary knowledge and competences for the use of the digital economy infrastructure and acts as the base for the development of the scientific research, supporting its development. Society (including employers and students themselves) expect that upon completion of training the graduate will be able to work at the enterprises of real production sector fully, to carry out labour operations and to become a part of the collective. However, much research prove that such result is not achieved [5, 6, 7, 8, 9]. Thus, the discrepancy between competences of university graduates and the needs of employers is pointed out as the problem which induced the author to carrying out this research. Consequently, the process of training of specialists at the Universities is the object of the research, and the organization of cooperation of the universities and employers within training of graduates for their work in the organizations became the subject of the research. The

development of the mechanism of the increase in the efficiency of cooperation of the universities and employers during training of graduates for their work in the organizations on the basis of mechanisms of target training acted as the purpose of the research.

## II. MATERIALS AND METHODS

Provisions of the system approach acted as the fundamental methodological prerequisite in this research [10]. Within this approach the education system should be considered as opened, suffering influence of the environment (the main directions of the state and regional growth, world scientific trends, and most of all the needs of employers, as the main objective of training at the university is obtaining qualification, which allow to carry out qualitatively certain labour operations, which a person who does not have the corresponding education cannot carry out.

At the same time the human capital can be considered as the system of the interconnected elements, having the property of emergence, too. Thus, the human capital consists of the following basic elements:

1) professional capital: general and special knowledge, all-professional skills, professional experience and work experience, entrepreneurial and organizational abilities, creative and innovative abilities;

2) capital of culture: general culture, motivation, principles and stereotypes of behavior within rules, traditions, moral norms, potential of the social interaction, level of inclusiveness in the corporate culture;

3) capital of health: natural-and-physical component, including the general state of health, physical and mental health.

Only the set of these components allows the employee to be implemented in his or her workplace in full, to have the maximum level of efficiency and value in the workplace and in the working collective. The absence or insufficient level of the development of any element reduces the value of the human capital (however they do not destroy it completely).

However, as many researchers note, universities give basic knowledge to the students, however the graduates have no experience of practical work, have no communicative skills, have the undeveloped potential of interaction (5-9, 11, 12).

Except the system approach, the solution of the problem of discrepancy between the competences of university graduates and the needs of employers, presented in this article, is also based on the basic principles of the situational approach. The essence of the situational approach is the need of taking into account the current situation for the making decisions. So, the author's suggestion is based on the idea, that many modern enterprises face the shortage of qualified personnel, need to complete learning or retrain the graduate of the university directly at the working place; that reduces the labour process efficiency. All this has led to the trend, when employers make attempts of cooperation with the universities, including organization of competitions and other competitive actions for the purpose of identification of gifted students and their training invitation with the prospect of employment. Many large enterprises are ready to

cooperate with the universities, creating the basic departments, preparing students for work at the particular enterprise, preparing specialization courses for students and also organizing professional development for teachers. In spite of the fact that all these actions are connected with time and financial expenditure for the employers, they are ready to carry such expenses. That proves the high relevance of the issue in the current situation. Consequently, the proposed solution has to base on the features of the current situation.

## III. RESULTS

The transition to digital economy determines the sharp need for the personnel of high qualification, able to fast adaptation to new technologies, having both profile technical and communicative competences [15]. That, in turn, outlines the circle of tasks of the highly qualified personnel training for the education system. The essential divergence between the contents of educational programmes and the set of the competences, necessary for the graduates in their workplace,

determined the high relevance of the development of the complex of actions, aimed at the modernization of mechanisms of target training, including improvement of training with active participation of the interested parties (first of all, the enterprises of real production sector, which are the potential employers). Let's define the basic principles of the development of the mechanism of the increase in the

efficiency of cooperation of the universities and employers during training of graduates for their work in the organizations:

- the graduate of the university is supposed to have not only the required set of profile competences, but also the exclusively high intellectual potential, steady motivation to the professional self-realization in the subject area;
- the development of mechanisms of individualization of training, taking into account the requirements of the specific employer, is necessary, especially within the last 2 years of training in the bachelor degree. It is connected with the need of the development of profound knowledge and skills for rather narrow sphere according to the profile of the organization. This requirement is important owing to the high complexity of technologies in the digital economy and specifics of the tasks to be solved;
- there is an urgent need in updating of the competence of the teachers, who are carrying out training at the universities, including updating and experience of practical activities at the enterprises. It determines the need of carrying out some actions for the professional development of the faculty and also for training of teachers on the organizations, which are the potential employers for the university graduates.

Target training supposes training of graduates according to the request of the particular organization (taking into account its requirements to the competences) with the subsequent employment of the graduates. At the same time the following mechanism of the realization of target training is offered:

- The 1st and 2nd years of training provide general education subjects and the objects for the acquaintance with the specialty of students. Before this stage is completed, it is difficult to select the most motivated and prepared students, therefore they study in accordance with the general practice;
- according to the results of 2 years of training the employers organizations can gather the most motivated and prepared students at the competitive basis and offer them training according the educational modules, created on the demand (with active participation) the employer organization, with the subsequent employment;
- during the 3th and 4th years of training the students have the opportunity to study the disciplines and competences, demanded for work at the employer enterprise, learn from the representatives of the employers enterprises, pass traineeship and training on the basis of the employer enterprise, within writing of the final qualification work the students can try to propose their solution of the specific practical issues, existing at the enterprise and revealed during passing the traineeship and training. Passing the traineeship and training at the employer enterprise will allow the students to study the features of practical activities, to develop practical skills, to get acquainted with the organization, its organizational culture and collective, regulations and traditions, to develop communicative skills during the interaction with the representatives of the personnel of the organization;
- according to the results of training (in case of full development of the educational module) the graduate can apply for admission to the staff of the employer enterprise.

