SCIENTIFIC JOURNAL

HIGHER ECONOMIC - SOCIAL SCHOOL IN OSTROLEKA

4/2023(51)

Łomza, 2023

SCIENTIFIC JOURNAL HE-SS in Ostroleka 4/2023(51), 48-58

Submitted on 01.09.2022/ accepted 16.11.2023

Olena Ievseitseva

Kyiv National University of Technologies and Design, Ukraine ORCID ID: https://orcid.org/0000-0001-6079-2968

DUAL EDUCATION: AN EQUAL PARTNERSHIP INSTITUTION OF HIGHER EDUCATION - EMPLOYERS - EDUCATION ACQUISITIONS

Introduction

The processes of globalization, the rapid development of scientific and technical progress, the natural speed of the emergence of new knowledge, and Ukraine's entry into the European educational environment determine the need for Ukrainian educational institutions to implement educational innovations. If we consider the problems of Ukrainian education, we cannot ignore the presence of a large amount of criticism among scientists, business representatives, and society as a whole. From the active debates of teachers, entrants and business representatives, it can be concluded that the competitiveness of Ukrainian education in the European space is very low due to the lack of satisfaction of the needs of the domestic labor market for professionally trained specialists who could immediately, without additional training, perform their duties at Ukrainian enterprises. The desire of Ukrainian education seekers to enter European educational institutions only exacerbates the problems of finding personnel for the employer. This especially affects representatives of small and medium-sized businesses, which cannot independently engage in the training of specialists due to lack of time and funds.

A significant problem is that the management of both public and private Ukrainian educational institutions very often understand innovation in education to mean, for the most part, technical innovation. Storage, dissemination and visualization of information with the help of the latest technologies, the use of information and educational systems - all these tools are really effective in teaching the material, but the educational material itself can only in rare cases be called result-oriented, which will satisfy the average entrepreneur. The GfK Ukraine nationwide survey "Ukrainian generation: values and orientations" revealed that the vast majority (43%) of young applicants believe that education and educational institutions in Ukraine do not meet the needs of the modern labor market [7].

Among the problems that cause dissatisfaction with education are: the lack of proper industrial practice and innovations in education, as well as the overload of the curriculum with "extra" subjects that are not related to the profession in any way. In general, the main barrier to the acquisition of practical skills by those acquiring education is the low quality of the training or the complete absence of industrial practice of the acquirer. The integration of such elements into the education system is, without a doubt, a progressive solution; nevertheless, the enterprises themselves stand in the way of such training events in most cases, they are extremely reluctant to accept the student and are in no hurry to conclude agreements with the educational institution. The workers of these enterprises do not understand what benefit they can get if they provide the opportunity for paid industrial practice, despite the fact that it is the employers who are the biggest critics of educational institutions and supporters of its earliest reformation. The reason may be the insufficient development of communication between educational institutions and enterprises, as well as the lack of experience of cooperation in the preparation of the curriculum on both sides.

Purpose, subject and research methods

In modern conditions, significant transformations are taking place in the education system of Ukraine aimed at building a knowledge society, European integration, and world educational standards. This requires the introduction of innovative technologies in the field of education, orientation to the needs of the labor market, which will contribute to the progressive progress of our state and the affirmation of its authority in the international arena. Today, the need to find new forms, non-traditional approaches to the organization of educational activities of education seekers, which will contribute to the effectiveness of training future specialists in the conditions of modern society and the implementation of state educational standards and programs, is intensifying. Due to the lack of effective management mechanisms for the training of future specialists, the quality of vocational education does not meet the requirements of employers, since graduates of educational institutions do not have full practical skills, readiness to perform professional functions, which weakens the competitiveness of domestic enterprises. Qualified and enterprising specialists can ensure the ability of modern production to compete in the international arena. However, despite the presence of studies on the problem of dual education, the mechanisms of state management of this process in the context of the modernization of the educational sector are not yet sufficiently represented in the scientific world, which led to the choice of the topic of the article.

The purpose of the article, as a component of scientific research, is to highlight the managerial and pedagogical aspects of dual education in the context of the modernization of the educational sector, namely to determine the main principles of dual education and the factors of its implementation in the professional training of future specialists in educational institutions of Ukraine.

Research results

The competitiveness of any state on the world market and the quality of life of its population directly depends on the level of professional training of personnel. The European Union is currently one of the leading world leaders in the field of training qualified personnel.

Dual (from Latin Dualis - double) form of education is a method of education, according to which theoretical training is mastered in an educational institution, and practical training takes place at enterprises, institutions and organizations to acquire a certain qualification. The level of participation of employers in the dual form of training constitutes the largest part of training. After graduation, students who studied under the dual form understand all economic, managerial and technological processes and have experience of interaction with specialists of enterprises, institutions and organizations.

