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Pedagogical technologies for the development of students' professional competence

Tecnologias pedagógicas para o desenvolvimento da competência profissional dos alunos

Tecnologías pedagógicas para el desarrollo de la competencia profesional de los estudiantes

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Abstract: The main purpose of the article is to study the basic provisions of the use of pedagogical technologies for the development of students' professional competence. Improving the training of specialists requires finding effective ways to form students' systemic ideas about the object of their professional activity, the skills and abilities of its research, organization and management. One of the most pressing problems in the field of professional training is the formation of various aspects of the professional culture of specialists, which are an expression of the maturity and development of the entire system of socially significant qualities, is productively implemented in individual activities and is inextricably linked with their personal culture. During their studies at the university, students should receive comprehensive pedagogical training, a sincere interest in creative search and the formation of pedagogical professionalism. As a result of the study, the main trends, aspects and prospects of the use of pedagogical technologies for the development of students' professional competence were revealed.

Keywords: Pedagogical technologies, Pedagogy, Professional competence, Professional culture of specialists, Students.

Resumo: O objetivo principal do artigo é estudar as disposições básicas do uso de tecnologias pedagógicas para o desenvolvimento da competência profissional dos alunos. Melhorar a formação de especialistas exige encontrar formas eficazes de formar as ideias sistêmicas dos alunos sobre o objeto de sua atividade profissional, as competências e habilidades de sua pesquisa, organização e gestão. Um dos problemas mais prementes no campo da formação profissional é a formação de vários aspectos da cultura profissional dos especialistas, que são expressão da maturidade e do desenvolvimento de todo o sistema de qualidades socialmente significativas, é implementado produtivamente nas atividades individuais e está intimamente ligado à sua cultura pessoal. Durante seus estudos na universidade, os alunos devem receber uma formação pedagógica abrangente, um interesse sincero na busca criativa e na formação do profissionalismo pedagógico. Como resultado do estudo, foram reveladas as principais tendências,



aspectos e perspectivas da utilização das tecnologias pedagógicas para o desenvolvimento da competência profissional dos alunos.

Palavras-chave: Competência profissional, Cultura profissional de especialistas, Estudantes, Pedagogia, Tecnologias pedagógicas.

Resumen: El objetivo principal del artículo es estudiar las disposiciones básicas del uso de tecnologías pedagógicas para el desarrollo de la competencia profesional de los estudiantes. Mejorar la formación de especialistas requiere encontrar formas efectivas de formar las ideas sistémicas de los estudiantes sobre el objeto de su actividad profesional, las competencias y habilidades de su investigación, organización y gestión. Uno de los problemas más urgentes en el campo de la formación profesional es la formación de diversos aspectos de la cultura profesional de los especialistas, que son expresión de la madurez y desarrollo de todo el sistema de cualidades socialmente significativas, se implementa productivamente en las actividades individuales y está indisolublemente ligado a su cultura personal. Durante sus estudios en la universidad, los estudiantes deben recibir una formación pedagógica integral, un interés sincero por la búsqueda creativa y la formación del profesionalismo pedagógico. Como resultado del estudio, se revelaron las principales tendencias, aspectos y perspectivas del uso de tecnologías pedagógicas para el desarrollo de la competencia profesional de los estudiantes.

Palabras clave: Competencia professional, Cultura profesional de especialistas, Estudiantes, Pedagogía, Tecnologías pedagógicas.

INTRODUCTION

At the beginning of the third millennium, the global socio-economic, political, socio-cultural processes that determine the development of mankind at the present stage of its life are deepening and accelerating. Global social shifts are systematic, rapid and irreversible. They are due to scientific and technological progress, rapid informatization and computerization, democratization of public life in most countries of the world.

The most responsible role in these conditions is the role of education. It is education that has a direct and greatest impact on the individual and society.

Education is a social institution through which every person passes, acquiring the traits of a personality, a specialist and a citizen. Thanks to the teacher's activities, the state policy is implemented in creating the intellectual, spiritual potential of the nation, developing domestic science, technology and culture, preserving and enhancing the cultural heritage and the person of the future, and also ensures the constitutional right of citizens of Ukraine to receive a complete general secondary education. All this raises the problem of teacher training, his professional development and professional competence. It is the competence-based approach that is considered as one of the important conceptual principles that determines the modern methodology for updating the content of education.

