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THE USE OF TRAINING TECHNOLOGIES IN THE PROCESS OF PROFESSIONAL TRAINING OF FUTURE RESCUERS IN HIGHER EDUCATION INSTITUTIONS

Abstract. The article presents the results of the implementation and approval of the developed training of psychological readiness of future rescuers for activities in extreme conditions. The training consists of nine interactive classes aimed at developing professionally important qualities of specialists in the field of human security. Depending on the stage of the research, theoretical, empirical and statistical methods were used. Before and after the implementation of the training, a pre- and post-training questionnaire was conducted using five psychodiagnostic methods, as well as an author's questionnaire to determine the level of psychological readiness of the respondents who took part in the research. After conducting some training sessions, post-training testing was conducted, namely at the end of the second session «Confidence as a step to success», the methodology for determining the level of subjective control was conducted. At the end of the the third lesson «Communication as a way of knowing others and oneself» the Methodology of studying the volitional organization of the personality by M. Gutkin, G. Mykhalchenko was conducted. At the fourth lesson «Responsibility as a guarantee of help» the Methodology for determining coping strategies by R. Lazarus was conducted. After the fifth lesson «Success - the desire for perfection», A. Rean's Methodology for determining success motivation and fear of failure was conducted. At the end of the eighth lesson «My future professional activity», the method of determining the style of self-regulation by V. Morosanov was conducted.

Keywords: psychological readiness, training technologies, professional training, future rescuers, extreme conditions.

Introduction. Today the complexity and riskiness of the professional activities of future rescuers generate a need for rethinking theoretical and methodological approaches and searching for innovative training methods in higher education institutions (HEIs) with specific learning conditions. Specialists of the State Emergency Service of Ukraine (SESU) during their professional activity, often encounter various professional and psychological burdens such as work in specialized gear, challenging circumstances for emergency situation, physical exertion, noise, danger, anxiety, etc. Given this context, with Ukraine integration into the European framework, the priority task becomes the training of a new generation of rescuers, including the utilization of training technologies to cultivate their professional readiness for operations under extreme conditions. In the 21st century, training technologies have become a widely used form of professional advancement, yet they are not prevalent in higher education institutions (HEIs). This is because the academic staff, in most cases, still employ traditional teaching methods, forms, and methodologies that are stipulated by educational programs and curricula.

Analysis of recent research and publications. Training sessions are seen as a means of fostering the development and enhancement of future professionals' crucial qualities, shaping their orientation towards their field of activity, fostering teamwork, self-esteem, self-regulation, self-improvement, reflection, and more others. The incorporation of training technologies into the educational process of HEIs can serve as a valuable tool for improving the quality of education and the development of learners. Training technologies facilitate the active engagement of higher education learners in the learning process, encouraging their active participation in task-solving and the acquisition of essential skills.

Here are some strategies that can be employed for the integration of training technologies into higher education:

Role-playing games and simulations: Creating scenarios that simulate real-life situations allows students to actively analyze and solve problems. This can be particularly beneficial for fields where practical skills are crucial, such as medicine, management, education, and more.

Group discussions and debates: Active participation in group discussions and debates helps students develop analytical and communication skills, persuasion abilities, and critical thinking.

Practical exercises and training sessions: Utilizing practical exercises and training sessions helps students reinforce theoretical knowledge, gain practical experience and skills, and develop self-discipline.

Online learning technologies: Using online platforms for training purposes enables the creation of interactive courses, webinars, and self-paced training modules, allowing students to learn at their convenience and pace.

Coaching and mentoring: Involving qualified coaches or mentors helps students address personal issues, set goals, and develop their potentials.

Systematic skill development approach: Introducing programs for the development of soft skills like communication, critical thinking, teamwork, etc., assists higher education learners in becoming more competent and adaptable to the modern job market.

When implementing training technologies in the educational process, it's important to consider the individual characteristics, needs, and abilities of students. Providing proper support for instructors and trainers who are implementing these approaches is also essential, along with creating a conducive learning atmosphere that encourages active student participation.

The incorporation of training technologies into educational activities as preparation methods continues to be a subject of ongoing scholarly discussions. Notably, the specifics of using training programs were discussed by S. Boiko, S. Kalaur, O. Keryk, A. Kuntsevskaya, K. Levina, I. Matiukiv, I. Manohina, R. Pento, K. Rodgers, O. Chuiko, T. Yatsenko and others.

