

The Problem of Development of Components of Metasubject Competence In Future Specialists in the Conditions of Practical Education

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ABSTRACT

The article plays an important role in the development of metacompetence components in a practice-oriented educational environment in improving the professional training of future professionals in higher education institutions. One of the main goals of practice-oriented education is to develop the cognitive and communicative competencies and skills of future professionals.

Keywords: *meta-subject competence, competence, formation, future professionals, practice orientation, professional training.*

I. INTRODUCTION

The development of metacompetition components in a practice-oriented educational environment plays an important role in improving the professional training of future professionals in higher education institutions. One of the main goals of practice-oriented education is to develop the knowledge and communication competencies and skills of future professionals. Of course, in the current global economic crisis, it is natural to have specific problems in the organization of practice-oriented education. Because today there are very few large modern manufacturing enterprises that operate on a regular basis. Therefore, most of the trainees are mainly trained in small enterprises. In addition, relying on old equipment and curriculum documents that do not meet modern requirements in the educational process does not lead to the expected results. However, one of the current pedagogical problems is the formation and development of not only the professional competence of future professionals, but also the meta-subject competence, its important components of personal and professional significance, cognitive and communicative competencies in a direct practice-oriented educational environment through the establishment of modern training and production complexes is calculated..

In our view, today the social partnership in the field of education of industrial enterprises is aimed at improving the skills of teachers in training in narrow areas, rare or fast-growing professions, reforming and strengthening the material and technical base of educational institutions. , encourage them, should be focused on the implementation of work that is integral to the development of cognitive and communicative competencies of graduates, important components of meta-subject competence of future professionals, the employment of graduates.

The introduction of new industrial technologies, modern automatic tools and electrical equipment in the production of not only "Automation of technological processes", but also in-depth training of other general and special disciplines, as well as additional literature, manuals on automatic tools and equipment, information and operational information sources, Internet Most importantly, it requires the systematic and effective organization of training and practice-oriented education in social partner enterprises. This, in turn, requires the continuous development of meta-subject competence, general

learning activities, their cognitive and communicative competencies, not only future professionals, but also teachers and engineers-pedagogues. Communicative competencies (communication competencies) play an important role in the development of cognitive competencies in future professionals. Indeed, cognitive and communicative competencies are inextricably linked. It is not possible to develop cognitive competencies without developing communicative competencies and vice versa without developing communicative competencies.

Russian psychologist A. V. Mudrik acknowledges that the ability to communicate is an important condition for the acquisition, development and professional socialization of cognitive competencies [1].

Communicative abilities and communicative competencies formed in real life situations are important in the communication process..

Social situations and production processes are constantly changing. As a result, the old knowledge and communicative competencies formed in future professionals may not meet modern requirements. Therefore, it is necessary to constantly develop them, or, if not, to acquire new knowledge and communicative competencies. Only one-sided or weak development of communicative and cognitive abilities does not allow the formation of active communicative competencies, on the contrary, a high level of development of communicative abilities requires the development of cognitive and communicative competencies required in the process of activity.

Practice-oriented education requires special knowledge, competencies and skills in the professional socialization of future professionals. We mean knowledge of modern society, the ability to interact with social structures, personal competence and communication competence, the ability to plan and forecast their lives after graduation, and more. Because many future professionals do not have a clear enough vision of their future and do not think seriously about it. This forces them to consider the need for special work on social development and professional socialization. Therefore, the group leader and the master of vocational education in collaboration with the master psychologist organize activities aimed at professional socialization of future professionals (special class hours, lectures, meetings with various professionals, experts, self-expression activities, active creative activity, professional skills develop methods for organizing and conducting competitions, competitions, trips to enterprises, educational institutions, which allow to improve their professional knowledge. In doing so, it is advisable to take into account the abilities and capabilities of future professionals. Undoubtedly, such activities allow them to adapt to society, develop cognitive and communicative competencies.

Communication becomes very important and even decisive in the process of socialization throughout a person's life, especially during adolescence. In most cases, his period of study in vocational education institutions coincides with adolescence. During this period, interpersonal relationships play a special role in his life, as well as the field of work-related communication, independence expands, he is directly involved in new forms of activity - production activities during practice-oriented training.

Determining the conditions for the development of communicative and cognitive competencies in future professionals is becoming increasingly important in connection with the deepening of social processes. In particular:

- the problem of emotional relationships between people has become much more acute;
- increased the amount of information required for specialists in various fields of activity;

- requirements for family function and its psychological characteristics have changed;
- Cognitive competence and qualification requirements have changed and are changing in connection with the development of production.

