



Dual Education of Developed Countries: Trends, Concept, Future

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Abstract: The study examines the features of dual education, its distinctive features, advantages and disadvantages, analyzes the main differences between the traditional model of education and duality. The emphasis is on the absence of a gap between practice and theory in dual education. The author draws attention to the peculiarities of introducing dual education in the Republic of Kazakhstan using the experience of developed countries, in particular Germany. The issue of the stages of implementation of the dual education program in the Republic of Kazakhstan is discussed in detail and the issue of changes in the country's legislative base is covered. The main problems of introduction of dual education in the domestic education and ways of their solution are highlighted in the work. Particular attention is paid to the issue of trends in the development of dual training the author makes a prediction about the future of this type of education.

INTRODUCTION

The purpose of the study is to analyze the introduction of dual education in the Republic of Kazakhstan in secondary specialized education using the experience of developed countries. The conducted research has allowed to see a full picture of the implementation of the program for introducing dual education in Kazakhstan and in the world. A detailed description of dual education in Germany gave a complete picture of the specifics of this type of training.

Characteristics of duality education: Beginning at the end of the 20th and beginning of the 21st century, the

education system is regularly reformed: teachers are looking for new and more effective ways of teaching. One of these is dual training. Dual training is a special kind of training, the distinguishing feature of which is the study of the theoretical part of training on the basis of an educational organization and practical-in the workplace. In the case of dual training, enterprises place orders for educational institutions on a specific number of specialists, employers participate in the curriculum development. Students go through practice at the enterprise without taking their studies off⁽¹⁾.

The dual system has been introduced, mainly in the field of vocational education and has been widely disseminated and recognized around the world. This is not

just a system for training professional personnel but an educational system that is based on creating conditions for students that are as close to labor as possible which can help the trainees prepare for training. The dual system makes it possible to combine theoretical and practical training in the educational process which distinguishes it from the traditional education system^[2].

The concept of dual education can be described as follows: graduates “finish their studies” on the job site. For students who come to the enterprises for industrial practice, they consolidate mentors. Mentors introduce students to the position specially for them develop and implement training and adaptation programs. In other words, future specialists receive practical skills directly in a professional environment. Prior to the introduction of this technology, graduates graduated from the university without practical and professional skills.

Technology dual training completely changes the type of education, its quality and brings the production process closer to learning. With this approach, theoretical training in an educational institution and practical training at the enterprise are combined^[3]. It is the equal participation and equal responsibility of the educational institution and enterprise for the learning process and students is the basic principle of the dual system of education. In other words, with this kind of education, the responsibility for the graduate’s professional skills will not only be borne by the educational institution but also by the enterprise where students practice.

The enterprise is interested in such a training system because it can train the necessary number of professional staff while reducing expenses (financial and temporary) for the search and selection of employees, their training and adaptation. The trainees at the enterprise get acquainted with the real conditions of production and receive the necessary skills for labor activity. They also have the opportunity to find employment at the end of the training at the enterprise where they were practicing^[4]. The main conditions for introducing a dual system of vocational training are:

- Availability of basic enterprises
- The developed program of interaction of an educational institution and the enterprise
- Creation or allocation of a special student place in the enterprise for training trainees
- Introduction of training of teachers of special disciplines at the enterprise^[5]

Let's highlight the advantages of dual training technology: The main drawback of the traditional education system is removed: the gap between theory and practice which allows to strengthen the practical orientation of the educational process. Dual training technology allows you to prepare ready-made specialists

throughout the training process. In the process of training specialists are involved 3 parties: an educational institution an enterprise and a student. There is an opportunity to influence the personality of a specialist, to form the necessary qualities and skills of the employee. With this type of training, the motivation and need for knowledge acquisition necessary for professional activities among students is increased. This is due to the fact that the higher the quality and level of knowledge, the better the trainee will perform his duties and get a better chance of finding a job. The interest of the head of the enterprise and organization in training and training of “his” workers is increased. The graduate's mobility in the professional direction is increasing, his competitiveness in the modern labor market which equates young specialists with workers with work experience. It became possible to organize an educational process in a dyad “university-enterprise”. Thanks to the work under this scheme, training and practice take into account the production requirements that are imposed on the future specialist^[6].