In the context of preparing future professionals in extreme conditions have been explored by researchers such as K. Balabanova, V. But, O. Vavryniv, M. Koval, Z. Kovalchuk, O. Kravchenko, O. Kutsyi, V. Lefterov, S. Liebidieva, S. Myronets, Ya. Ovsianikova, Ye. Potapchuk, A. Pobidash, O. Timchenko, H. Khlypavka, O. Shapoval, Yu. Shvalb, and others.

Considering the diversity of training technologies and the constant need for the academic staff of higher education institutions with specific learning conditions to enhance the forms, methods, and tools of professional training, a Training for Psychological Readiness of Future Rescuers for Operations in Extreme Conditions has been developed.

The goal of the article is to experimentally verify the effectiveness of the developed psychological readiness training of future rescuers in extreme conditions.

Research results. Throughout various stages of the scientific investigation, we employed theoretical, empirical, and statistical research methods. Theoretical methods encompassed analysis, synthesis, systematization, and logical generalization of scientific sources pertaining to the issue of psychological readiness of higher education institution graduates under specific learning conditions. Empirical methods included observation and testing to ascertain the professionally important qualities of prospective specialists. Statistical methods involved computerized computation of statistical data using the SPSS software.

In the 21st century, training as an active learning method stands out as one of the most widespread forms of psycho-pedagogical work, celebrated for its effectiveness, internal openness, positive atmosphere, individual and group reflection, particularly in the development of professional competencies. Based on training sessions, an effective interaction with the environment is cultivated [4, p. 5-6].

The term «training» in English is understood as «preparation», «training», «learning» and «education».

Training technologies in psychology represent an approach to psychological work that utilizes various methods and techniques of teaching to induce changes in behavior, emotional reactions, cognitive processes, and other aspects of human psychology.

These training technologies are frequently employed in psychotherapy, psychological counseling, psychological support, and various psychological programs to aid individuals in problem-solving, skill development, altering negative behavioral patterns, and achieving psychological well-being.

Some of the popular training technologies in psychology include:

1. Cognitive-Behavioral Training: This approach focuses on changing negative thought patterns and behaviors that impact emotions and personal functioning.
2. Social Skills: Social skills training helps individuals learn to communicate with others, establish healthy relationships, and interact effectively in various situations.
3. Relaxation Training: This type of training teaches methods for stress reduction, improving self-control, and enhancing attention focus.
4. Emotional Intelligence Training: This technology aims to develop awareness of one's own emotions, understanding others emotions, and effective emotional management.
5. Art Therapy: This approach utilizes creative methods such as drawing, working with clay, or music therapy to help express emotions and resolve inner conflicts.
6. Self-Regulation Training: This involves learning methods to manage one's own reactions and emotions in challenging or stressful situations.

These training technologies can be utilized individually or combined to achieve specific psychological goals and enhance an individual's quality of life. The selection of a particular training approach depends on the person's needs and the nature of the issue they bring to a psychologist or psychotherapist.

The developed psychological readiness training of future rescuers in extreme conditions consists of nine interactive sessions, each lasting 1.5 to 2 hours, and is thoroughly described in our previous scientific works [1, 2, 3]. As a result, we aim to experimentally verify the effectiveness of its implementation in the professional training of professionals in extreme conditions, specifically future rescuers.

Before conducting the training, we selected a group of thirty cadets for the initial trial. These individuals were divided into two groups, each consisting of fifteen participants. All the education

seekers willingly expressed their desire to participate in the proposed training sessions. Prior to the commencement of these sessions, we conducted pre-training diagnostics for all thirty cadets using specified methodologies [3]:

1. Author's questionnaire for determining psychological readiness.
2. Method for assessing the level of subjective control.
3. Method for studying volitional organization of personality by M. Gutkin and G. Mykhalychenko.

4. Coping strategies assessment (Lazarus Coping Test).
5. Motivation for success and fear of failure (A. Rean questionnaire).
6. Methodology for determining self-regulation style (V. Morosanov's method for assessing behavioral self-regulation style - SSPM).

Let's delve into the details of each of the developed sessions. For instance, during the first training session titled "Psychological Readiness as an Active State", the expectations of future rescuers were explored to cater to their needs throughout the training process. Their desires encompassed:

Discovering whether they would become professional rescuers and if they made the right career choice.

Striving to become highly skilled and responsible professionals.

Identifying their own strengths and weaknesses. Learning about psychological readiness.

Acquiring skills to overcome fears and manage stressful states. Breaking communication barriers.

Developing the ability to recognize positive aspects in their surroundings.

Learning to function under conditions of deprivation.

Developing cohesion around a shared goal and trusting colleagues.

Psychologically preparing for actions in extreme conditions.