Referring to international experience, it can be argued that the concept of key competencies acts in this context as a key concept, since competence is of an integrated nature, namely: it combines professional knowledge, intellectual skills and abilities and methods of activity.

The concept of "competence" means the terms of reference of any official or body; possession of knowledge, experience in a particular area. The professional competence of a teacher is understood as the



personal capabilities of a teacher that allow him to independently and effectively realize the goals of the pedagogical process. For this, it is necessary to know pedagogical theory, to be able to use it in practice. "Competence" determines the level of professionalism of an individual, and its achievements occur through the acquisition of the necessary competencies, which are the goal of professional training of specialists.

By competence, we mean a set of interrelated personality traits (knowledge, abilities, skills, ways of acting) necessary for high-quality productive activity. Competence is defined as the possession of the relevant competencies. The analysis of the definitions of pedagogical competence allows us to assert that pedagogical competence is a system of scientific knowledge, intellectual and practical skills and abilities, personal qualities and formations, which, with sufficient motivation and a high level of professionalism of mental processes, ensures self-realization, self-preservation and self-improvement of the teacher's personality.

Today, the diagnosis of the formation of a student's professional competence is relevant and arouses a certain interest on the part of researchers. Its effectiveness is mainly due to the level of development of the psychological properties of both the cognitive and emotional-volitional spheres of the personality.

Based on the study of literary sources, we have identified the most important qualities of a future professional (Mugattarova et al, 2020):

- 1) the moral and psychological qualities of a manager (high ideals in life, humanism, honesty and truthfulness, justice and objectivity, freedom and courage, a developed sense of duty and responsibility, intelligence and tolerance, tact in relationships, emotional restraint, politeness, unlimited patience, communication skills, business and personal reputation);
- 2) the pedagogical qualities of a manager (the ability to train subordinates, develop the necessary professional skills of staff, organize general cultural, aesthetic, physical education, clearly and logically formulate an order, argue their views)
- 3) professional qualities (the art of leadership, skills of working with people, political culture, an integrated systematic approach to work, the ability to generate ideas, transform them into practical actions, creativity (creativity), modern economic thinking, computer literacy, correct lifestyle, communication culture, foreign languages)
- 4) business qualities managerial skills: diagnose the organizational system, interpret the situation and draw the right conclusions, promptly make and implement non-standard decisions, motivate personnel for high-performance work, rationally organize work, ensure high labor discipline, objectively select, evaluate, place personnel, ensure self-organization work collective, to navigate people, to understand their characters, abilities and psychological state, to establish business relationships with other leaders, to be able to conduct a conversation, to negotiate expressively, convincingly, reasonably, to have a sense of humor, high erudition, the ability to act effectively in conditions of economic risk, practical mind and common sense, sociability, enterprise, initiative and energy, exactingness and discipline, high efficiency, will, purposefulness,



organizational skills, ability to organize teamwork, leadership skills, strategic thinking, independence, initiative;

5) aspects of the theoretical training of a modern manager: fundamental knowledge of macro- and microeconomics, scientific management, theory of management and leadership, sociology, psychology and law, information technology and computer technology

Scientists identify two equally important motives for addressing the problem of professional competence - objective and subjective. The essence of the first is that the quality of education, the level of development and readiness for practical activity becomes the most important factor in the success of business, the quality of services, and, consequently, the realization of the ultimate goal of educational activities of a higher educational institution. The essence of the subjective motive is the student's desire to realize himself as a person (to get a highly paid, interesting, prestigious job, to pursue a successful business career).

This is what requires the search for new, individual approaches to the development of curricula, training programs, the organization of optional and extracurricular work, the selection of teaching methods and quality assessment criteria, etc.

Professional competence is one of the important aspects of self-realization of future managers and a determining factor on which the success of the implementation of social, cognitive and other significant functions depends. It includes not only the criterion of the professionalism of specialists in solving various responsibilities, but also the level of professionalism of the mental processes that ensure their activities.

Education is the factor that predetermines the socio-economic development of the state. The economy and the labor market are in dire need of competitive specialists who are able not only to use the acquired knowledge, but also to be mobile, to adapt to changing market conditions. One of the most important areas of modern higher education is to define a competency-based strategy associated with a shift in emphasis on the formation of professional competence of future specialists (Blaskova, Blasko, Kucharcikova, 2014).