The most widespread dual training was in the system of secondary vocational education which is focused on the training of workers and mid-level professionals. Another distinguishing feature of this type of training is the strengthening of the role of the employer. The employer arranges workplaces for trainees, sets up virtual simulators, simulating equipment, special instructors are trained. Responsible for working with trainees. A dual formation was born in Germany whose experience was later adopted by the countries of the European Union. The German vocational education system is distinguished by a well-developed mentoring institute, practical training and active participation of the business in the training of personnel. Dual training in Germany is introduced in a strict legislative framework and is implemented with the help of trade and industry and craft chambers.

The dual model of German education implies the involvement of employer’s organizations in the vocational education system as providers of educational services. Professional training is chosen:

- Artisans
- Representatives of creative professions (designers, artists, tailors, etc.)
- Employees from the spheres of industry, banking system and trade
- Employees of the social sphere

For training on the dual system, it is necessary to conclude a contract with the enterprise. About the recruitment of students the enterprise is announced for a year. To study on a dual system, applicants must produce a certificate of basic schooling. For training in certain specialties make special demands. For example:

knowledge of a foreign language or mathematics, a profile subject, possession of computer technology, the presence of certain personal qualities. Graduates of German schools or immigrants who graduated from school and who received their first professional education outside Germany have the right to study under this program^[7].

Features of the introduction of dual education in the post-Soviet space: In Russia, an example of dual education is the system of education in the Moscow Institute of Physics and Technology, developed at its creation. According to this program, students of the third and fourth year are actively involved in research work in scientific organizations. The experiment showed high results, after which it was introduced to the Novosibirsk State University.

The developed dual training technology for bachelors of vocational training in the Russian Federation is based on the following principles: Conducting classes in the disciplines of the psychological and pedagogical cycle in the classrooms of the technical school will allow students of the university to observe the educational process in all its manifestations, to take part in it. Thanks to this opportunity, students acquire professional practical experience. The theoretical study of technical disciplines is supplemented by production practices in production. Also, students receive a working profession of their industry^[8]. Working programs of technical disciplines are divided into 3 blocks:

- Theoretical training in the university
- Industrial training at the enterprise
- A block of working professions

In dual training, the theoretical part of the training takes the form of traditional lecture forms, seminars and laboratory works. The practical part goes directly to the production where the student is in interaction with the labor process^[9]. In the practical part of the training, students study the production process under the guidance of designated mentors. Students not only apply the received theoretical knowledge in practice but also receive labor experience, pass the process of socialization, learn to compete in a professional environment. Also, students receive education in related work specialties for which future bachelors of vocational training will be trained in the future. Thus, duality education is in the main, of a practical nature^[10].

Advantages of the dual system of education:

- Practical part of training is conducted at enterprises and not in training workshops
- Costs are reimbursed to countries and unions through compensation or by training in enterprises
- Educational content is agreed between the educational institution and the enterprise

- There is a business relationship between the educational institution and the enterprise
- The obtained knowledge on the theoretical part of the training is immediately fixed by work in practice
- The company can immediately apply the acquired knowledge
- Due to the regular application of professional skills, students are constantly motivated to improve their skills
- All students undergo the same level of preparation^[11]

The listed merits show how different is dual training from the traditional education system, illustrates the benefits for students.

Disadvantages of the dual system:

- The quality of education can both grow and decline, depending on the quality of the work of the enterprise with students
- Training programs are not always consistent with the seasonal sequence, i.e. can be observed partial isolation of the theory from practice
- The educational institution may not provide the necessary materials for the practical work of the students
- It can observe a shortage of workers and training places at enterprises, caused by different factors

Work with students is not sponsored by the state, so, business leaders are forced to raise the price of manufactured goods in order to have funds for working with students. Also, small businesses of small and medium-sized businesses can not afford admission of trainee students due to insufficient material and technical equipment, lack of finance, etc.

Thus, the dual system of training has both pluses and minuses. Disadvantages refer to the activities of the company where students are practicing. Nevertheless, this approach is beneficial to all parties: the educational institution, students, enterprises. Due to mutual benefit, the dual approach has significant prospects for further development. For example, in Germany, the number of students enrolled in this program increases every year. The CIS countries did not stay aside and began to actively introduce dual education into the domestic education system.