Today, employers are interested in getting involved in the training of education seekers at the stage of their education. For a long time now, business has been acutely experiencing a shortage of knowledge and skills of young professionals who would meet the market's requirements. All employers agree that students should acquire thorough theoretical knowledge and practical skills while studying at an educational institution. They also note that they would like to have the opportunity to influence the content of educational programs followed by students.

The main task of dual education

to eliminate the main shortcomings of traditional forms and methods of training future specialists, to overcome the gap between theory and practice, education and production, and to improve the quality of training of qualified personnel taking into account the requirements of employers within the framework of new organizational and excellent forms of training.

The main ones signs dual education

the theoretical part of specialist training takes place on the basis of an educational institution; the practical part of specialist training takes place at the workplace; education seekers combine training and internship at the enterprise; enterprises make orders to educational institutions for a specific number of specialists in a certain specialty; employers participate in the formation of the training program; employers can have different forms of participation in the training of specialists: fully pay for training; purchase the necessary equipment; cover all expenses related to the process of their industrial training; pay monetary rewards to education seekers for the use of their work, etc

Fig. 1. The main features of dual education

Germany is considered the founder of dual education. Canada, Austria, Switzerland, South Korea, China and other countries adopted this system from her.

Let's consider in detail how to get a dual education in Germany. To enter a higher dual school, an applicant must have completed secondary or specialized secondary education. Education seekers are selected on a competitive basis. Also, each student must find a partner among enterprises - this is the main condition.

For example, at the Hera-Eisenach Dual Higher School, education lasts six semesters - three years. Each semester is divided into three months of theory and three months of work at the enterprise. Although in other institutions, in order to obtain theoretical knowledge, it is enough for a student to visit an educational institution 1-2 days a week, as well as to work independently. The rest of the training is work at the enterprise. The student has a mentor at the company. His status is enshrined in law and the curator receives 538 euros for his work with the student. For three months, he works together with students on projects that have a direct connection with the enterprise. Note that this is a significant advantage for the company, the student integrates into the company's system, studies all working mechanisms. It also tests and implements certain projects that are important for the future of the enterprise. These projects are evaluated by both the mentor and the professor of the higher school. But there are also traditional tests and homework. Dual education is fixed at the legislative level.

However, after completing the studies, the graduate is not obliged to work at the enterprise where he underwent training and industrial practice.

In Ukraine, dual education was introduced during 2015–2017. At that time, an experiment was carried out with organizations of the educational and production process with elements of a dual form of education, in particular on the basis of vocational schools and colleges.

The global competitiveness index of Ukraine ranks 11th, and the quality of personnel training at enterprises and organizations ranks 94th. And the shortage of engineering personnel is currently very large. An engineer must develop products, prepare production and manage small groups that carry out production. It is impossible to train such specialists in the traditional academic way.

Currently, the dual form of education is just beginning to be introduced into the Ukrainian educational process. It is designed not only to establish effective cooperation between educational institutions and the labor market, but also to create real conditions for students to study theoretical material in practice. By the way, the work of a student of dual education must be paid. This should be a prerequisite. Earnings usually depend on the contract and agreements between the employee and the employer. At the same time, the student of education not only receives money, but also acquires the most concentrated and useful knowledge that is directly related to his profession..

Advantages
dual
education

organization of cooperation between politicians, businesses, and social partners; development of the legislative basis for the recognition of national standards of the quality of professional education; training of education seekers during work; involvement of qualified production personnel in pedagogical activities; implementation of institutional research and consulting; taking into account the specific requests of enterprises to the content and quality of professional education.

Fig. 2. Advantages of dual education

One of the main advantages of such training is practical experience. After all, theoretical knowledge, not supported by practice, is quickly forgotten.

"Innovation" is a concept whose essence is revealed by the words "innovation" and "updating"; an experimental or planned process of introducing original, non-standard ideas, methods of obtaining the necessary results. Educational innovation is the introduction of new forms, methods and semantic load of the educational process. Like any innovation in general, educational innovations are the result of scientific research and relevant research, in the case of educational innovation - both a teacher-scientist and representatives of related or even random professions, who under various circumstances become participants in the movement of natural changes in the educational field .

The most famous classification of innovations is the typology of A.I. Prigozhin [6]. He indicates that by type of innovation they are divided into material and technical and social. The structure of material and technical innovations includes equipment, technologies, and production materials. Social innovations include: economic, organizational-management, social-management, legal and pedagogical. In the modern conditions of the functioning of educational institutions of Ukraine, which are formed under the influence of the need for European integration, it is necessary to focus attention not so much on material and technical, but on social and management innovations, since educational innovations that do not require financial subsidies (this especially applies to stateowned institutions) can be implemented in the educational system of Ukraine as soon as possible.