It is not enough for modern university graduates to have a certain stock of knowledge and professional skills. Successful personal and professional self-realization requires such qualities and abilities that would ensure social adaptation and professional mobility. Vocational education should be guided by the modern labor market, which makes new demands on the specialist. Graduates should be able to operate with technologies and knowledge that will satisfy the needs of the information society and modern production.

The concept of "competence" includes not only cognitive and operational-technological components, but also motivational, ethical, social, behavioral (results of education, knowledge, skills, system of value orientations). In the formation of competencies, a decisive role is played not only by the content of education, but also by the educational environment of a higher educational institution, features



of the organization of the educational process, educational technologies used, including technologies for organizing students' independent work, which emphasizes the generalized, integral nature of the concept of "competence" in comparison with the concepts "knowledge", "skills".

In our opinion, competence is a situational category, which is expressed in the readiness to carry out certain activities in specific professional (problem) situations. That is, that evaluative category that characterizes a person as a subject of professional activity, capable of solving problems related to his competence.

Consequently, the professional competence of a manager is an integrated indicator of his theoretical and practical readiness to perform professional activities related to the upbringing and training of another person.

METHODOLOGY

The main purpose of the article is to study the basic provisions of the use of pedagogical technologies for the development of students' professional competence. For this, a number of methods were applied, which form the research methodology. The study was carried out using the following theoretical methods: systems analysis and synthesis, induction and deduction, comparison, classification, generalization and systematization, idealization and abstraction.

RESULTS AND DISCUSSION

The formation of a system of market relations requires a transformation of people's thinking. Education as a social institution solves the problem of preparing members of society with economic thinking, requires new approaches to teaching, the use of advanced pedagogical experience and predetermines the use of non-traditional forms, methods and means of teaching and upbringing, and with them new forms of activity of objects of the educational process that carry in itself the features of both training and labor. The most effective form of activity is based on the model of interactive learning, which assumes that the object of learning in the educational process also acts as its subject.

At the World Economic Forum in Davos, 10 general competencies were formulated, which must be balanced with professional ones, which will be most in demand in 2020 in successful companies that are developing rapidly. In particular, they include in the rating priority (Kryshtanovych, Bilyk, Shayner, Barabash, Bondarenko, 2021):

- 1. Possession of an integrated multilevel approach to problem solving. Transfer the ability to systematically, holistically, multidimensionally diagnose a problem and solve it taking into account all risks and prospects.
- 2. Critical thinking. Reflects the ability to analyze information, avoid the imposition of other people's thoughts and positions, weigh all arguments, and counteract mass thinking.



- 3. Creativity. Demonstrates the ability to produce new, non-standard ideas, solutions, views, to be creative in solving existing problems, to create innovations.
- 4. Ability to lead people and recognize their potential. It involves the possession of leadership abilities and the ability to manage people on the basis of planning, organizing, coordinating, motivating, monitoring and regulating their activities.
- 5. Ability to interact with people. Demonstrates the ability to communicate with people, listen to them, convey their opinion and position, resolve conflicts, ensure teamwork and pleasant communication in various situations
- 6. Knowledge of emotional intelligence. Represents stress resistance, the ability to control one's own emotions, the ability to understand the emotions of other people and influence them.
- 7. Ability to reasonably form their own opinions and make decisions. It presupposes possession of a sufficient level of knowledge, skills and abilities that allow one to confidently make decisions independently and defend one's own opinion with reasoned ones.
- 8. Customer focus. Has the purpose of targeting the consumer of specific services, works or products that are produced by a specific person. At the same time, a consumer is understood not only as a specific buyer, but also an employee associated with the production cycle; a person whose work depends on the results of the work of another employee, and the like.
- 9. Ability to negotiate. Demonstrates the ability to assess the position of the interlocutor, use an effective strategy and tactics of negotiation, flexibly respond to changes in the mood and needs of the counterparty, be able to persuade, argue, explain the position of the party, and the like.
- 10. Flexibility of the mind. It assumes possession of cognitive flexibility, that is, the ability to quickly respond to all stimuli and situations, thinking and analyzing several problems at the same time, promptly changing the format of work.

The formation of professional competencies among graduates is a complex multidimensional scientific and methodological problem. Any of the available theoretical approaches to the organization of the educational process is a means of achieving the desired level only in relation to a specific component of this complex system, while the competence-based approach allows solving this problem in a complex manner (Bernarto, Bachtiar, Sudibjo, Suryawan, Purwanto, Asbari, 2020).