For example, Russia is working to introduce dual education into training: institutions and professional institutions are being reorganized for a new type of training, contracts are concluded with different companies. In the Russian Federation, scientists and researchers call dual education the most promising in the field of training specialists. It is noted that the most successful implementation of dual education with the participation of large businesses^[12]. In the Russian

universities curricula are drawn up in accordance with the proposals of employers. Their wishes and requirements. This is due to the fact that theory and practice in teaching become inseparably knitted. If you do not take into account the production requirements in the preparation of curricula, the theory and practice will remain separated from each other. And in the Republic of Belarus, the introduction of a dual technology of training, following the example of German colleagues, began. This is done to solve several problems:

- Lack of seniority among young professionals which hinders them in finding a job
- Trainee students receive necessary experience, are trained in practical skills
- Enterprises will cease to experience shortages of staff, since, dual training provides a regular influx of young professionals

Considering that most developed countries are gradually moving to dual education, their experience is taken over by the developing countries of Eastern Europe and Asia, Kazakhstan also drew attention to this type of training. Interest in the new type of training is determined by the desire of the Republic of Kazakhstan to become one of the thirty most developed countries in the world. To this end, according to the President, Kazakhstan should become a highly developed nation

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Therefore, it is necessary to change the existing system of education. To this end, domestic educators drew attention to dual training which is widespread in Germany, Singapore, Denmark, Switzerland, France, China and other developed countries. Also, the transition to a new training system is caused by an acute shortage of vocational and skilled workforce. In this regard, it is necessary to improve the system of training technical personnel with their subsequent employment.

In the Republic of Kazakhstan, since, 2012, active introduction of dual education into secondary specialized education has begun. The relevant amendments were made to the legislative acts. For example, not only amendments were made to the Labor Code but also new concepts which were not previously available. The Law "On Education" regulates the introduction of dual education. For example, they stipulate that the ratio of theoretical and production training should be in the ratio 40/60, i.e., the emphasis is on practice, not on theory, as was the case with traditional training. The Ministry of Education and Science of the Republic of Kazakhstan approved the Rules for the organization of dual training in the organizations of Technical and Vocational Education (TVE).

Also, in accordance with the law, the time for practical training is counted among students in the length of service. According to data for 2016 dual training was introduced in 348 colleges of the Republic of Kazakhstan which carry out training in technical, technological and agricultural specialties. In the implementation of participate 1718 enterprises with a coverage of 22 thousand students. The National Chamber of Entrepreneurs legislatively enshrined the obligations of organizations on the issues of internship at work places and vocational training at enterprises. According to the innovations in legislation, the professional practice of trainees is an integral part of professional training programs for specialists^[13].

The introduction of dual education in Kazakhstan is carried out with the support of German educators and sociologists, culturologists. For example, the German Society for International Cooperation (GIZ) is working on the introduction of dual education in four Kazakhstani colleges as part of the Merkel-Nazarbayev initiative. For this project in 2014, four areas were selected (EKO, Karaganda, Akmola and Kostanay). In each area, one college was chosen for the transition to a new type of training.

Another example: in May 2015, a joint project with the Chamber of Commerce of Trier (Germany) was launched at the "Atameken" enterprise. The aim of the project is to strengthen the role of enterprises and regional chambers of entrepreneurs in organizing dual training. Six regions were involved in the project: Astana, Almaty, Kyzylorda, Zhambyl, South Kazakhstan, Almaty regions.

But not only entrepreneurs need to be motivated to participate in the project for the implementation of dual education. Many students are not aware of this possibility. For the informatization of students it is necessary to conduct vocational guidance work with students of the 9th and 11th grades. Career guidance plays an important role in attracting students to the program with dual training. This experience is adopted by domestic specialists. For this purpose vocational guidance activities are conducted^[14].

According to the plan of the Government until 2019, the elements of dual training will be introduced in 80.1% of colleges. The system of "double" training in Kazakhstan will ensure the successful entry of young people into the labor market and the qualitative growth of their professional competences^[15].

