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The State of Teacher Training in the Conditions of Dual Training



Abstract: - The purpose of this article is to understand and justify the conditions for the use of elements of the dual training system in the implementation of professional educational programs to improve the efficiency and quality of training of qualified pedagogical personnel in secondary education institutions.

The article discusses the advantages and disadvantages of dual education as a technology for preparing bachelor's degree programs in modern conditions of pedagogical university. Nowadays the topic of "dual training" is a very urgent problem on the pedagogical platform. Because vocational education has never been conceived without connection with the manufacturing sector. The authors describe how dual education is carried out abroad, as well as how the dual education model is being implemented in Kazakhstan. As an example to describe the introduction of elements of dual training, the system of dual training of some pedagogical universities of the Republic of Kazakhstan is presented. The article shows that this technology makes it possible to solve the tasks assigned to the pedagogical university for the training of pedagogical personnel for the system of secondary vocational education. Dual training reduces the gap between theory and practice, promotes the professional development of teaching staff. In addition, it sets new tasks for the higher education system: the development of dual training programs, the regulation of tripartite relations "university – student – employer".

Keywords: training of teachers, dual training, professional pedagogical education, school, higher educational institution

I. INTRODUCTION

At present, the issue of training qualified personnel is in the attention of teachers, employers and ministries' employees.

The State Program for the Development of Education and Science in the Republic of Kazakhstan for 2020-2025, approved by Decree of the Government of the Republic of Kazakhstan dated December 2019 No. 988, emphasizes the importance of the dual education system in the development of special training and professional education. In this regard, the President of Kazakhstan K. Tokayev proposed to ensure continuous professional development of teaching staff, introduce dual education into the system of technical and vocational education, advanced training courses, internships at enterprises, master classes, trainings, organization of course training, and also development of methodologies and tools.

One way to increase the efficiency of professional training of personnel is dual training. The system of dual professional training, recognized at the world level as a form of personnel training, is based on the maximum involvement of real production conditions for students of different levels of professional training to master a profession. The form of dual training is a type of organization of the educational process of professional education that is focused on experience. (Lebedeva & Solopova, 2020: 191-199). The main goal of dual education is to prepare qualified and competent graduates who have mastered the main skills to work in educational institutions. The dual system allows combining theoretical and practical training in the educational process, and the study of theory at the educational institution is complemented by practical training at the industrial enterprise and the future workplace.

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This system arose as a product of social partnership, which is a mechanism of close interaction between the state, employers and various public associations for the training of highly qualified personnel in accordance with the needs of the labor market.

The dual form of education is considered not only as a pedagogical alternative, but also as an educational phenomenon successfully adapted to the conditions of the market economy, which directly and indirectly influenced the development of professional pedagogy in various countries, including Kazakhstan.

Our research subject is the features of dual education in the training of pedagogical personnel.

The purpose of our research is the training of teaching staff in conditions of dual education.

II. MATERIALS AND METHODS

The needs of the labor market and society in training of qualified and professional personnel require improving the mechanisms of interaction between the labor market and educational services.

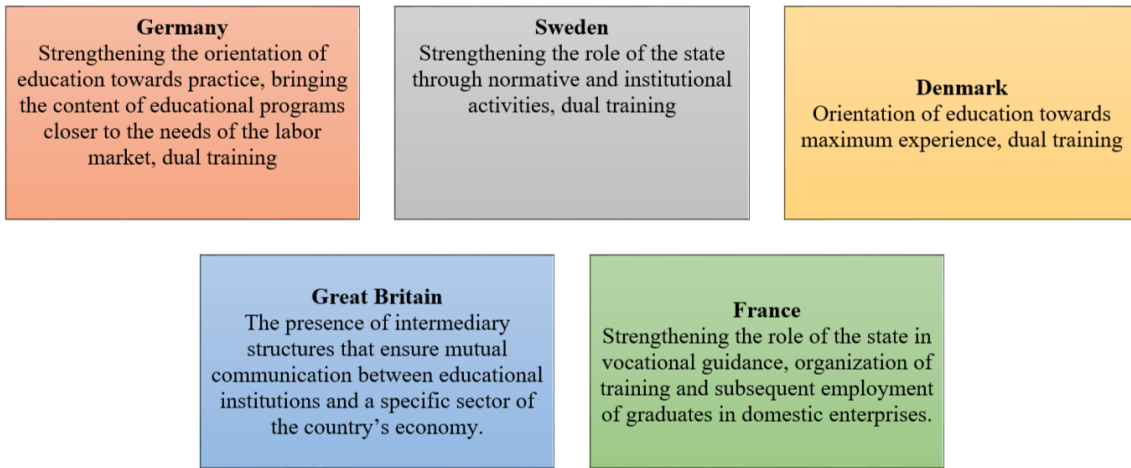
The training of teaching staff that meets the requirements of a modern school is an urgent problem in professional pedagogical education.