The introduction of a competency-based approach makes it possible to apply the cluster tool to the formation of professional competencies. Clusters are a set of actors acting in concert on the basis of a common goal. The types of clusters differ in the mechanisms of interaction between participants in the implementation of a common goal. In relation to the conditions of higher education, clusters of the first type can unite teachers of the graduating department and students of the corresponding specialties (Sangsawang, 2015).



Clusters of the second type can be considered as an association of higher educational institutions on the basis of joint educational programs for the implementation of separate parts of the task within the framework of a common project. Clusters of the third type are inherently an association of a higher educational institution and external partners, including market entities that are customers of the services of this educational institution, to solve problems of performing a certain type of work within the framework of a project that embodies the interests of external partners, and is implemented with their participation.

Competence requirements in the context of each individual specialty form reference criteria for assessing learning outcomes in the form of professional and qualification standards. These results, in turn, are the basis for the development of curricula, curricula of academic disciplines, control and assessment tools, selection of teaching methods and technologies and, ultimately, for determining the necessary human, financial and material resources to create an educational product (Ochirov, 2016).

Interactive methods contribute to the formation of competence, teach democracy, communication, think critically and make your own thoughtful decisions. According to I. Yurko and others, interactive teaching technologies are based on such didactic approaches as cognitive (or traditional), social-role and behavioral.

The cognitive (or traditional) approach is aimed at the development of theoretical thinking and cannot provide a high level of motivation to study the material of the discipline and effective interaction of participants in the educational process. In professional training, it is effective only for students with high self-motivation and conscious professional self-determination.

The socio-role approach is aimed at mastering the subject's role positions in the structure of socio-economic relations and creates conditions for professional self-determination and the formation of the business qualities of the individual. Its effectiveness is based on the student's presence at least of a general idea of the essence and content of specific role functions, and on the teacher's - perfect mastery of the material of the academic discipline and an arsenal of various active teaching methods for the timely change of traditional roles and methods of behavior in the classroom (Kryshtanovych, Kotyk, Tiurina, Kovrei, Dzhanda, 2020).

The high demands of the society of the third millennium provide for the formation of a new generation of managers. The quality and timeliness of fulfilling the assigned tasks in the field of planning, organizing the search and selection of accommodation, adaptation, assessment, stimulation, movement, and development of personnel depends on the level of professional competence of managers. Therefore, the requirements for managers should be formed so that they correspond to the totality of the employee's competencies, which should be reflected in the professiogram, psychogram, competency cards, qualification card, and the like. In these documents, in full, it is necessary to prescribe the



desired list of qualities necessary for the applicant to fulfill his official duties.

The vocational education system plays an important role in ensuring professionalism. Recently, among young people, there has been a significant increase in interest in higher education, including in management education. The analysis of special literature gives grounds to assert that the formation of a manager is possible only on the basis of special step-by-step professional training, on the basis of a combination of scientific and theoretical achievements of science, organizational and technological developments, the experience of leading management schools that provide a high level of training of highly qualified specialists. The key to high-quality professional training of a professional manager is an optimally organized educational process in a higher educational institution, constant improvement of business education. The latter is developing under the influence of new requirements of employers, the state, society, because now the manager must form effective interpersonal relationships, be creative in solving problems, and achieve the goals and results.

Training a competitive manager in a new economy, that is, a knowledge economy, requires the use of modern technologies in the learning process, to ensure an organic combination of theory and practice. In other words, the formation of an effective mechanism for training a competitive manager should be based on the synthesis of knowledge, skills and abilities; assimilation by the student of theoretical knowledge and methodological tools. Despite the fact that the educational level of managers is high (about 90% of them have higher education, and a significant part also have a scientific degree), the problem of improving the quality of their training continues to be acute. Therefore, in the training of human resources, priority should be given to professional knowledge. Professionalism also presupposes career growth. Success in an individual career is becoming synonymous with a successful profession (Ishkineeva, Ozerova, Ahmetova, Kaveeva, 2021).

Now, the manager must form effective interpersonal relationships, be creative in solving problems, and achieve the set goals and results. The manager must be forward-thinking. Managers can perform well and lose the entire company at the same time if their work is not focused on the future.

