



UDC 378

FORMATION OF PROFESSIONAL COMPETENCE FOR THE BACHELORS IN TRANSPORTATION TECHNOLOGIES

Kopytkova T.H., PhD in Pedagogics,
Associate Professor at the Department of Language Training
Kharkiv National Automobile and Highway University

Kopytkov D.M., PhD in Pedagogics,
Associate Professor at the Department of Transport Technologies
Kharkiv National Automobile and Highway University

Проаналізовано різні підходи до визначення професійної компетентності. Визначено поняття «професійна компетентність», її складові та критерії сформованості професійної компетентності бакалавра транспортних технологій, за допомогою яких можна оцінити ступінь розвитку професійної компетентності. Встановлено, що підвищенню професійної компетенції бакалаврів транспортних технологій можуть сприяти методи активного навчання та розширене вивчення дисциплін психолого-педагогічної підготовки.

Ключові слова: компетентісний підхід, професійна компетентність, складові компетентності, критерій сформованості.

Проанализированы различные подходы к определению профессиональной компетентности. Определены понятие «профессиональная компетентность», её составляющие и критерии сформированности профессиональной компетентности бакалавра транспортных технологий. Установлено, что повышению профессиональной компетентности бакалавров транспортных технологий могут способствовать методы активного обучения и расширенное изучение дисциплин психолого-педагогической подготовки.

Ключевые слова: компетентностный подход, профессиональная компетентность, составляющие компетентности, критерий сформированности.

Kopytkova T.H., Kopytkov D.M. FORMATION OF PROFESSIONAL COMPETENCE FOR THE BACHELORS IN TRANSPORTATION TECHNOLOGIES

The issue of developing and enhancing the professional competence of a person who is able to think freely and actively, simulate the production process, independently generate and implement new ideas and technologies in the production is relevant in the current social and economic conditions.

Firstly, a professionally competent specialist has a positive effect on the knowledge and skills of subordinates in the process of working together; secondly, he are able to achieve the best results in their professional activities; thirdly, as a result of its activities it contributes to the perception of its own professional capabilities.

Road transport is one of the developed branches of social production that affects all aspects of human activity and society as a whole, determines the efficiency of development of production forces, and meets the economic and social needs of enterprises and the public.

However, despite the importance of the proper functioning of this sector of the economy, there are still unresolved contradictions in the professional training of bachelor of transport technologies between: existing educational technologies and modern labor market requirements; high requirements for the professional competence of the future bachelors of transport technologies and the lack of methods for diagnosing it in the current educational process; the lack of scientifically grounded pedagogical conditions for the formation of professional competence of future bachelors of transport technologies and the need for the conditions to be realized during the course of educational activities.

In this regard, the problem of the formation of professional competence of these specialists, who are able to ensure the sustainable functioning of road transport as an important sector of the country's economy, is of particular importance.

Key words: competence approach, professional competence, competence components, formation criteria.

Problem statement. For a long time, the higher technical school was in the positions of formation of solid systematized knowledge among the students. However, at the moment, this approach is insufficient, since the production needs the graduates from higher educational institutions who are able to solve problematic issues related to their

professional activities. In connection with this, higher education institutions face the task of forming a professionally competent specialist. The problem of developing and enhancing the professional competence of a person who is able to think freely and actively, simulate the production process, independently generate and implement new ideas and technologies in



the production is relevant in the current social and economic conditions. Firstly, a professionally competent specialist has a positive effect on the knowledge and skills of subordinates in the process of working together; secondly, he is able to achieve the best results in their professional activities; thirdly, as a result of its activities it contributes to the perception of its own professional capabilities.

Road transport is one of the developed branches of social production that affects all aspects of human activity and society as a whole, determines the efficiency of development of production forces and meets the economic and social needs of enterprises and the public.