The main research methods were analysis and generalization, which led to the conclusion that dual training in the system of pedagogical training requires, on the one hand, educational and methodological support for the process of preparing teachers and mentors for dual training, as well as monitoring the professionalization of senior students at pedagogical universities who work at schools. The practical material for the study was a questionnaire and interviews conducted with students while working at school and at the end of the academic year.

III. RESULTS AND DISCUSSION

Recently, many developed countries are actively introducing the dual education model in higher education institutions.

The generally recognized leader in the organization of dual education is Germany, where the vocational education system is distinguished by a developed mentoring institution, practice-oriented training and the active participation of business in personnel training. The experience of this country is a model for the entire European Union. In Germany, dual education is regulated by a strict legislative framework and is implemented through chambers of commerce and industry. In Germany, dual education is formed as a result of cooperation between higher education institutions and employers. The training program is formed by order and with the participation of employers who have the opportunity to distribute the volume of educational material among subjects within one specialty. The student spends about 50% of his time in classes and 50% at work. Company employees play the role of teachers (Chirvinskaya, 2020: 1). The success of the German dual education system lies in its integrity and clear separation of functions of organizations, structures and the state, business and professional education. According to the German scientist G. Stegmann, the success of dual education in Germany reflects a decrease in unemployment among young people (Stratmann, 1982: 173-202). The duration of German dual education programs is two to three and a half years. Of course, Germany is not the only European country that widely uses vocational education; dual education is implemented in Austria, Switzerland, Great Britain, Denmark and many other countries (Zech, 2007: 22; Hanushek, 2012: 29- 34). Now let's consider a description of the models of interaction between the educational services market and the labor market in different European countries (Allen, 2009: 375-389) (Fig. 1).



Thus, analyzing the experience of advanced countries, it can be noted that the integration of the educational process and practice is the basis for high-quality training of qualified specialists in various fields.

In 2014, dual education was introduced into the system of secondary professional education in Russia. In the same year, it was implemented as a pilot project in the Kaluga, Ulyanovsk, Yaroslavl, Perm and Krasnoyarsk Krai. Large enterprises are located in these regions of Russia (instrument making and mechanical engineering, aviation, automobile and engine industries, pharmaceuticals, etc.).

In 2006-2014, dual education in professional education became widespread in China. China was experiencing a new type of industrialization that required large numbers of highly skilled workers. In November 2005, the State Council of the People's Republic of China announced the "Decree on the Comprehensive Development of Professional Education," which indicated the need to introduce an innovative mechanism for interaction between professional education organizations and employers in order to change the traditional model of professional education training. According to this document, within a period of 2 months to 2 years, a teacher of special subjects and a master of industrial training in secondary professional education institutions must go to enterprises for internship [Zhiyan, 2016: 74-79].

In Kazakhstan, the process of dual education started in 2012. It was proposed that students of higher educational institutions undergo compulsory internship at enterprises, starting from the 2nd year. According to the Road Map, in those years dual education was introduced in 15 areas, 99 specialties and 152 qualifications (Zech, 2007: 206-207).

The need to implement the state policy of the country's transition to an innovative path of development implies significant changes in the system of higher education. To date, potential employers and educational institutions have come to a consensus that the modern labor market needs highly qualified specialists of a new formation, ready for any challenges that arise in front of them in an increasingly competitive environment (A.A Seitalieva, 2024).

The high level of interest of enterprises acting as potential employers, the content of students' education, as well as its quality determine the importance of the dual education system in higher education. The effectiveness of such a system for training future specialists is possible if authorities, employers, the general education system and private educational organizations work together in this direction. Analyzing the literature on dual education, one can schematically see its advantages and disadvantages (Fig. 1, 2) (Rastegaeva, Filimonyuk, 2018: 97-99).