The educational process in accordance with the concept of dual education is organized in a combination of the educational institution and the periods of production practice: the students go to work for a fixed enterprise. At the moment, dual education is being introduced in the colleges of the country. At the moment, most of the colleges and secondary special educational

institutions in the country are being transferred to dual training. In 2014-2015 in 13 colleges of Kostanay oblast a dual system of education was introduced. For example, the Kostanai Polytechnic College has developed new training programs in four specialties. New educational modules are being gradually introduced into the educational process.

Implementation of the introduction of dual training is carried out in stages. In Astana, tripartite agreements on social partnership were signed within the framework of introducing a dual training system in the companies of Samruk-Kazyna JSC. Nursultan Nazarbayev instructed the competent authorities to determine the list of basic enterprises and develop a dual model of training specialists. To implement the instructions of the Head of State, the following measures were taken:

- Dual education systems introduced
- 16 corporate training centers have been modernized

Corporate standards for long-term labor force planning have been created, including a full list of professions and specialties, the formation of unified professional standards and models of sectoral qualification frameworks^[16]. The next step was the conclusion of 44 contracts for dual training with entrepreneurs in Almaty. For example, LLP “Almaty-Energo Servis”. Employees of the plant not only provide jobs and incur costs associated with the practice but also participate in the development of curricula and theoretical material. With each entering into college LLP “Almaty-Energo Servis” signs a contract for the entire period of education with a guarantee of subsequent employment.

Another example is the activity of JSC “Kazakhtelecom” which is the leader among companies on intracorporate training. So, in 2013, Kazakhtelecom JSC upgraded the qualifications of 13 509 employees which is 46.1% of the total number^[37]. We described the achievements of the Republic of Kazakhstan in the field of introducing dual education. But it is necessary to dwell on existing problems. Since, dual training is new for the national education system, the presence of legislative, bureaucratic and technical difficulties is quite natural. The human factor is also an important problem: the society does not accept a new type of education, criticism, lack of personnel, lack of human resources, etc.^[18]. Let's analyze the main problems of introduction of dual education in our country:

- Lack of legislative base, instructions and standards
- Not developed educational programs and theoretical material
- Not all workplaces at enterprises are properly equipped

Investments: Domestic entrepreneurs are reluctant to bear the costs associated with training. Some entrepreneurs are afraid to make long-term forecasts the other has no financial means. To solve the above problems, it is necessary to solve the following tasks:

- To create legislative, regulatory and legal support for dual training
- Develop a national dual training model
- Motivate entrepreneurs to participate in the dual education program
- Implementation of state financial assistance to entrepreneurs. Participating in the dual education program
- Establish an institution of mentoring
- Develop and implement an effective system of vocational guidance
- To create the infrastructure of the dual training system

The solution of the described problems will help to create a new model of vocational training that will overcome the backlog in the structure, volume and quality of labor resources from the real requirements of specific enterprises. Lavrentiev A., president of the Association of Kazakhstan Automobile Business, thinking about the need to introduce dual education, cites the following example: Kostanai University produces about 2000 people per year. But, when coming to work, practically each of them has no practical skills. To solve this problem, he proposes to bring students directly to production where they will receive the necessary skills and knowledge.

Most of Kazakhstan's teachers consider dual education to be the most promising, profitable. This is due to the fact that students throughout the learning process gain experience, regularly improve their professional skills. Also, the conclusion of an agreement between the company and the student will help the latter get a guaranteed job placement which will reduce the unemployment rate in the country. At present, there are 24 experimental sites in the Republic of Kazakhstan where students receive education combining theory and practice. The experiment is conducted in all regions of the country. Based on its results, conclusions will be drawn about the feasibility of the universal introduction of dual education.

CONCLUSION

At the moment, it is the dual education in the sphere of obtaining working specialties that is recognized as the most effective form of education. The study completely confirms this hypothesis: teaching without interruption of practice from theory promotes the acquisition of professional skills much more quickly. In the future, an even greater number of domestic educational institutions

will be transferred to dual education, a 100% coverage of vocational training institutions with dual education is planned. This training system is becoming more attractive to more countries. For example, post-Soviet countries following Russia and Kazakhstan are beginning to develop a project for introducing dual training into the national education system.

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