Every company should make a profit for as long as possible. However, if you think only about profit, then you may not see the opening ahead. The manager's mind must constantly train for scale. Systematic work on deepening education and experience is provided to the employee in accordance with the requirements of the time of special knowledge, skills and abilities.

In the structure of a manager's competence, it is advisable to single out certain components: a system of professionally necessary knowledge and skills (cognitive component), ways to improve and update them; operational component (general cultural competence, professional value



orientations, attitudes towards professional self-improvement), self-regulation (psychological competence, self-esteem, conflict competence).

The main criteria for assessing the professional competence of a manager is the corresponding complex of his qualities and characteristics (professional and pedagogical readiness and activity, its effectiveness, pedagogical search research activity, information and communication function, gnostic, communicative and organizational components of pedagogical activity) ().

A necessary component of a manager's professional competence is the formation of a value attitude, which, in particular, is expressed in his value attitudes, motives of both professional and social activities. Each action of the manager is performed under the influence of a certain motive - desire, interest, ideal, sense of duty, social requirements, etc., since it is aimed at achieving specific goals. All motives of a person are characterized at the socio-psychological level by her real views, beliefs, attitude; determine the degree of self-actualization of future specialists, who in the course of their activities can reach two levels of professionalism (Natalia, Veronika, Nataliia, Iryna, 2020).

The first level assumes compliance with the regulatory requirements for the chosen specialty. At the second level, professionalism turns into the inner qualities of a person, becoming her personal characteristic. Consequently, the level of professional competence depends not only on the level of formation of all its components, but also determines the maturity of a person in professional activity, in professional communication, in the formation of a professional's personality as an individual, that is, it provides the manager with effective functioning as a subject of a professional in the "person-to-person" system (Eliyana, Ma'arif, Muzakki, 2019).

The motivational sphere of self-realization is not the same at different stages of professionalization. So, at the stage of choosing a profession, there is an interest in the content of future activities, an understanding of its significance, certain professional expectations. At the stage of vocational training, the adaptation of the individual to the profession begins, her acceptance of the role of a professional. At the stage of practical mastery of the profession, adaptation continues; there is a correction of professional motives and goals, the first pleasure from work, motives for the self-realization of the individual in work; the hierarchy becomes more complicated.

At the stage of the flourishing of professional activity, the motives of individual contribution to the profession, professional creativity are fixed. At the stage of leaving the profession, the motive for self-realization of the individual in new forms of activity may appear. Personal and professional development of future specialists includes two main substructures. The first presupposes the professionalism of the individual (the formation of acmeological options for professionalism, the development of professionally important and personal-business qualities, the improvement of the style of activity, the disclosure of the



potential of the individual, the change in the system of motives and values) (Panachev, Zelenin, Opletin, Legotkin, Kusekova, 2018).

The second includes the professionalism of the activity (increasing the professional competence of the individual and improving the system of professional skills of workers). One of the components of the professional competence of a manager is professionally important qualities - his individual mental and physiological properties, which determine the predominantly effective formation of professional competence, entry into the profession in the process of professional training and practical activity, successful performance of professional functions.

Among the professionally necessary qualities of future specialists, it is worth highlighting the following (Kryshtanovych, Kryshtanovych, Stechkevych, Ivanytska, Huzii, 2020):

- a) mandatory qualities, the absence of which makes it impossible to carry out professional activities in general (state of health);
- b) extremely important, the presence of which contributes to the effective implementation of professional activities (confidence in a high assignment and understanding of responsibility, ability and interest in working with clients, organizational qualities, the ability to think in broad categories, communicate with people, the ability to convince and motivate, the ability to organize a team, adherence to principles, discipline, control of emotions, creativity);
- c) peripheral qualities that do not have a decisive influence on the effectiveness of professional activity, but at the same time contribute to its success (the ability to distribute attention, remember faces, a combination of a sense of demand and kindness, etc.).

The formation of the professional competence of the future manager also provides for the creation of pedagogical conditions, the definition of which is based on the principle of the unity of consciousness and activity. According to this principle, the teacher's activity determines the formation of the consciousness of the future specialist, his mental qualities, which direct and regulate practical activity.

Pedagogical conditions are interconnected and are conditionally divided into external (do not depend on the volitional qualities of 6 people and characterize his readiness to exert influence) and internal (contribute to the effectiveness of the impact of external conditions, which is manifested in the degree of coordination between the actions of the teacher and the student in the process of solving problems and attitudes towards the student. as a subject). The main pedagogical conditions include the creation of an appropriate environment based on competence-based, personality-oriented and developmental learning; application of individual, differentiated approaches; invariance of certain forms and methods of teaching.