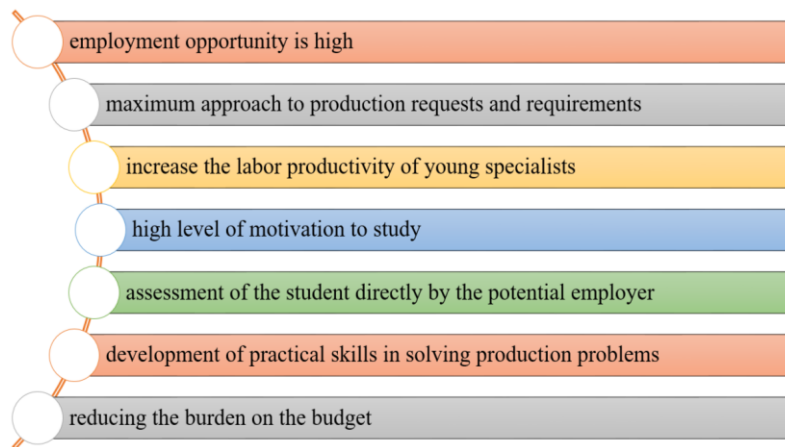


Figure 1 - Advantages of dual education

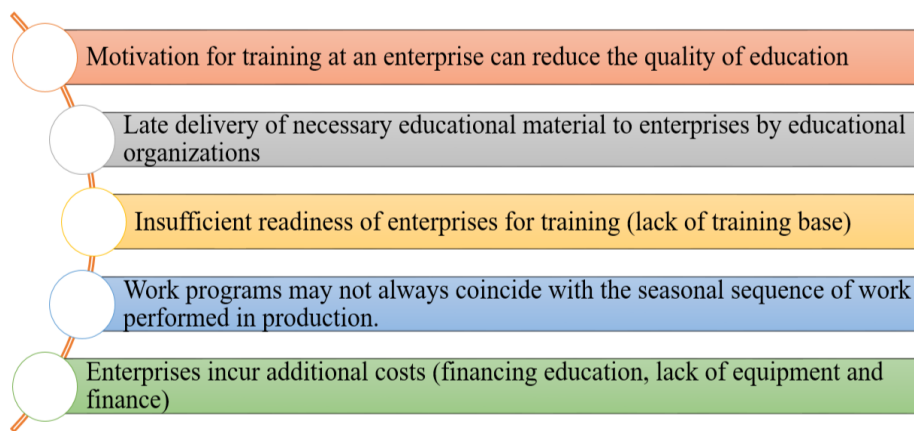


Figure 2 - Disadvantages of dual education

Now let us dwell on the system of dual education in higher educational institutions of the Republic of Kazakhstan that prepare pedagogical specialties.

The dual type of education is very important for small rural schools, where there is a shortage of physics, mathematics, chemistry and biology teachers.

In recent years, work has been actively carried out in Kazakhstan to introduce a dual model of education at the undergraduate level in higher educational institutions. For example, at the Pavlodar Pedagogical University named after A. Margulan, the introduction of elements of dual education is aimed at implementing a form of personnel training for the system of preschool, secondary and technical and vocational education. For example, in the educational program “Informatics” in the form of dual education, 10 students are studying on the basis of higher professional education and 6 students on the basis of technical and professional education. Students are accepted on the basis of a dual education agreement. The agreement is concluded between a higher education institution, an educational organization and a student working in this organization. More than 200 students are studying dually in the direction of “Pedagogy and methods of primary education”.

The training of specialists is carried out according to the educational program for future teachers of Russian language and literature at Abai Kazakh National Pedagogical University, based on the introduction of dual education (Sabirova, 2022, 56-63).

The use of elements of the dual education system was implemented between the Department of Computer Science of the Gumilyov Eurasian National University and the school-lyceum №54 of the city of Astana (Seitalieva, Shyndaliev, 2023: 36-47).

At the East Kazakhstan State University named after S. Amanzholova, a dual education system has been introduced at the Department of Pedagogical Education and Management in the specialty “Pedagogy and Methods of Primary Education” (Radchenko, 2019: 17-19).

If we say that the unity of theory and practice is realized by dual education, then one of the forms that realizes this unity is pedagogical practice.