However, despite the importance of the proper functioning of this sector of the economy, there are still unresolved contradictions in the professional training of bachelors of transport technologies between: existing educational technologies and modern labor market requirements; high requirements for the professional competence of the future bachelors of transport technologies and the lack of methods for diagnosing it in the current educational process; the lack of scientifically grounded pedagogical conditions for the formation of professional competence of the future bachelors of transport technologies and the need for the conditions to be realized during the course of educational activities.

In this regard, the problem of the formation of professional competence of these specialists, who are able to ensure the sustainable functioning of road transport as an important sector of the country's economy, is of particular importance.

Analysis of recent research and publications. The essence of the competence of future specialists in individual industries as a whole has been sufficiently studied in the works of Ukrainian researchers – R. Gurevich, N. Nichkalo, I. Zyazyun, S. Sysoyeva, A. Pekhota, A. Gura, as well as foreign specialists – T. Crowl, S. Kaminsky, D. Podell, J. Perret et al.

So, in the study [1, p. 154] the competence is the knowledge of the activity, the ability to transfer the knowledge to others, the level of development of professional self-awareness, individual features and professionally significant qualities (purposefulness, interpersonal skills, responsibility, ability to self-education in the process of activity, ability of pedagogical and psychological communication, etc.). The authors [2, p. 20] mean the general ability and willingness of an individual to work based on knowledge and experience, obtained through training, and focused on independent participation of the individual in the cognitive pro-

cess during the course of work, as well as on the successful inclusion of the personality in such activity. In the study [3, p.15], competence is a systemic understanding of all the problems associated with an activity, the ability to set tasks and the ability to organize the solution of specific problems related to a certain field. In [4, p. 28] the author understands the availability of knowledge and experience necessary for effective activity in a particular subject area, and the quality of training a specialist for a certain activity and the quality of education in an institution.

The term “competence” is closely related to the term “professional competence”. In [5, p. 396] professional competence is the ability to act effectively, to solve standard and problematic situations that arise in teaching. The author of the study [6, p. 121] believes that professional competence is the theoretical, practical and psychological components of the preparedness of a future specialist manifested in his ability and readiness to carry a specific type of professional activity. In the study [7, p. 125] professional competence is a combination of professional knowledge and the ability of implementing it. In [8, p. 76] the professional competence is a set of employee individual characteristics, knowledge and skills to determine the quality of job performance and it is due to the behavior in business circumstances.

Thus, from the analysis of sources for the definition of the concepts of “competence” and “professional competence”, it should be concluded that, presently, there is no generally accepted definition of these concepts, first of all, the concept of “professional competence”. The absence of this definition can be explained by the fact that the author interprets this notion depending on the branch of science or economy for which this concept is to be determined.

Formulation of the problem. The purpose of the study is to identify measures for the formation and evaluation of professional competence of the bachelors in transportation technologies.

During the research it is necessary to solve the following tasks: to define the term “professional competence” for the above-stated bachelors; to determine the main activities for the formation of professional competence of bachelors in transportation technologies; to determine the main components of professional competence for a bachelors in transportation technologies; to identify the main qualitative criteria for the formation of professional competence.

Main material presentation. One of the important ways to improve the quality of train-



ing graduates of higher educational institutions for future professional activity is meeting the competence-based approach to the content of higher education. This recent approach has been widely developed in the papers of both foreign and Ukrainian scientists, who consider professional competence both in relation to a particular field of activity, and in general. This approach means a gradual reorientation of higher professional education, which is limited to the traditional transfer of a certain set of knowledge and skills of students, to the creation of conditions for mastering the complex of so-called key competencies (components of professional competence) that ensure the future bachelor's ability to stand in the labor market and further sustainable labor activity in a current market economy. Key competencies are the individual abilities that are necessary for successful operation in specific production situations. They are not the personal characteristics in any industries, but have to be formed in the training and directly in the working. The integration of theoretical, practical knowledge and professional experience leads to the creation and further development of key competencies (components of professional competence), which allow solving a large number of problematic issues.

