

SKŁADNIK OSOBOWOŚCIOWY KSZTAŁTOWANIA KULTURY BEZPIECZEŃSTWA W DZIAŁALNOŚCI ZAWODOWEJ PRZYSZŁYCH INŻYNIERÓW OCHRONY PRACY

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Streszczenie. W artykule została zaktualizowana kwestia konieczności i zasadności doskonalenia procesu szkolenia zawodowego przyszłych inżynierów ochrony pracy na zasadach systemu metodologicznego nakierowanego na kształtowanie kultury bezpieczeństwa działalności zawodowej. Szczególną uwagę zwraca się na rozwój składnika osobowościowego kultury bezpieczeństwa działalności zawodowej, który odzwierciedla cechy zawodowe i osobiste przyszłego inżyniera ochrony pracy. W oparciu o zastosowanie teoretycznych metod badawczych zostały przeanalizowane źródła naukowe w celu ustalenia aparatu terminologicznego oraz klasyfikacji cech i umiejętności zawodowych i osobistych. Określony został także zestaw cech zawodowych i osobistych przyszłego inżyniera ochrony pracy, który obejmuje wolę oraz składniki emocjonalne, moralne, komunikatywne i organizacyjne. Istotnymi cechami okazały się natarczywość, determinacja, przestrzeganie zasad, odpowiedzialność, wysoka samoorganizacja własnej działalności zawodowej. Uzasadniona jest konieczność kształtowania zdolności poznawczych, organizacyjnych, konstruktywnych, komunikacyjnych, prognostycznych, jak również kształtowanie myślenia zorientowanego na bezpieczeństwo pracy, oszczędność energetyczną, ochronę zdrowie. Proponowane są sposoby kształtowania ważnych pod względem zawodowym cech przyszłego inżyniera ochrony pracy.

Słowa kluczowe: cechy zawodowe, cechy osobiste, umiejętności zawodowe, kultura bezpieczeństwa, szkolenie inżynierów ochrony pracy.

PERSONAL COMPONENT OF THE FORMATION OF THE SAFETY CULTURE OF PROFESSIONAL ACTIVITY OF FUTURE OCCUPATIONAL SAFETY AND HEALTH ENGINEERS

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Abstract. The article actualizes the need and expediency of improving the process of professional training of future occupational safety and health engineers (on

labour protection) on the principles of building a methodological system for the formation of a culture of professional activity safety. The work pays special attention to the development of the personal component of the safety culture of professional activity, which represents the professional and personal qualities and abilities of a future safety engineer. The basis of the theoretical research methods application, scientific sources determining the terminological apparatus and the classifications of professional and personal qualities and abilities were analyzed. The complex of professional and personal qualities of future safety engineers has been established, and includes volitional, emotional, moral, communicative, organizational qualities. Persistence, decisiveness, adherence to principles, responsibility, and high self-organization of personal professional activities are noted as important qualities. The necessity of forming gnostic, organizational, constructive, communicative, prognostic and energy-saving, labour and health-saving thinking is substantiated. The ways of forming professionally important qualities of a future safety engineer are proposed.

Key words: professional qualities, personal qualities, professional abilities, safety culture, training of engineers on labour protection.

ОСОБИСТІСНИЙ КОМПОНЕНТ ФОРМУВАННЯ КУЛЬТУРИ БЕЗПЕКИ ПРОФЕСІЙНОЇ ДІЯЛЬНОСТІ МАЙБУТНІХ ІНЖЕНЕРІВ З ОХОРОНИ ПРАЦІ

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Анотація. У статті актуалізовано питання необхідності та доцільності удосконалення процесу професійної підготовки майбутніх інженерів з охорони праці на засадах побудови методичної системи формування культури безпеки професійної діяльності. У роботі особливу увагу приділено розвитку особистісного компоненту культури безпеки професійної діяльності, який відображає професійно-особистісні якості та здібності майбутнього інженера з охорони праці. На основі застосування теоретичних методів дослідження проаналізовано наукові джерела щодо визначення термінологічного апарату та класифікації професійно-особистісних якостей та здібностей. Встановлено комплекс професійно-особистісних якостей майбутнього інженера з охорони праці, до яких віднесено вольові, емоційні, моральні, комунікативні, організаційні. Важливими якостями підкреслено наполегливість, рішучість, принциповість, відповідальність, висока самоорганізація власної професійної діяльності. Обґрунтовано необхідність формування гностичних, організаційних, конструктивних, комунікативних, прогностичних здібностей та працезахоронного, енергозберігаючого, здоров'язберігаючого мислення. Запропоновано шляхи формування професійно-важливих якостей майбутнього інженера з охорони праці.