Therefore, the important tasks of the preparation process for professional activity are (Fedorov, Mialkina, Sedykh, Zhitkova, 2021):

- formation of the foundations of worldview positions;
- the formation of a humanistic orientation of professional activity; professional development of future specialists;



- awareness of the general cultural significance of the educational process;
- awareness of education as a mechanism for the formation of the spiritual world of a person.

The competence-based approach assumes a shift in emphasis from the accumulation of normatively defined knowledge, skills and abilities by the future specialist to the formation of his ability to practically act, to apply individual techniques and experience of successful actions in professional situations.

One cannot but agree with V. Bidenko: the competence-based approach is based on the allocation of competencies that do not deny knowledge, skills and abilities (triad "Z - U - N"), but fundamentally differ from them, in particular (Irhin, Irhina, Nikulin, 2019):

- from knowledge existence in the form of activity, and not only in the form of information about it;
 - from skills the ability to transfer to various objects of influence;
- from skills awareness, which allows a person to act even in a non-standard environment.

It is the competence-based approach that means a gradual reorientation of the dominant educational paradigm with the predominant translation of knowledge and the formation of skills to create conditions for mastering a set of competencies, meaning the potential, the ability of a graduate of a higher educational institution to sustainably live in a modern multifactorial socio-political, market-economic, information and communication saturated space.

The studied pedagogical technologies of the process of forming students' pedagogical competence have a system of goals, the main of which is the formation of the employee's professional competence. Taking into account the content and structure of the professional competence of a specialist, we have defined a three-component system of goals (Table 1).

Table 1
Three-component system of goals.

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The formation of professional competence in the learning process at higher educational institutions is achieved through the development of its individual components according to such criteria as (Yakimova, Terehov, Salnikova, Ishmuhametova, 2020):

- the degree of formation of theoretical knowledge (compliance with educational standards and the conditions of an integrated educational environment)
- the degree of formation of practical skills (compliance with the integral requirements of the professional field)



- the degree of development of practical skills (compliance with the requirements of the professional environment);
- the degree of formation of social behavior (compliance with the requirements of society and corporate ethics).

The component structure of the professional competence of a future specialist is based on the following conditions and indicators (Fedorov, Mialkina, Sedykh, Zhitkova, 2021).:

- the criterion of personality self-development and attitude to educational and professional activities (life strategies, creative potential, professional orientation);
- a criterion for the formation of a student's professional identity (professional self-prediction of a personality, professional skills);
- activity criterion (awareness of professional self-realization in educational and practical activities, creation of a long-term individual program of professional growth, self-development and professional self-improvement).

The use of criteria and indicators allows in the process of assessing the results of vocational training to determine the levels of training: high, medium (or sufficient) and low. They meet certain requirements of employers regarding the knowledge, skills and abilities they expect in the professional field of potential applicants for existing vacant positions in enterprises, institutions and organizations of various forms of ownership. Real indicators for graduates can be assessed numerically, in particular, through a questionnaire or survey, and expressed in points (for example, on a 100-point scale), or in relative units (percent).

So, the theoretical and practical training of students when applying the competence-based approach in a higher educational institution should be comprehensive. Therefore, the structural components of the process of forming the professional competence of future specialists are humanitarian, fundamental, theoretical and professional, practical, informational and social training.

CONCLUSION

The foregoing allows us to generalize the idea that the modern concept of development "Education throughout life", aimed at periodic consistent competence-based training of the subject, is a necessary condition for the formation of his personal competitiveness. In the global world, the issue of personal and professional self-realization is relevant, which is the basis for the formation of such a personal quality as professional universalism - the ability of an employee to change spheres and methods of activity. A modern 40 specialist should have such characteristics as the ability to work in a team, the ability to make independent decisions, be proactive, capable of innovations. In addition, a competent professional specialist must be psychologically self-possessed, ready for overload and stressful situations, and be able to get out of them with dignity. These characteristics are consistent with the signs of professional competence, which is considered by individual authors



as a system of theoretical, methodological and normative provisions; social and scientific knowledge; appropriate moral and psychological qualities; organizational, methodological and technological skills that are objectively necessary for a future specialist to perform official and functional duties.