In our opinion, the main conditions for the formation of professional competence of future bachelors in transportation technologies: organizational conditions (curriculum, class schedule, material and technical equipment of the educational process); educational and methodological conditions (selection of the content of classes, the integration of various courses); technological conditions (organization of active forms of education, the use of innovative technologies in education); psychological and pedagogical conditions (diagnostics of the development of students, the system of stimulation of education, the definition of criteria for competence).

In order to form the professional competence of the bachelor, it is advisable to give lectures on disciplines that directly create the student's personality as a future specialist, namely, "Professional Pedagogy", "Pedagogical Psychology", "Engineering Pedagogy", "Labor Psychology", which are absent at the moment in this specialty.

An effective measure of knowledge transfer can be business and role-playing games, in which the communicative function of cultural and business communication manifests itself. The method of giving lectures on these disciplines should be problematic, that is, the problematic issues raised by the lecturer during the lesson should be resolved with the students.

Information (technical, economic, etc.), which will be received by the student during lectures on specialty, should be a novelty. Special literature (textbooks, manuals, reference books, professional editions) should not be morally obsolete. For each professional discipline it is expedient to include a study of the state standards of Ukraine, acting in the field. In general, the student must learn the skills to obtain the necessary information and analyze it from various sources: special literature, electronic and print media.

In curricula, it is also advisable to include lecture courses on "Social Psychology", which will help to understand the social significance of the activity to which the future bachelors in transportation technologies will be involved.

Thus, the professional competence of a transportation bachelor is a combination of knowledge and skills that are realized through the components and allow solving problematic issues that arise in the course of a professional activity within established authority, in a certain time frame and with an appropriate level, and objectively evaluate the results of their professional activities.

We consider it expedient to introduce the concept of "term" and "quality" into the definition of "professional competence of an bachelor...". The use of the term "term" is explained by the heightened "value" of operational management decisions in environmental conditions, and the great social significance of road transport, primarily passenger traffic, for various types of communications. When organizing road transport, such decisions may concern the operational changes of routes and modes of traffic of transport units, timetables (hourly work schedules), organization of drivers', conductors and other support staff labor. The term "quality" is understood as the degree of assimilation and execution of orders by subordinates to solve a specific problem, as well as the degree of control over the implementation by the manager and the achievement of the goal.

Thus, based on the analysis of the definition of the concept of "professional competence" and modern ideas about its components, we consider it possible to determine the components of the professional competence of an bachelor in transportation technologies: pedagogical – the ability to professional self-development through the acquisition of theoretical and practical knowledge and the transfer of the knowledge to subordinates; pedagogical competence can be divided into theoretical and practical; theoretical one involves the transfer of theoretical knowledge, while the practical – the transfer of practical skills for specific activities; psychological – the



ability to perceive and understand the behavior of staff, the motivation of its activities, the ability to work in extreme situations or in the case of any change in standard working conditions; the ability to comply with the norms of cultural and business communication, in terms of the implementation of professional activities in road transport enterprises (transport firms, transport and forwarding agencies and other similar institutions) acquires a special meaning; technical – the ability to perceive technical information, presented in the form of drawings, diagrams; information on the characteristics of rolling stock, auxiliary mechanisms, the ability to develop the technical drawings in accordance with the established requirements; technological – the ability to understand existing and develop new technological schemes for the transportation process, the ability to develop new schemes for cargo delivery, rational selection and use of rolling stock, organization of rolling stock and drivers' operation; informational – the ability to perceive information, first of all, new, its assimilation and analysis, and the generation of relevant decisions on the basis of such information; economic – the ability to perceive and analyze economic indicators (financial statements, estimates, tariffs for services) and calculations of financial indicators (income, expenses, profitability, cost, tariffs) of the enterprise, the ability to perform feasibility studies of the industry projects; legal – possession of knowledge and the ability of their practical application in relation to legal relations between team members, subjects of the transportation process (sender, carrier, consignee), understanding of responsibility for violation of legal relations, as well as knowledge of laws and regulations issued by the authorities of different levels; value – the ability for an objective self-analysis of the results of own activities, the determination of further ways of development as a specialist; environmental – the perception that road transport is one of the main environmental pollutants, and thus the ability to design technological schemes for the transport of goods or passengers with the least negative environmental impact in accordance with the requirements of current legislation, emission standards of various types of engines, noise pollution, etc., the calculation of the negative impact on the environment and the development of measures to reduce this effect; social – the ability to understand the social significance of the activities performed by the specialist, and the corresponding attitude to it, since road transport is a link between the industry of production and consumption, ensures a

