

## DEVELOPMENT OF PROFESSIONAL COMPETENCE OF MASTERS OF INDUSTRIAL EDUCATION

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**DOI: 10.5958/2249-7137.2022.00233.6**

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### ABSTRACT

*The issues of the imbalance existing in the market between the demand of production for the level of qualification of workers, including for the operation of high-tech equipment, and the actual degree of training of specialists for industry are considered. The leading role in narrowing the existing gap is given to the master of industrial training.*

**KEYWORDS:** *Master Of Industrial Training, Competence Model, High-Tech Production, Professional Training.*

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### INTRODUCTION

The training of qualified workers for modern high-tech production is one of the urgent problems for industry and education. Such a problem arose due to the transition to a market economy, changes in production and, as a result, a decrease in the prestige of many working professions, on the one hand, and rapid technical re-equipment - updating the capacities of enterprises in recent years - on the other.

As a result, a significant imbalance has developed in the modern labor market between the demand for production and the existing level of qualification of workers, including for the operation of high-tech equipment. The speed and quality of professional training of the necessary specialists do not correspond to the pace of technical re-equipment of production facilities.

The idea of building a bridge between the spheres of work and vocational education - formulating, on the basis of the requirements of the economic sphere, the final learning outcomes that describe what people will learn to do after completing a vocational education or training program - underlies one of the promising concepts of modern education, called "competence-based education". an approach". Western scientists stood at its origins - the American David McClelland (1917-1998) and the Scot John Raven (born in 1936). Within the framework of the competence-based approach, the relationship between the economy and education is based on the requirements of the economic sphere, expressed in the form of "educational outcomes" or "competence required to get a job". These economic requirements need to be translated into learning outcomes, i.e. into "competence acquired through learning". At the same time, competencies are considered as a phenomenon that reflects the existing balance of interests of employers, educational institutions, the state, society, as well as the students themselves. Competence is a special result of education, the ability to apply knowledge, skills and practical experience for successful work. [1]

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"Competence is what links 'knowledge' and 'action'."

The term “competence” was introduced to replace the narrower term “skill” in order to emphasize the importance of personal qualities as opposed to purely functional skills and abilities. Competence is defined by different authors as readiness for activities: aimed at resolving problems (challenges); in varied new contexts; in a situation of uncertainty; with the involvement of internal and external resources. In the broadest sense, competence is understood as the basic quality of an individual that affects the efficiency and quality of his activities. There can be a lot of such qualities, therefore, the set of possible competencies is also practically unlimited. The educational process, built in line with the competence-based approach, has a pronounced practice-oriented character. The meaning of education is the development of students' readiness to independently solve problems in certain areas and activities based on the use of social experience, an element of which is the students' own experience. The educational process is built as a system of conditions necessary for the formation of students' experience of independent solution of professional and other problems that make up the content of education. In other words, the very approach that we previously called “learning by doing” is being implemented. [2]

However, the most striking feature of the competency-based approach is the authorship of the graduate's competency model: it no longer belongs to representatives of the scientific and educational community or methodologists (as was the case, for example, in the Soviet education system), but is the result of a broad social contract. Representatives of stakeholders (at least employers, the state and the education system, and at most student, parent and wider public) agree on exactly what the results of vocational education in a particular profession or specialty should be. The results of the agreement are recorded and approved in a specific document (for example, in an educational standard). Then, on the basis of this document, each graduate of a professional educational organization is assessed - to what extent he has mastered a given set of competencies. At the same time, representatives of various parties interested in the results of vocational education also take part in the assessment procedure.

Thus, competencies differ from the traditional results of education (knowledge, skills) in that they reflect the currently existing balance of interests of society, the state, educational institutions, employers, and consumers of services. And the main question of the competency-based approach is formulated as follows: what kind of competencies and at what stage of professional education should be formed? And since the balance of public interests is constantly changing (which is associated not only with opportunistic reasons, but also with quite objective ones, such as the development of technology and technology), the graduate's competence model must be constantly reviewed and adjusted. Ideally, annually; at least once every three to five years. [3]

As we can see, the use of a competency-based approach in vocational education strengthens the focus on learning outcomes. If in the traditional system of education, first of all, knowledge, skills and abilities “at the entrance” were recorded (a set of didactic units that need to be studied within the framework of the program, the number of hours, etc.), then in the conditions of the competency-based approach it is initially fixed what kind of knowledge, skills and skills (in the form of competencies) must be obtained by each graduate “at the exit” from the educational process. And on the basis of this, an educational program is drawn up. Competences as the

results of vocational education are combined into two large groups: • professional competencies associated with the performance of production tasks within one or more related professions; • general competencies, universal for all types of activities.