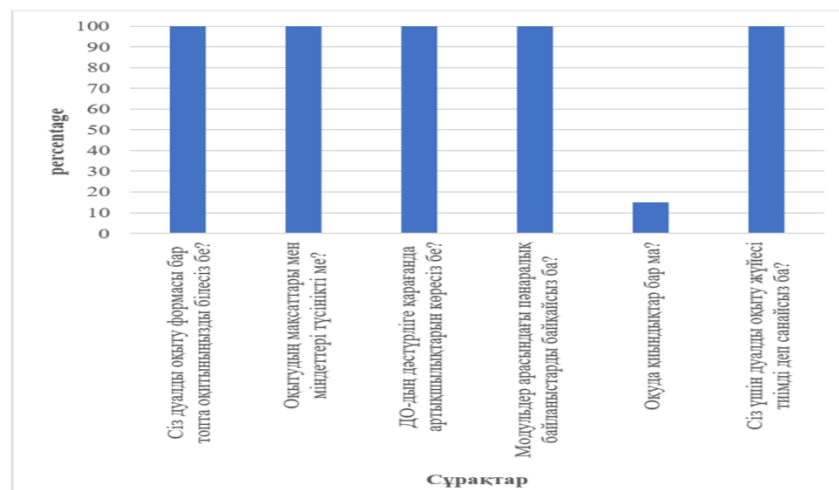
Today, Kazakhstan has made some progress in implementing its plans. An organization has been created in the country that conducts and coordinates work in this direction; standard curricula and educational programs are being developed for specialties, the novelty of which is that more than 40-50 percent of the training time is devoted to practical exercises.

A wealth of positive experience has been accumulated in organizing student internships in departments of higher educational institutions, which is due to the practice-oriented way of organizing undergraduate training: in the first year, students come to school for internship, get acquainted with the features of the educational process, observe, analyze, and conduct extracurricular activities under the guidance of experienced teachers, organize various activities, etc.

The main base for students' practical training is the school. School teachers are directly involved in ensuring the improvement of the content of education and the organization of the educational process, as well as in monitoring the quality of education of university students, i.e. a legal, educational and methodological documentation on dual education and a system are being developed together with universities: contracts will be created, institutions will be determined, educational and methodological complexes and class schedules will be created, plans and schedules will be coordinated, etc.

Great steps are being taken to introduce dual education into the country’s pedagogical higher education system, that is, it contributes to the correct formation of future specialists and opens the way to the timely elimination and prevention of some shortcomings and provides feedback.

A survey was conducted among students to determine the impact of introducing elements of dual learning (Fig. 1).



A survey was conducted to determine the effectiveness of dual education in learning process of students. 68 students took part in the survey and were asked the following questions: “Do you know that you are studying in a group with a dual form of education?”, “Are the goals and objectives of training clear?”, “Do you see the advantages of dual education compared to traditional?”, “Do you notice interdisciplinary connections between modules?”, “Do you experience learning difficulties?”, “Do you think that the dual education system is effective for you?” All students gave positive answers to the questions. During the survey, students noted the advantage of dual education, that is, the opportunity to immediately apply in practice (at the educational institution) theoretical knowledge (pedagogy, methodology, psychology, computer science) acquired at the university.

Based on the results of the survey, we can conclude that the use of elements of the DE system in pedagogical universities based on strengthening the practical orientation of specialist training is an effective technology for training bachelors of professional education of this system.

Studying the results of using the dual education system at a pedagogical university, based on strengthening the practical orientation of specialist training, allows us to confirm that this system is an effective technology for training bachelors in any specialty.

To provide enterprises with qualified and professional personnel, it is necessary to establish a clear link between the manufacturing sector and education.

IV.

CONCLUSION

The dual system of professional education has gained worldwide popularity; it is the most common and recognized form of personnel training, combining theoretical training in an educational institution and industrial training at a manufacturing enterprise. The development of a dual education system in the field of vocational education should be based on the specific conditions of educational institutions. Dual education should include interaction between the department and the school and the creation of a dual education program, up to the defense of theses. It has great opportunities for the professional development of teaching staff. Dual education should occupy a leading place in the system of professional training of teaching staff, and the trilateral relationship “university – student – employer” should be regulated.

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