Although the problem of developing communicative skills and cognitive competencies is currently being actively studied by pedagogical scientists, the issue of developing cognitive and communicative competencies of future professionals in the process of teaching and practice-oriented education has not yet been studied in depth.

Practice-oriented education is an integral part of the education of future professionals and is traditionally seen as an integral part of the educational process provided for in curricula and programs. Today, the organization of practice-oriented education in higher education institutions often lags behind modern requirements. It is important to note that issues of personal social significance have not been adequately explored. In today's rapidly changing real socio-economic environment, it is necessary to look for new ways to transform practice-oriented education into a pedagogically managed process.

At the Namangan Engineering and Construction Institute, where we operate, we conducted pedagogical experiments to study the possibilities of developing knowledge and communication competencies in future specialists studying in the specialty 5320300-Metal and metalworking, Faculty of Mechanical Engineering. At the same time, we have identified as an important pedagogical task the development of knowledge and communication competencies of future specialists studying in the field of mechanical engineering (engineers-technicians, masters of repair of measuring instruments, masters of repair of welding appliances).

The following requirements are set for the level of preparation of graduates for internships (professional practice) organized in this specialty:

- strengthening and deepening of theoretical knowledge acquired in the process of practice-oriented education (professional practice), gaining competencies in all types of professional activities;
- mastery and development of competencies in engineering, mechanical engineering, production automation and repair, adjustment, operation and maintenance of welding equipment;
- develop team and team work competencies and learn to establish an acceptable relationship with the participants in the production process on this basis.

In the process of practice-oriented education, it is planned to achieve the following goals:

- cognitive and educational goals (practical application of theoretical knowledge and development of cognitive competencies);
- socially oriented goals (establishing and developing relationships with production staff, communicating on the job, working in a team or team, gaining information sharing experience).

Based on the above objectives, we have developed components of meta-subject competence (regulatory, information management, cognitive and communicative competencies in future professionals through the implementation of professional activities in manufacturing enterprises, active influence on group and team activities, information exchange, communication and collaboration).) developed a method of organizing the practice of development.

The practice-oriented training in the control groups was organized in the traditional way and was mainly focused on "applying and consolidating the theoretical knowledge acquired by future specialists". In the organization of internships in the experimental groups, the specifics of future professionals were taken into account, that is, they paid special attention to person-centered educational

technology in the development of regulatory, information, cognitive and communicative competencies. Prospective professionals were given individual creative assignments to perform independently. These assignments are mainly related to work or professional activities, focusing on the socialization of future professionals by expanding the scope of professional knowledge and communication, mastering professional concepts and expressions, focusing on professional activities and performing various district professional roles.

Practice-oriented education was organized based on the professional and personal orientation, interests, program requirements, material and technical base of the educational institution, training and production rooms, laboratory rooms and the capabilities of enterprises. The strong relationship of the head of the educational institution and the practice with the enterprises allowed to involve future specialists in real production processes.

Practical tests are important in assessing the practice-oriented learning outcomes of future professionals in higher education institutions. Their use allows an objective assessment of the level of regulatory, information, cognitive and communicative competencies of future professionals, methods of work.

Such tests are usually carried out using existing equipment, special simulators, tools, equipment. Practical tests are more complex and are structured according to the content and nature of the training task. Technological and instructional maps reflecting the requirements for samples, drawings, quality of work, labor efficiency, production and time standards, the mechanism for assessing the level of regulatory, information, cognitive and communicative competencies (in points) of future professionals can be a benchmark (criterion) for. At the same time, it is very important to correctly determine the "value" of each professional practice (labor practice), that is, to show how many points a future specialist will receive for doing it correctly..

A 100-point grading system is available. It is then possible to convert this system of assessment to a 10-point grading system or to enter a coefficient (C) of mastering the learning material (cognitive competencies). The coefficient of acquisition of cognitive competencies is determined by dividing the number of points (M) accumulated by the future specialist by the total number of points (N): $C = M | N$. On the 100-point scale of the assessment, the conditional unit for the critical magnitude of the coefficient is 70. In other words, the satisfactory level of acquisition of professional knowledge and competencies is 0.7. Prospective specialists who have achieved such a ratio will be able to successfully perform the tasks inherent in their future careers, which means that they have developed cognitive competencies. If the future specialist clearly performs all the actions within the framework of training and production tasks, he will be awarded ten points. The level of difficulty of the task depends on the requirements for the competence of future professionals. These requirements are set out in state education standards, curricula and programs. The scale of evaluation of the future specialist's practice-oriented learning outcomes is given in Table 1.