Active approach in education. As stated in the resolution of the CMU on the "State standard of basic and comprehensive secondary education", the activity approach is the orientation of the educational process towards the development of personal abilities and skills, the practical application of knowledge gained from various educational subjects, the successful adaptation of a person in society, professional self-realization, formation of abilities for collective activity and self-education [3].

The world community needs such learning outcomes that enable a person to apply the acquired knowledge and acquired skills in the necessary situations.

This means the availability of modern educational technologies that would simplify the training of qualified workers for the labor market as much as possible. In the past, teachers already recognized the fact that knowledge can be obtained only in the process of using it. At the same time, entrants go to educational institutions to study because they want to gain applied knowledge - the qualification of an employee of a certain level in a certain specialty. It is necessary to understand how to make a training program in this situation. As proved by Y.G. Fokin, in order to implement any approach in education, it is necessary to analyze its advantages even before the curriculum is drawn up: "... the curriculum of an educational discipline is a "floor" on which you need to put "supports" in order to technologically support specific classes in academic discipline. The program provides a certain initial state and final control, it also sets the content ... At the same time, as a foundation - "floor" - it is necessary to have a pre-developed method of such transformation independent of the curriculum of the educational discipline. Only after that, a strictly developed technological program can appear above the "mean floor" [7].

An active approach in education is a way of effectively transforming education seekers into qualified specialists, which are needed by enterprises on the Ukrainian labor market.

International experience shows that effective education is impossible without cooperation with business. For example, Aalto University in Finland (Aalto University) has developed a program of "individual business processes" [6].

Projects within this program introduce students to various aspects of the enterprise - marketing, finance, logistics and other activities. For the duration of such projects, educational institutions form a research group consisting of 2-5 students of the last year of study and a teacher appointed as the leader of the group. Most often, at the company, students' work is analysis, planning or benchmarking (description) of the company's processes. Students are selected individually for each project from different faculties of educational institutions, they also receive monetary compensation for their work, which additionally motivates them. In Sweden, three universities - Uppsala University, Jönköping University and Örebro University - have joined forces within the regional state partnership "ACCESS" to provide professional support to small and medium-sized businesses. The organization helps employees of educational institutions, students and entrepreneurs to meet and start joint activities [7].

If we talk about the experience of educational institutions in Germany, German education is basically based on the involvement of students in cooperation with business. About a third of German students choose the so-called "Fachhochschule" (institutes of applied sciences), in which a one-year internship at a specialized enterprise is a mandatory condition. The Berlin University of Applied Technical and Economic Sciences (Hochschule für Technik und

Wirtschaft Berlin), which takes a leading place in the rankings of the best educational institutions in terms of employment of its graduates by major, has created an entrepreneurial cluster "Science-Practice". He mostly deals with the employment of students according to their profile [1].

US educational institutions are characterized by the involvement of business in the development and management of the educational program and courses of disciplines. One of the main manifestations of such interaction is the writing by students of the so-called "Capstone Project" - a final qualification paper based on the solution of a real business problem proposed to students by representatives of enterprises.

In Ukraine, a big problem seems to be the relationship between business and educational institutions as such. Since many managers of modern enterprises received their education back in the 90s of the last century, when higher education in Ukraine was at the initial stages of its transformation, they formed an idea about domestic educational institutions as those that are not capable of professionally training, especially for new specialists, humanitarian directions. Moreover, unlike foreign business, Ukrainian entrepreneurs do not consider an educational institution as a place that can help them in solving various problems, but see it only as an institution that produces untrained personnel. However, the scientific and pedagogical staff of departments and faculties can provide business with assistance in such matters as: consulting, conducting lectures and courses; professional development of personnel; publication and implementation of educational literature; carrying out scientific research, research and design, design and construction, technological, search and design and search works; carrying out research on the development of, for example, certain branches of the national economy and conjunctural studies; design, development, testing and production of experimental samples and experimental batches of materials, substances, devices, equipment; implementation of measures related to the implementation of exhibition and fair activities [4].

The most successful, from the point of view of relations with business, educational institutions that can create business schools (an institution that provides an MBA degree) in their composition. All these services, which are able to provide educational institutions, without a doubt, will significantly improve the attitude of the entrepreneur to the university.