Within the projects of target training students study according to the educational modules aimed at the formation of the specific competences demanded by the employers organizations. Restively, the identification of the necessary competences as well as the formation of some requirements in relation to the competences, which employees from among the future graduates are supposed to have, is the first stage of the developed mechanism (Fig. 1).

It should be noted that a set of competences will differ for each enterprise. Certainly, a rather wide block of competences will be duplicated (the field of crossing of the requirements of various enterprises in the relation to the competences formed by the student), nevertheless each enterprise needs its unique set. The further work with the partner higher education institutions, carrying out training of students [13, 14] is carried out on the basis of the requirements of the particular enterprise.

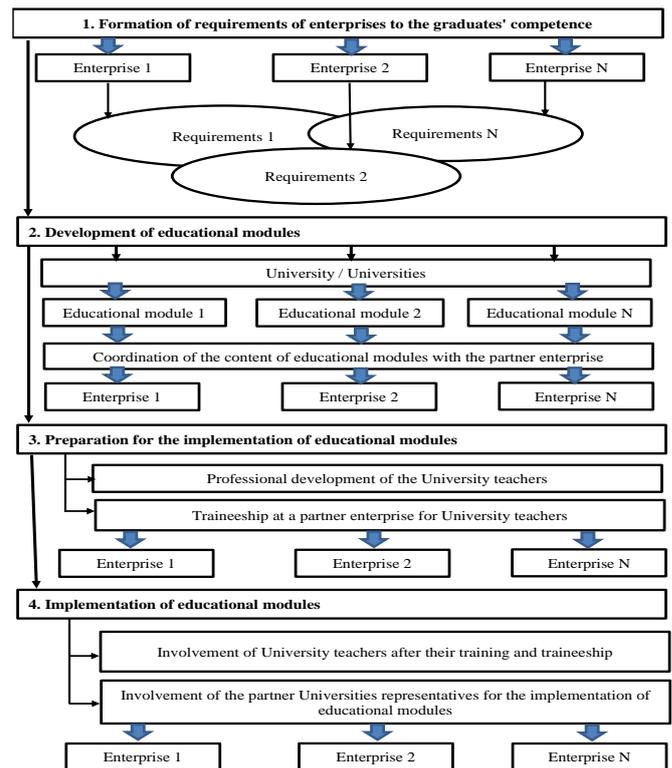


Figure. Mechanism of targeted training of the personnel

Fig. 1. Mechanism of targeted training of the personnel

At this stage we face the main restriction in the use of the developed mechanism. Such restriction is the scale of the employer organization. Certainly, the participation in similar educational projects will be possible only for the enterprises of large and partially medium business.

Nevertheless, the offered mechanism allows to provide digital economy with highly qualified personnel and to reduce time for adaptation of the graduates to their professional activity.

The contents of the educational modules have to be coordinated with the employers organizations without fail.

The personnel of these organizations, as the carriers of knowledge, skills and wide experience of practical work, carriers of corporate culture, should be also attracted actively for the purpose of the improvement of quality of training according to the educational modules; that allows the students to adapt the accelerated rates to features of work at the enterprise, to create the necessary level of loyalty, to increase the prestige of work in the organization among the students.

The improvement of quality of teaching is also provided by the fact, that regular training according to the additional professional programmes for teachers on the basis of the partner organizations and also the training allowing teachers

to update skills of carrying out the labour operations in modern working conditions is provided.

The presented mechanism allows to provide:

- systemacity of actions for the improvement of quality of training of graduates for the needs of the large enterprises employers;

- receiving by the universities faculty the relevant competences, corresponding to the requirements of the employers organizations;
- the increase in the level of motivation of students to target training and, consequently, to the high level of training; that is connected with the possibility of the subsequent employment.

#### IV. CONCLUSION

Thus, the mechanism of the increase in the efficiency of cooperation of the universities and employers within training of graduates for their work in the organizations on the basis of mechanisms of target training is developed for the solution of the problem of the discrepancy between the universities graduates' competences and the needs of employers. The features of the offered mechanism are the following:

- selection of students at the final training stages (the last 2 years of training) for the participation in the development of educational modules. It allows to involve the most prepared students, with the highest rates of development of the intellectual capital in the programme of target training; that will allow to develop the labor capital. Such approach will allow to use the financial resources, spent for training of such students in the most effective way, providing reliable employment and high quality of training of the future personnel of the organizations. At the same time the selection of students for target training is carried out by the employers enterprises on the competitive basis in the presence of obligatory consent from the student;
- orientation to the practice-oriented principle and to the identity of target training of students for the benefit of the employers organizations by the means of formation of individual educational trajectories, the use of modern educational technologies;
- stimulation of interaction of the Universities with the employers organizations regarding the development of the personnel potential of teachers of the Universities in the most demanded directions of preparation and specialties. It will allow to bring educational programmes and modules of the Universities closer to the requirements of the organizations.

Thus, the following aspects of training will gain their development as the result of the realization of the offered mechanism:

1) practical orientation of training, efficiency of forms of interaction of the Universities with the organizations within the use of their material-and-technical resources for the organization of practical preparation during implementation of educational programmes;

2) practice of the development of educational programmes both in general, and according to separate educational modules, in relation to the needs of the specific customer.

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