Ключові слова: професійні якості, особистісні якості, професійні здібності, культура безпеки, підготовка інженерів з охорони праці.

Introduction. Safety plays the most important role in human life. According to statistics from the State Labour Service (State of Occupational Injuries, 2020), the number of victims of accidents at work in 2020 in January amounted to 266 people (32 of which were fatal); February – 274 (28); March – 283 (37); April – 425 (30); May – 417 (36); June – 633 (45). The main causes of work-related fatalities in 6 months of 2020 are organizational (58.7%); psychophysiological, technogenic, natural (26.4%); technical (14.9%). The analysis of statistical data indicates the existing problems in the implementation of organizational measures for the prevention of industrial injuries, including timely training on labour protection, professional selected workers, supplying workers with personal and collective protective equipment, and safe organization of workplaces. In this context, the training of occupational safety engineers on the basis of the application of the methodological system for the formation of a culture of safety in professional activity seems to be very relevant. In the process of ascertaining stage of the experiment, we found that the main components of a safety culture of professional activities are motivational-axiological, cognitive-pragmatic and personal components.

Analysis of basic research and publications. In this article, we will consider the essential characteristics of the personal component reflecting the professional and personal qualities and abilities of an occupational safety and health engineer. This research field is very diverse and has been studied in a number of scientific directions. The issues related to the formation of professional and personal qualities and abilities are reflected in the scientific works of Ukrainian and foreign scientists: I. Androshchuk, A. Borodienko, V. Grineva, E. Zeer, I. Zimnyaya, I. Zyazyun, A. Kovalenko, N. Kuzmina, N. Kulalaeva, A. Otich, L. Petrenko, A. Infantry, S. Rubinshtein, V. Slastionin. From the point of view of the psychological school, the foundations of personality psychoanalysis were laid by A. Adler, Ch. Cooley, D. Marcia, Z. Freyd, N. Holland, E. Erickson.

The results of the analysis of scientific literature indicate that the problem under consideration has been widely studied. However, it should be noted that the substantiation of the professional and personal qualities and abilities of a future safety engineer requires a deeper study. Taking this into account, the **purpose of the article** is to determine and describe the professional and personal qualities of an occupational safety and health engineer which are necessary to achieve positive dynamics in the formation of a culture of occupational safety.

Materials and methods of research. The methodological basis of the research consists of the theory of the development of professionally significant personality traits in the learning process, the theory of creative personality development, theories and concepts based on the systemic, personality-oriented, axiological and activity approach. The work involves the following research methods: theoretical (systematization and analysis of scientific literature on the problem of research, generalization of scientific facts, idealization, identification in determining the professional and personal qualities of a person); empirical (observation, questioning of students and teachers in order to establish the professional and personal qualities of future occupational safety and health engineers).

Results and discussion. In the scientific literature, professionally important qualities are understood as the psychological qualities of a person that determine the productivity (productiveness, quality, efficiency) of activity (Zeer, 2003, p. 25). According to O. Evdokimova (2006), professionally important qualities are a system of

stable personal qualities that create the possibility of successful performance of professional activities (p. 19). K. Levitan (1991) understands professionally significant qualities as a constant, fixed attitude of an individual to his profession, himself, work, people, things, and a certain system of motives, forms and methods of professional behavior in which this attitude is realized.