Separately, I would like to highlight not the participation of educational institutions in the activities of enterprises, but on the contrary - the participation of enterprises in the work of an educational institution, through the educational process. Very often, methodologists and teachers are faced with a situation when, for the sake of greater visibility or the functioning of the activity approach in education, it is necessary to demonstrate the theoretical basis with an example or to find input data for some educational task. Suppose that some enterprise can provide its real documentation (that which does not disclose commercial secrets),

reports and analytical data, service software, demonstrate its product or service. In this case, the motivation of the enterprise to provide information or a tool is to get the opportunity to follow the educational process and take into account the results of the work of the teacher and the student of education.

Practical training of students of educational institutions should be an integral part of the educational process and be carried out during the entire period of study. The purpose of industrial practice is the manifestation of an activity approach in education - consolidation of the theoretical knowledge acquired by students during training with practical professional skills and work skills at the enterprise. Educational institutions set the following main tasks before the student of education, economic direction of education, during industrial practice: familiarization with the enterprise-base of practice, study of its specialization, features of technological processes; analysis of enterprise activity; familiarization with the activities of the divisions, their structure and functions, regulations on the department, job duties of employees; performance of individual tasks in accordance with the content of a specific type of practice. At the same time, the bases of practice according to the program can be: production enterprises; commercial and intermediary enterprises; organizations and enterprises of the service sector [5].

Perhaps cooperation with the enterprise should not begin with the conclusion of contracts on practice, but rather with the exchange of experience and knowledge, which will contribute to the joint conclusion of the educational program. If we talk about foreign experience, it is usually profitable for companies in the West to invite people with education as temporary employees. Many enterprises may be interested in popularizing their own approach to the vision of the industry and spreading their professional outlook among young people. New ideas of a person who has not yet worked at the company sometimes make it possible to find non-standard solutions when solving problems.

In most European countries, the production practice lasts about a month. Some entrepreneurs consider industrial practice as a kind of volunteer activity. In European organizations, education seekers mostly observe the process from the side, in some cases they are entrusted with the performance of responsible tasks.

In the USA, a student who goes through the industrial practical component of training is considered at the company as a full-fledged employee, with only a small number of duties. The company pays the student a salary, but is less concerned about his training. Nevertheless, most such programs in the US last from 6 months, which is less reminiscent of industrial practice.

Therefore, the entrepreneur's interest in the internship of education seekers, an attempt to integrate them into his organizational structure, plays a key role in the effective implementation of the industrial practice of education seekers. Evidence of the usefulness of such measures should be the successful experience of updating the curriculum and other cooperation with the educational institution,

as well as a clearly written contract on the organization of industrial practice, concluded for a period of at least 1 month.

Taking into account all of the above, the direction of the educational institution's work with leading enterprises is promising and clear. Of course, what kind of changes will be made in the educational program depends on the specific educational institution and company. Such an individual approach may seem somewhat disparate, but if you take enterprises of the same industry, then the proposals for disciplines will be similar. This was the impetus for the preparation of the project of a new form of education in Ukraine. According to the decree of the Cabinet of Ministers of Ukraine dated September 19, 2018, No. 660-r, the Concept of training specialists using a dual form of education was approved.

A dual form of education is a way of obtaining an education that involves combining the training of individuals in educational institutions with training at workplaces in enterprises, institutions and organizations to acquire a certain qualification, as a rule, on the basis of an agreement on the implementation of training.

Conclusions

At the current stage of development, Ukrainian educational institutions must rely on social and managerial educational innovations, as well as gradually introduce an activity approach in education to the curriculum. A partnership between an educational institution and enterprises can significantly save the latter's money for independent training and training of professional personnel. International experience shows that the applied nature of education is the key to successful employment of most graduates [13]. Ukrainian entrepreneurs should, first of all, consider the educational institution as an organization that will contribute to solving certain issues relevant to business. Agreements at the highest levels on the cooperation of educational institutions and enterprises will help to quickly establish several areas of cooperation, in which the industrial practice of the students of education has a decisive place. Since the reason for the limited cooperation between the educational institution and the business is the low motivation of the representatives of the enterprises, partnership relations should be developed in such a way as to first interest the entrepreneur in the possibilities of involving the student to solve specific problems. The solution to this problem is the Concept of training specialists according to the dual form of education adopted by the government. Educational institutions of Ukraine should participate in programs based on this concept, since such initiatives are no less relevant for a higher school than for vocational schools. Education in Ukraine is becoming autonomous. And this means that educational institutions must now understand how to finance their development, and how to update the material and technical base so that the applicant enters them. This is one problem. Another is the lack of motivation: technical and engineering specialties are currently in short supply.