Thus, professional competence is an important aspect of a manager's self-realization and a determining factor on which the success of the implementation of social, cognitive and other significant functions depends. A necessary component of managers' self-realization is the motives of professional and social activity, which characterize their real views, beliefs, and determine the degree of self-actualization.

REFERENCES

- Bernarto, I., Bachtiar, D., Sudibjo, N., Suryawan, I. N., Purwanto, A., & Asbari, M. (2020). Effect of transformational leadership, perceived organizational support, job satisfaction toward life satisfaction: Evidences from indonesian teachers. International Journal of Advanced Science and Technology, 29(3), 5495–5503.
- Blaskova, M., Blasko, R. & Kucharcikova, A. (2014). Competences and Competence Model of University Teachers. Procedia Social and Behavioral Science, 259, 457-467.
- Eliyana, A., Ma'arif, S., & Muzakki. (2019). Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. European Research on Management and Business Economics, 25(3), 144–150. https://doi.org/10.1016/j.iedeen.2019.05.0
- Fedorov, A. A., Mialkina, E. V., Sedykh, E. P. S., & Zhitkova, V. A. (2021). Model of managing the professional-educational route of a future specialist. Revista Tempos E Espaços Em Educação, 14(33), e16325. https://doi.org/10.20952/revtee.v14i33.16325
- Irhin V., Irhina I., Nikulin I. (2019) University sports and recreation activities system as a factor of ensuring the students health. World Journal of Medical Sciences, 9(3), 162-166.
- Ishkineeva F., Ozerova K., Ahmetova S., Kaveeva A. (2021), Students healthy lifestyle and the strategy of adaptation to the university environment. International Journal of Innovative Technology and Exploring Engineering, 9(1), 5123-5126.
- Kryshtanovych, M., Kotyk, T., Tiurina, T., Kovrei, D., & Dzhanda, H. (2020). Pedagogical and Psychological Aspects of the Implementation of Model of the Value Attitude to Health. BRAIN. Broad Research in Artificial Intelligence and Neuroscience, 11(2Sup1), 127-138. https://doi.org/10.18662/brain/11.2Sup1/99
- Kryshtanovych, M., Kryshtanovych, S., Stechkevych, O., Ivanytska, O., & Huzii, I. (2020). Prospects for the Development of Inclusive Education using Scientific and Mentoring Methodsunder the Conditions of Post-Pandemic Society. Postmodern Openings, 11(2), 73-88. https://doi.org/10.18662/po/11.2/160



- Kryshtanovych, S., Bilyk, O., Shayner, H., Barabash, O., & Bondarenko, V. (2021). Study of the Experience of the Formation of Professional Competence in Future Managers of Physical Education and Sports. Revista Romaneasca Pentru Educatie Multidimensionala, 13(1Sup1). 162-176. https://doi.org/10.18662/rrem/13.1Sup1/390
- Mugattarova E., Bolotnikov A., Garifullin R., Imangulov R., Kalmanovich V., Khairullin R. (2020) Development of health-saving environment at engineering university. IOP conference series: Materials Science and Engineering, 890, 012172. https://doi.org/10.1088/1757-899X/890/1/012172
- Natalia, S., Veronika, D., Nataliia, B., & Iryna, H. (2020). Formation of professional competencies of primary school teachers using ICT. Revista Tempos E Espaços Em Educação, 13(32), 1-17. https://doi.org/10.2095 2/revtee.v13i32.14965
- Ochirov, G.. (2016). Formation of professional competence of the future teachers of initial classes by student teaching means. Historical and social-educational ideas, 8, 205-208. https://doi.org/10.17748/2075-9908-201 6-8-1/2-205-208
- Panachev V., Zelenin L., Opletin A., Legotkin A., Kusekova R. (2018) Aspects of health improving and sports-mass work students. Journal of Global Pharma Technology, 10(5),268-273.
- Sangsawang, T. (2015). Instructional Design Framework for Educational Media. Procedia Social and Behavioral Sciences, 176. https://doi.org/10.1016/j.sbspro.2015.01.445
- Yakimova E., Terehov P., Salnikova O., Ishmuhametova N. (2020). Crowdsourcing as an approach to solving environmental problems by future construction engineers. IOP Conference Series: Materials Science and Engineering, 890(1), 012174. https://doi.org/10.1088/1757-899X/890/1/012174

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