stable connection of the population with the places of work and rest, and the development depends on its proper functioning.

Current requirements relating to the professional training of the bachelors in transportation technology should include the achievement of the final result of education, as which it is reasonable to consider a professional competence as a unity of knowledge and skills, readiness and ability to solve a wide range of issues arising in professional activities.

Thus, when determining the criteria for the formation of professional competence of a bachelor, we are guided by its essential characteristics and the provisions of the criteria approach. Therefore, such criteria should reflect the nature of the activity, the motivation for this activity and the attitude to its implementation. Thus, we propose to assess the degree of competency development by the following quality criteria: motivational criterion – awareness of the content and significance of the organization of transportation and transport management, a positive attitude towards it, which further allows you to generate a steady interest in such activities and a gradual increase in the overall level of competence, that will be expressed in the individual's need in knowledge; cognitive criterion – the application of theoretical knowledge, practical skills necessary for the implementation of professional activities and the solution of various production situations associated with this activity, efficiency criterion – the implementation of project activities that reflects the possibility of a bachelor in creating new transportation technologies, delivery schemes and in general new methods of organizing passenger or cargo transportation; evaluation criterion – self-analysis and self-assessment of the results of its activities, understanding, analysis of the quality of decisions made and the achievement of the goals. The above-stated criteria should be to determine the degree of development of professional competence among the bachelors in transportation technologies.

Conclusions. The concepts of "competence" have been analyzed as a result of which it has been established that at the moment there was no universally accepted definition of these concepts, first of all, the concept of "professional competence". The absence of the definition is explained by the fact that each of the authors interprets this concept depending on the branch of science or economy for which this it is taken. The main components of transportation technologies bachelor's professional competence have been defined and the term "professional competence". The



criteria for the development of professional competence of the transportation technologies bachelors have been defined, which can be used to determine the rate of the professional competence development.

REFERENCES:

1. Зязюн И.А. Педагогическая техника учителя. Школьные технологии. 2005. № 6. С. 154–164.
2. Ничкало Н.Г. Наукові дослідження з проблем педагогіки і психології вищої школи. Вища освіта в Україні: реалії, тенденції, перспективи розвитку. Ч. 1. Матеріали Міжнар. наук.-практ. конф. Київ, 1996. С. 19–23.
3. Сисоєва С.О. Проблема формування особистості, здатної до творчої самореалізації. Наукові праці: збірник. 2000. Т. 7. С. 13–19.
4. Пехота О.М. Освітні технології. Київ, 2001. 253 с.
5. Скворцова С.О. Проектування освітніх результатів на засадах компетентнісного підходу. Наукові записки Вінницького державного педагогічного університету ім. Михайла Коцюбинського. Серія: «Педагогіка і психологія». 2009. № 27. С. 395–398.
6. Петрук В.А. Теоретико-методичні засади формування професійної компетентності майбутніх фахівців технічних спеціальностей у процесі вивчення фундаментальних дисциплін. Вінниця, 2006. 293 с.
7. Балабанова Л.В., Сардак О.В. Управління персоналом. Київ, 2006. 512 с.
8. Недашківська Т.Є. Професійна компетентність та компетенції державного службовця: об'єм термінологічного значення понять. Вісник Національної академії державного управління при Президентові України. 2008. № 1. С. 73–81.