The Federation of Employers declares that there is a significant shortage of highly qualified personnel, and offers a combination of work and training, when a young specialist is trained by an educational institution together with an enterprise. To do this, labor market research is conducted, its needs are determined with a forecast for three to four years ahead, which specialties will be in demand. Today, employers would like to include the costs of training specialists in production costs. This means that these costs must be taken into account in the cost of goods or services offered by the company.

References

- 1. Берлінський інститут техніки та економіки [Електронний ресурс] / Режим доступу : https://www.htw-berlin.de/en/research/research-service-and-transfer/cooperation-partnerships/. Назва з екрана.
- 2. Д. Б. Семенов. Українська вища освіта мертва [Електронний ресурс] / Режим доступу : https://medium.com/@dmytrosemenov/українська-вища-освіта-мертва-тримайтесь-від-неї-подалі-с57fd46d4842. Назва з екрана.
- 3. Державний стандарт базової і повної середньої освіти [Електронний ресурс] / Режим доступу : http://zakon2.rada.gov.ua/laws/show/1392-2011-%D0%BF. Постанова Кабінету Міністрів України від 23.11.2011 р. № 1392.
- 4. Сутнісні характеристики інноваційних технологій як виду сучасних освітніх ресурсів / Т. Попова, Ю. Беседіна. Українська інженерно-педагогічна академія. К.: Вісник КНУТД, 2017. Вип. 1 (107) (Сер.: Економічні науки). ISSN 2413-0117.
- 5. Університет Аалто [Електронний ресурс] / Режим доступу http://biz.aalto.fi/en/cooperation/for corporations/projects/. Назва з екрана.
- 6. Університет Йончопінг [Електронний ресурс] / Режим доступу : https://ju.se/en/study-at-ju/after-graduation.html. Назва з екрана.
- 7. GfK Ukraine [Електронний ресурс]: (Проект) / Регіональне представництво Фонду ім. Фрідріха Еберта в Україні, Центр Нова Європа. К.: GfK Ukraine, 2017. Режим доступу: https://www.gfk.com/uk-ua/rishennja/news/ukrajinske-pokolinnja-z-cinnosti-ta-orijentiri/. Дата звернення: 24.10.2018. Назва з екрана.
- Accelerating Workforce Reskilling for the Fourth Industrial Revolution. An Agenda for Leaders to Shape the Future of Education, Gender and Work. World Economic Forum. 2017. URL: http://www3.weforum.org/docs/WEF_EGW_White_Paper_Reskilling.pdf (Last accessed: 03.11.2020)
- 9. Ausbildung in Deutschland, Investition gegen Fachkraeftemangel: BIBB-report. BiBB, Mai 2020. URL: http://www.bibb.de/veroeffentlichungen (Last accessed: 06.07.2020).
- Barbeau J. E. Cooperative Education in America Its Historical Development, 1906-1971.
 Northeastern University, College of Education, Boston, Mass. 02115 URL: https://files.eric.ed.gov/fulltext/ED083913.pdf (Last accessed: 18.09.2020).
- 11. Berufsbegleitendes Studium: Alle Infos zu Fernstudium, Abendstudium und Co: website. URL: https://www.studieren-berufsbegleitend.de/berufsbegleitendes-studium/ (Last accessed: 22.12.2020).
- 12. Verordnung über die Berufsausbildung zum Automatenfachmann / zur Automatenfachfrau vom 01. Juli 2015 : veröffentlicht im Bundesgesetzblatt Teil I Nr. 26 vom 03. Juli 2015. URL: https://www.dortmund.ihk24.de/blueprint/servlet/resource/blob/3877576/89a016893e1f4596 040348fa3 86a5727/verordnung-automatenfachmann-fachfrau-data.pdf (Last accessed: 22.04.2020)

13. Zuchowski I., Kochanowicz Z., Pilcicki C., Schuler H., BRIDGING THE LABOUR SHORTAGE THROUGH VOCATIONAL ORIENTATION AT AN EARLY STAGE OF EDUCATION-THE GERMAN EXPERIENCE, Zhytomyr Ivan Franko State University Journal. Pedagogical sciences, 2 (105)

Abstract

The article reveals the essence of the concepts dual education, educational and professional environment; administrative and pedagogical aspects of dual education in the context of modernization of the educational sector are highlighted; the main principles of dual education and the factors of its implementation in the professional training of future specialists in higher education institutions of Ukraine are determined. Attention is focused on the need for state management of the process of introducing dual education into the professional training of future specialists. Based on research, it is noted that the concept of dual education is ensured by unity between representatives of government, business and educational institutions.

Keywords: education, dual education, system of dual education, cooperation between educational institutions and enterprises, practice-oriented dual education, educational policy of the state, enterprise, employer

JEL Classification: M21