A theoretical analysis of the psychological and pedagogical literature indicates the different approaches of scientists to the classification of qualities and abilities. I. Androshchuk (2017) identified the following groups of professionally important qualities of future teachers of labour training and technologies: intellectual (developed intelligence, mental flexibility, ability to solve problems in typical and non-standard situations, broad erudition, developed intuition and logical thinking, ingenuity, observation skills); moral and ethical (humanism, kindness, sincerity, benevolence, politeness, decency, honesty, personality orientation, compassion, sensitivity, tact); communicative (sociability, the ability to listen and hear the interlocutor, developed speech skills, the ability to express one's thoughts, mastery of facial expressions and gestures); volitional (perseverance, decisiveness, emotional stability, poise, restraint, independence, endurance, purposefulness, discipline, flexibility of behavior, organizational skills, responsiveness, responsibility); creative (initiative, the ability to generate new ideas, abilities to create and innovate in their various forms, developed imagination, unconventional thinking, sense of humor) (92-93).

In the aspect of the problem of our research the work of A. Borodienko (2017) draws special attention and in the process of developing the professional competence of the heads of structural divisions of Ukrainian communications enterprises considers it necessary to form the following professionally important personality traits: persistence, confidence, proactive attitude, initiative, adaptability (the ability to restructure work in changing conditions); stress resistance (the ability to control one's emotions maintaining efficiency despite the presence of stress factors), disinclination to conflict (the ability to transfer a conversation to a subordinate, colleague or a client from an emotional level to a constructive one), the ability to control emotions, mastery of self-regulation methods; the ability to independently organize work, determine priorities in performing tasks, clearly plan activities and structure own activities; focus on results (ability to find the optimal solution); endurance, high capacity for work; ability to accelerate learning and assimilation of a large amount of information (p. 209).

The main professional qualities required of engineers by the European Federation of National Engineering Associations (FEANI) are: understanding of the essence of the engineering profession and the duty to serve society, the profession and preserve the environment; ability to work in a team on interdisciplinary projects; ability to be a leader, including administrative, technical, financial and personal aspects; communication skills and maintenance of the required level of competence through continuous professional development.

Some scholars associate professional and personal qualities with professional identity, which is defined as a set of mental and personal changes accumulated in the process of mastering and performing professional activities, providing an effective level of solving complex professional problems (Vavilova, 2003). In this vein, L. Vavilova (2003) laid the following complex of qualities in the basis of the professional identity of labour protection specialists: communicative (interactive) qualities that determine the attitude of a labour protection specialist to an active subject of joint activity which is

built according to the “subject-subject” scheme and the ability to work in close cooperation with specialists of other profiles; status-positional qualities reflecting the substantive characteristics of the subject, the system of his relations to society, people, himself and to norms, rules and professional values; activity-professional (subjective) qualities, including professional goal-setting, professional knowledge, professional activities programming and professional attitude; outwardly behavioral qualities, containing exactingness, sociability, adherence to principles, confidence, fairness, tact.

Based on the highlighted views of scientists, the features of the professional activity of a safety engineer, as well as during a survey among students (future occupational safety engineers), teachers of higher educational institutions who train these specialists, we have identified the following professional and personal qualities of a future engineer in labour protection:

- volitional – persistence, adherence to principles, exactingness and strictness in relation to personnel in compliance with the norms and legislation on labour protection, self-control, restraint, discipline;
- emotional – poise, emotional stability, stress resistance, self-control;
- moral – conscientiousness, fairness, decency, law-abidingness, mutual respect, tact;
- communicative – sociability, business communication skills, charisma, oratorical skills to motivate employees to improve labour safety;
- organizational – responsibility, diligence, dedication, initiative, decisiveness, rationality of decision-making, efficiency, mobility.

It should also be noted that a future safety engineer as a manager of an occupational safety and health management system at an enterprise must have leadership qualities such as healthy ambition, dedication to his work, understanding of the need to motivate personnel to improve occupational safety, a properly built relationship with personnel, and the ability to self-improvement and self-development. An important quality in the professional activity of a labour protection engineer is decisiveness, which is necessary when organizing control over compliance with safety requirements providing the timely issuance of instructions and the removal of an employee from labour duties in case of his violation of labour protection legislation. It is important to note that in the professional activity of an occupational safety engineer there often occur traumatic situations associated with accidents at work that have serious consequences or a fatal outcome. The investigation of such accidents takes a certain period of time when the occupational safety and health engineer has to interact with the regulatory and supervisory authorities. In view of this, a safety engineer must have the high moderation, the ability to endure adverse psychological influences and emotional stress for a long time.

