

CHARACTERISTICS OF DUAL EDUCATION IN THE TRAINING OF ENGINEERING BACHELORS IN HIGHER EDUCATION INSTITUTIONS

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Abstract. The article examines the features of dual education, which allows to solve the problem of professional training of personnel, taking into account the interests of higher education institutions and employer enterprises in the training of engineers in the field of alternative energy in higher education countries. The dual education system is an effective and flexible mechanism that enables the training of highly qualified specialists required in the activities of enterprises of various sectors in the modern conditions of the market economy.

Key words: production and higher education institutions, dual education, effective and flexible mechanism, dual education system, activities of enterprises of various sectors, theoretical and practical parts of the program.

INTRODUCTION

According to the decree of the President of the Republic of Uzbekistan "On measures for the further development of alternative energy sources" dated 01.03.2013 No. Great attention is being paid to improving the quality, introducing modern teaching methods into the educational process, selecting talented students, training competitive specialists for the labor market, developing scientific research and innovations, and focusing on practical results. taking into account the planned experience and continuing to carry out research and pilot-industrial developments at the maximum technical and scientific level, taking into account the world experience, applying some solutions regarding the use of alternative energy sources in the conditions of our country, as well as for this field modern equipment and technologies aimed at increasing the efficiency of training of specialists and taking measures to organize production [1].

Regarding further improvement of the education system in our republic According to the decision of the Cabinet of Ministers of the Republic of Uzbekistan dated March 29, 2021 No. 163 "On measures for the organization of dual education in the professional education system" on the procedure for the organization of dual education in the professional education system statute confirmed. In addition, to develop a national plan, a special program in the direction of renewable energy sources in our country, to create a new system for personnel training using a dual education system in higher and secondary special educational institutions for this field. The practice of actual tasks is important. Because the practical use of alternative energy sources is considered as the most important factor for sustainable economic development and increasing the competitiveness of qualified personnel [2].



It is known that the system of training qualified personnel of higher educational institutions is characterized not only by quality changes in the process of the educational system, but also by its interaction with the production sectors, as well as by the development of personnel competence [3,4].

MATERIALS AND METHODS

Further development of the educational system to increase the knowledge and skills of graduates of higher educational institutions is an urgent issue in order to meet the needs and size of production enterprises for qualified personnel. In such conditions, introducing the principles of the dual education system into the system of training qualified personnel of higher educational institutions is considered the most effective method.

In this regard, the results of the analysis of the experience of developed and advanced countries (for example, Germany, France, China, Japan, India, Great Britain, Brazil, Russia, Malaysia, etc.), show that the integration of the educational process and practice in various enterprises serves as a basis for high-quality training of qualified specialists in their fields.

Dual education can be imagined as a "pedagogical activity that ensures the formation of individual knowledge and skills of students in their professional fields in professional training activities" [5]. In this case, direct practice plays the main role. LV Sidakova admits that the dual education system is "an educational system that involves the combination of educational activities of an educational institution with the activities of production enterprises" [6]. The dual educational system of training specialists can be considered as "an educational system aimed at training specialists who will have the required level of qualification in a specific profession, clearly coordinated between the employers and production enterprises of higher professional education." [7].

Analyzing local and foreign literature, it is possible to imagine the dual education system as an educational model in which theoretical training can be carried out in educational institutions, and practical training can be carried out in production enterprises [8,9,10].

The high level of interest of the employers in the content of the education of students in higher education determines the importance of the dual education system in higher education. In order to increase the effectiveness of such a system for training future specialists, state organizations, employers, education organizations should act together. In this regard, according to mutual agreement with the participants of the educational process, students and employing enterprises, students spend a certain time in the enterprise and receive a salary [11-16].

RESULTS AND DISCUSSION

In the process of introducing the dual education system to higher education institutions, a number of problems are encountered. These problems include the fact that work programs aimed at bachelor's training do not match the sequence of seasonal work in production enterprises; the educational organization cannot always teach in accordance with the curriculum. The first of the main difficulties in the training of personnel is the insufficient level of preparation of the enterprise for training, namely the lack of training places in the enterprises; the need to increase the price of the produced product, the lack of funds for education in order to attract to education ; (lack of equipment, inadequate funding, etc.).

As a result of the analysis of the literature on the dual education system, it was possible to identify its many possible advantages, which are presented schematically in Figure 1.