The main task of the master of industrial training is for students to work with full dedication and learn to apply knowledge in practice. The guys learn to work together, study, create, always be ready to help each other. Practice shows that learning together is not only easier and more interesting, but also much more effective. [4]

Practical training is a component of the pedagogical process, the main purpose of which is the formation of the foundations of professional skills of students in a certain field of activity, the development of professional competencies. The concept of "professional competence" is considered as a category that goes beyond professional qualifications. It includes the ability to act mobile in a certain situation, applying one's professional experience to independently solve problems that have arisen.

The form of practical training can be defined as the way, the nature of the interaction of the master of industrial training and the student with each other and with the educational material. Along with the methods and means of training, the form of organization of practical training directly affects its productivity. The development of forms of education is their gradual renewal, saturation with elements of independent cognitive and transformative learning activities. Forms of practical training provide for the development of individual abilities and creative activity of students.

The main task is to form students' interest in the chosen profession. Based on this, they set themselves the goal of obtaining as much knowledge and skills as possible and gaining practical experience.

The success of the master's activity largely depends on the ability to organize purposeful, differentiated monitoring of the work of the entire group and each student. The activation of the group is achieved by introducing elements of competition, game moments, a phased assessment of the implementation of individual operations, the results of work in general, to the knowledge of the profession and the desire to achieve high results. At the first stages, students need to form the simplest skills of independent work. At the same time, the wizard clearly shows the methods of performing operations and accompanies with a clear explanation. Independent work performed by students after showing the methods of work by the master has the character of imitation. It does not develop independence completely, but is important for the formation of more complex skills and abilities, a higher form of independence.

Taking into account the requirements of employers, the master developed a structure for organizing classes based on innovative forms of practical training: a lesson-competition, a lesson-competition.

This is a form of training in which work is performed without the direct participation of the master, but on his instructions. Students work in a group, but all receive the same individual tasks.

In these classes, each student sets a specific task for himself: to achieve high results, complete the task faster and better.

Such competitive activities have a great educational impact on students, contributing to the formation of such qualities of the future worker as responsibility for the results of their work, collectivism, a sense of satisfaction from the work performed, and an aesthetic attitude to work. They prepare students for independent work at basic enterprises.

When students have a goal - to acquire knowledge, skills, gain practical experience and make efforts to achieve this goal, they become a real specialist.

Also, professional skill competitions are an exciting form of competition among students. They teach high professional skills, instill pride in their profession, introduce them to the secrets of mastery, shorten the student's path to high professional activity and are a good test of the knowledge, skills and abilities of students.

One of the real ways to reduce the gap between the requirements for the professional level of workers requested by the production and their actual degree is, along with a general increase in the effectiveness of the measures of the vocational education system, an increase in the level of competencies of participants in the vocational training process - masters of industrial training.

In recent years, scientists of the country have published many works on the definition of competencies and the development of a system for training masters of industrial training. The model includes three integrative components: special, psychological and pedagogical and working profession, the practical part of which takes place both in training workshops and at a specific production enterprise. One of the main tasks of developing the system of training for industrial training masters is the need to clarify where to train, on what to train and for whom to train highly qualified workers.

The training of workers must outstrip the development of technology and technology.

The master should have two areas of competencies to ensure the quality of training of students. First of all, meet the traditional requirements for a teacher. These competencies must include the following components:

Knowledge and skills in the psychological and pedagogical field: from techniques for entrancing students with subjects to creating a comfortable environment for cooperation;

High level of communication and creativity;

Knowledge of strategic planning, selection of teaching methods;

Use of new technologies in the pedagogical process.

Basic competencies will allow you to fulfill one of the first tasks of a teacher - to captivate, interest students, instill in them a love for the profession.

The second, and most important in the modern economy, are competencies in the field of mastery of the taught subject. The key skills for the master of industrial training here should be the constant desire and motivation for self-development. In conditions when, during the implementation of many educational programs, the master often remains autonomous from production (not included in the work processes existing at modern enterprises), his own initiative is one of the tools for achieving professionalism in his chosen field. It allows you to receive the necessary information, keep abreast of global industrial development, current trends in the socio-economic state of your own region, the development of new equipment, technologies, etc.

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At the same time, another general recommendation to the personnel training system, of course, should be a proposal to further strengthen and comprehensively develop the systemic interaction of universities with enterprises in the region.

In modern conditions, this cooperation should include the following steps:

search for a common language (system) of interaction between the business community, universities in general and teachers of educational programs in particular. At the same time, the criteria and proposals jointly developed by the parties should be as flexible as possible, having the ability to vary taking into account global and local changes in the economic, educational and other spheres;

Search and development of programs that will commercialize the interaction between universities and business, which will benefit both parties;

Development of new forms of interaction, other than lectures, open days, providing places for practice, etc.

All this can become a real basis for leveling the existing gap and getting away from lagging and catching up training of workers for high-tech production.

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