To achieve the effectiveness of the professional activity of a safety engineer, it is advisable to form and develop not only the above-mentioned professional and personal qualities, but it is relevant to possess the formed complex of professional abilities. The analysis of scientific special and psychological and pedagogical literature made it possible to determine the following professionally important abilities that future occupational safety and health engineers should have:

- organizational – the ability to create a labour protection management system at an enterprise, organization, as well as motivate personnel to fulfill and comply with safety requirements, make management decisions in non-standard production situations, organize the work of personnel to ensure labour safety;

- constructive – the ability to select legislative and regulatory acts, plans and programs of measures for labour protection ensuring the creation and functioning of a labour protection management system at work, in organizations;
- gnostic – the ability to obtain, generalize and systematize knowledge in the field of labour protection, in the rapid processing of incoming information and highlighting the main points in it;
- communicative – the ability to communicate, to work in a team, to cooperate and establish interaction with government bodies of labour protection, heads of structural divisions of the enterprise, employees of the organization and the employer; prevention and resolution of conflict situations in the process of professional activity; skills in preparing reports and holding negotiations;
- predictive – the ability to foresee dangerous situations, predict industrial injuries and occupational diseases.

In the studied problematics it is highly acquired for future engineers on labour protection to develop thinking focused on safety. Notice the fact that an occupational safety and health engineer as a highly cultured person must have a respectful attitude towards the environment, have caring attitude to energy, occupation and health, think about the dangers and consequences of the use of modern production technologies, apply methods and means of labour that are safe for health and nature, use environmentally-friendly technologies at work and in everyday life, contribute to the preservation of flora and fauna on the planet. In our research, we consider energy-saving thinking as understanding of the need for saving energy, water, natural gas and motor fuel, efficient use of energy resources through innovative solutions; expedient and deliberate acquisition of new goods and things, prolonging the life of old things, using eco-clothes; waste disposal for reuse and waste sorting. Labour protection thinking is defined as an understanding and awareness of the need to preserve health and life in the labour process, knowledge and application of regulatory and legislative documents in the field of labour protection, implementation of professional activities in accordance with safety standards, the purposeful use of safe methods and means of work, personal protective equipment, self-improvement by continuous training on labour protection. Health-preserving thinking is manifested in a person's ability to self-preservation and prevention of health, internal introspection and self-respect, positive motivation for life and an active life position, harmonious development in society, readiness to adapt to constantly changing conditions of existence in the environment.

It is important and significant in the context of the systematization and analysis of literary sources to study the approaches to the formation of professional and personal qualities of specialists. Within the framework of the problem under consideration, the theoretical model of the formation and development of professionally significant personality traits was developed by E. Zeer (2006) and includes a motivational component (the need to solve professional tasks successfully, interest in the process of solving them, desire to achieve success and show oneself from the best side, etc.), a cognitive component (understanding of professional tasks, assessing their significance, knowledge of solutions, an idea of probable changes in the working environment, etc.) and an operational-activity component (character traits, abilities, characteristics of perception, thinking, emotional and volitional processes adequate to the requirements of professional activity) components.

With all the diversity and versatility of positions to the problem of the formation of professional and personal qualities, we have highlighted the main provisions aimed at the formation of a culture of professional activity safety: activation of motivational activity of students to realize the need to form a culture of labour protection, labour culture, health culture; raising value orientations aimed at developing safe thinking; mastering by future safety engineers the system of knowledge and skills on hazardous and harmful production factors, the main sources of increased danger of production facilities, means and methods preventing and protecting against occupational risks; development of skills to motivate and stimulate personnel for safe work; creating the reflective environment conducive to introspection of one's own level of safety culture and high self-organization of professional activity.

Conclusions. Thus, the generalization and systematization of the views of scientists shows that the presented system of professional and personal qualities and abilities of future occupation safety and health engineers is quite holistic and actualizes the role of the personal component in the process of forming the culture of safety of professional activity. The proposed approaches to the formation of the culture of safety of professional activity among future safety engineers create the preconditions for the development of professional adaptation, professional becoming and mobility in the context of various workplace situations. We see the prospect of the direction of scientific research in the development of criteria for assessing the personal component of the safety culture of professional activities of future occupational safety and health engineers and the implementation of experimental verification of the formed indicators.

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