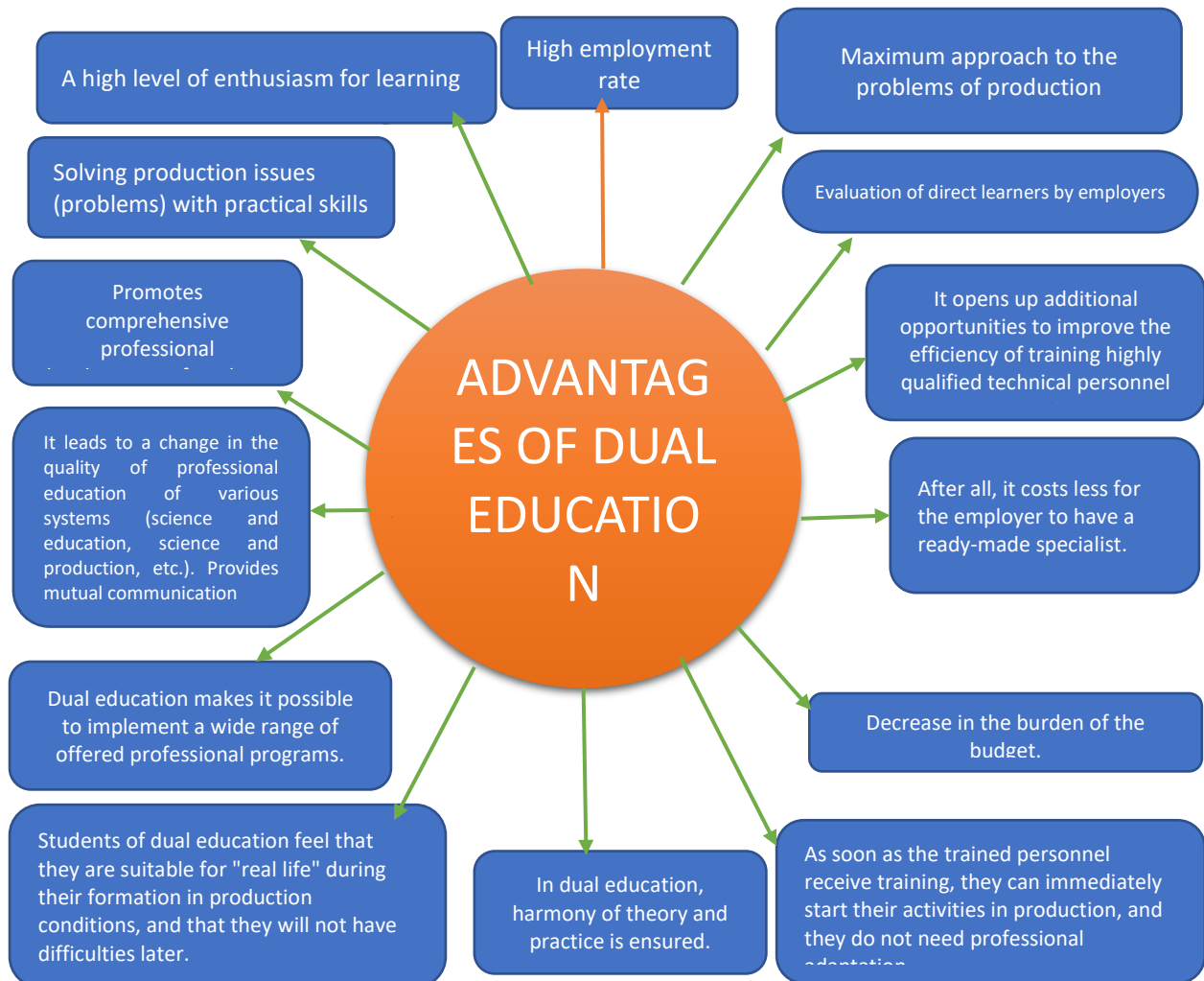


Figure 1. Advantages of dual education.

As a result of the implementation of the training of specialists on the basis of dual education, it is important to note that it is important to "ensure the organization of a specific educational approach for the student". In the implementation of dual education, the educational process relies on a group of students, as well as the use of distance education in order to individualize the educational process for the use of an individualized system of personnel training for dual education, and in this, network educational mechanisms. based on implementation.

In order to successfully implement dual education in the higher education system, it is proposed to develop a dual education model based on cooperation between participants in the educational process [9].

The main elements of this model are: legal, conceptual components, a program for introducing dual education for higher education institutions, and a personnel component. Each of the proposed elements recognizes each other. In this case, the conceptual component is represented by technological, methodological, personal-resultative levels, mechanisms, and the activity of several conditions of the student's motivation for teaching.

First of all, it should be noted that the legal basis for the introduction of the dual education system is necessary, which will allow to regulate the relations between educational



organizations and base enterprises for the joint training of personnel; implementation of educational programs taking into account the views of interested parties, taking into account the structure, content and technical adaptability; also take into account the labor market forecast in a specific area; mechanisms of such cooperative training programs make a great contribution to the development of priority sectors of the economy and create conditions for the development of an independent system of vocational education, depending on its quality.

CONCLUSIONS

Thus, if we talk about the concept of dual education and it can be applied to the higher education system, it will strengthen the practical direction based on the analysis of the educational processes of the higher education institution and production in the preparation of bachelors. This form of education allows to harmonize the cooperation between higher education institutions and enterprises, and in the training of professional personnel, bachelors conduct theoretical courses and professional training directly at workplaces and their they will acquire highly qualified knowledge and they will have the opportunity to expand their functional responsibilities.

The process of introducing dual education requires the implementation of fundamental changes in the organization of educational activities; theoretical and practical parts of the curriculum requires the creation of adequate exchange mechanisms. The dual education system is an effective and flexible mechanism for the training of specialists required by enterprises operating in various sectors of the market economy in modern conditions, which enables the training of highly qualified personnel.

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