1-жадвал

A scale for evaluating the future specialist's practice-oriented learning outcomes

Number of marks (Out of 100 chances)	<60 дан 64 гача	60-64 69	65-69 73	70-74 77	75-79 81	80-84 85	85-89 89	90-94 93	95-99 97	100 100
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Success coefficients	<0,6 60- 64	0,65- 0,60	0,70- 0,73	0,74- 0,77	0,78- 0,81	0,82- 0,85	0,86- 0,89	0,90- 0,93	0,94- 0,97	0,98- 1,00
Rating (in points)	0	2	3	4	5	6	7	8	9	0

Almost all of the practice leaders noted that the future professionals strive for mutual cooperation, show initiative in carrying out common work. According to them, learners have developed regulatory, information, cognitive, communicative and speech competencies.

The level of development of knowledge and communicative competencies at the Namangan Institute of Engineering and technology is one of the indicators of professionalism and socialization of future professionals. Given the importance of cognitive and communicative competencies in the development of professional skills and socialization of future professionals, the "Map of Interests" currently used in educational institutions and diagnostic centers to determine the level of their professional and personal development. "Study through psychological diagnosis", "Determination of professional ability", S.O. Krolovskaya and O.V. Kuzina's method "Professional orientation (training) of future professionals", AV Batarshv's test "Determination of organizational and communicative qualities" available.

We practically observed and tested the practice-oriented training process of future specialists of the 2nd and 3rd stages studying in the field of metallurgy and metalworking in the field of mechanical engineering. The research was conducted in control and experimental groups. The test was attended by 100 prospective professionals. 10 percent of them are girls. Preliminary test results showed that the level of development of cognitive and communicative competencies in the future specialists of the control and experimental groups was almost the same (the difference was not more than 1.3 and 1.5 percent).

Several evaluation criteria were developed for the final test results: L - low level of development of cognitive and communicative competencies in future professionals; BA - below average; A - average; AA - above average; H (high (as a percentage of the total number of future specialists in the control and experimental groups).

The results of the study showed a significant increase in the number of prospective professionals who developed cognitive and communicative competencies in the experimental process (40% of prospective professionals with increased cognitive and communicative competencies in the experimental group, 30 in the control group), ie an increase of 10%. In other words, the number of future professionals with advanced cognitive and communicative competencies increased by 10 [3,4].

Development of cognitive and communicative competencies of future professionals through a system of targeted pedagogical measures for the organization of practice-oriented education is one of the promising areas of increasing the intellectual capacity of future professionals and their socialization. The practical significance of the work done in this regard is that the socialization of future professionals is carried out in psychological and pedagogical compatibility. This is one of the factors in developing their cognitive and communicative competencies.

Engineer-technician, engineer-mechanic or plumber-repairman, hearing ability will be highly developed. They distinguish sounds better than others because they practice regularly in professional activities. For example, by analyzing the operation of the machine and the sound coming out of it, it

can determine what is wrong with it.

Kinesitic analysis plays a major role in the acquisition of motion competencies in the engineering profession. Kinesthetic analysis occurs as a result of the interaction of skin-motion and vision analyzers. As a result, the interrelationship of cognitive functions increases. Activities that form the basis of competencies and competencies are inextricably linked with cognitive functions and processes..

Practice-oriented education is an integral part of vocational education. Acquisition of professional knowledge implies a direction of educational activity, the whole content of which, directly or indirectly, is aimed at preparing students for employment in the chosen specialty. Nowadays, great demands are placed on the professional training and personal qualities of specialists. The implementation of professional activities depends on the professional training of specialists [2].

The main purpose of vocational education is to ensure the professional development of the individual. It is necessary to create a complex pedagogical environment for the development of special professional skills, knowledge and communication competencies of future professionals.

The peculiarity of modern scientific and technological development of the world community is determined by the complexity of production processes, the emergence of new scientific and technical means, the expansion of personal relationships, the development of computer networks, the increase in information. All this affects man, and most importantly, the productive forces of society.

Ability is an individual-psychological feature of a person and is a condition for effective performance of activities (study, work). A person with developed abilities and cognitive competencies successfully performs labor practices and methods and achieves high results. At the same time, it is important to understand the importance of professional knowledge, competencies and skills and their application in practice. It is obvious that the humanization and individualization of interactions in the group and community is of great importance in order to involve future professionals in professional and social activities.

This requires new approaches to the organization of education, especially practice-oriented education.

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