During this same session, an initial questionnaire was administered to determine psychological readiness. Additionally, on the first training session, we introduced the cadets to the concepts and criteria of psychological readiness, fostered a comprehensive attitude toward both risky activities and themselves within those activities, and invited participants to collaborate in the research endeavor.

Let's examine each of the developed sessions in details. During the first training session, «Psychological Readiness as an Active State», the expectations of future rescuers were explored to address their needs throughout the training process. Their desires included the following: Learning whether they would become professional rescuers and if their career choice was right. Aspiring to become highly skilled and more responsible professionals. Discovering their own strengths and weaknesses. Understanding psychological readiness. Acquiring skills to overcome fears and manage stress.

Breaking communication barriers. Developing the ability to recognize positive aspects in their surroundings.

Learning to work in conditions of deprivation. Developing cohesion around a shared goal and trusting colleagues.

Psychologically preparing for actions in extreme conditions. During this session, an initial questionnaire was administered to determine psychological readiness. Additionally, during the first training session, cadets were introduced to the concepts and criteria of psychological readiness, fostered a comprehensive attitude toward both risky activities and themselves within those activities, and invited participants to collaborate in the research endeavor.

At the end of the second session, «Confidence as a Step to Success», the RSQ technique was administered, and the results are presented in Figure 1:

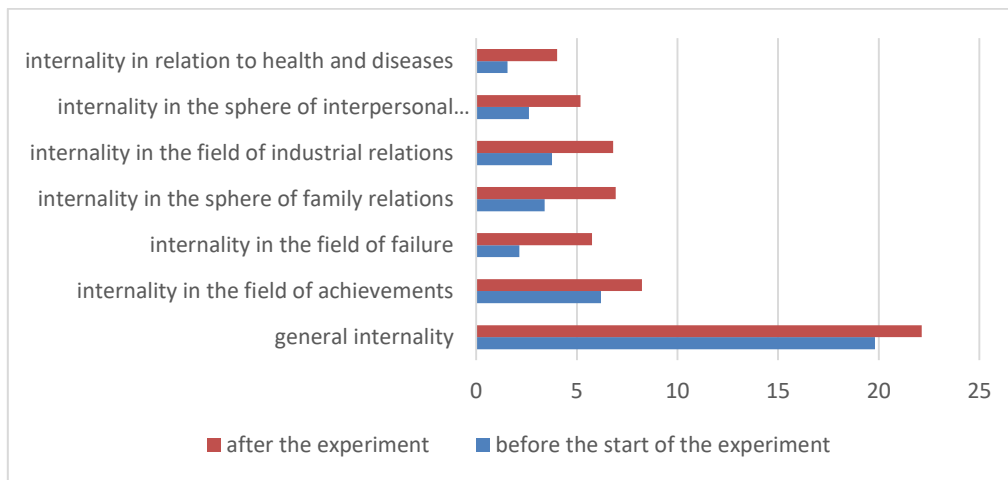


Figure 1. – Comparison of Changes in Subjective Control Level

By employing this technique, changes in the level of subjective control were determined. As depicted in Figure 1, before the session, both groups of cadets had lower levels of subjective control, but after the session, these levels increased. This indicates the combination of confidence and readiness for action within them. During this same session, all participants were introduced to the concept of confidence and its underlying causes. Ultimately, future rescuers learned to analyze their behavior in extreme conditions, overcome stressful states, and prioritize confident behavior.

After conducting the third training session on “Communication as a Path to Understanding the Surroundings and Oneself”, the Methodology for Studying Volitional Organization of Personality by M. Gutkin and G. Myhalchenko was employed. The following results were obtained:

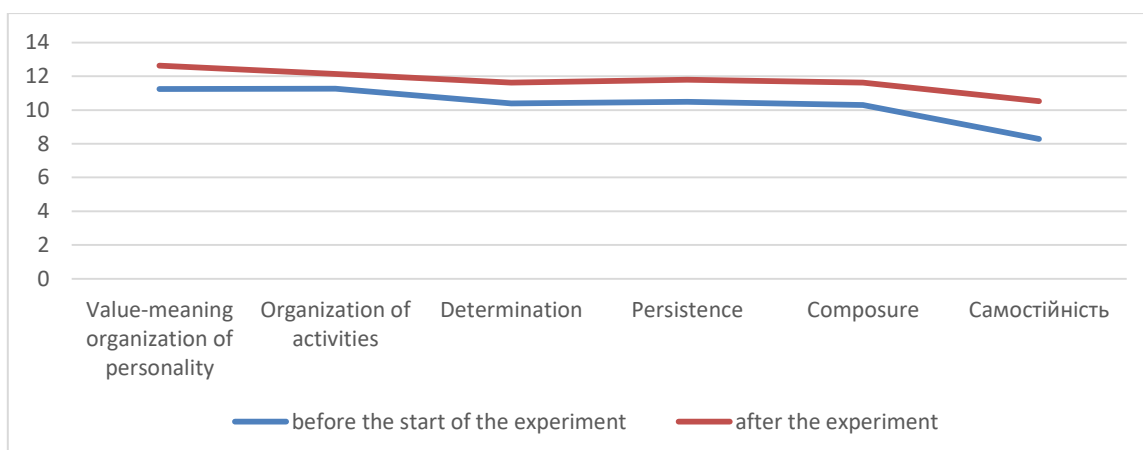


Figure 2. Comparison of the Level of Volitional Organization of Personality

According to the obtained results of the broken curves of volitional organization of personality in Figure 2, slightly higher indicators of value-based semantic organization, activity organization, determination, perseverance, self-mastery, and independence were identified among the cadets after the session. Additionally, the future rescuers learned to create conditions for protection, overcome communication barriers, recognize positive aspects of colleagues' personalities, and demonstrate attention and respect for the team.

At the conclusion of the fourth session titled “Responsibility as a Guarantee of Assistance”, the Lazarus Coping Test was administered, yielding the following average scores:

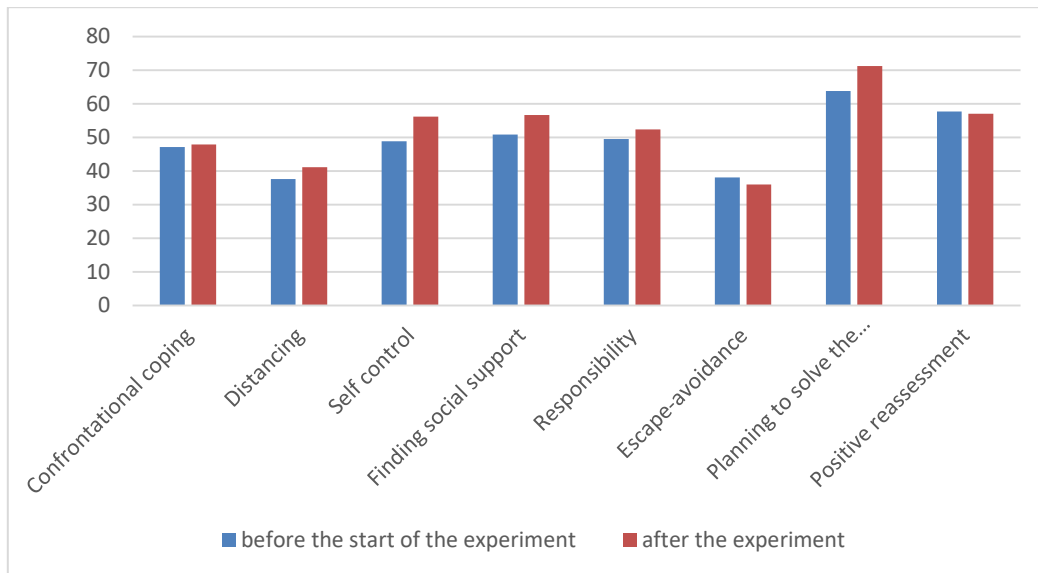


Figure 3. Comparison of R. Lazarus's Coping Strategies

In accordance with the obtained data in Figure 3, we observe that the indicators of confrontational coping and positive reappraisal remained virtually unchanged after the session. However, the indicators of distancing, self-control, seeking social support, responsibility, and problem-solving planning have clearly increased, while the indicator of escape-avoidance has decreased. During the session, the rescuers familiarized themselves with the concept of responsibility, learned to utilize their internal potential for making responsible and managerial decisions, developed the ability to overcome life activity challenges, and realized their accountability for the outcomes of their actions.

The fifth session, titled «Success – the Desire for Excellence», concluded with the determination of motivation for success and fear of failures using A. Rean's questionnaire:

Table 1. Comparison of Success

Arithmetic mean of motivation	
before the start of the experiment	14,32
after the experiment	15,74

In Table 1, we observe that the average score of motivation for success increased by 1.42 after the completion of the fifth session. This indicates that the rescuers enhanced their motivation for active engagement and raised their aspirations. They analyzed pathways to achieving success, learned to set and achieve goals, consolidate information, and utilize acquired knowledge in their future professional endeavors.

The sixth session, «Psychophysiological Self-Regulation», and the seventh session, «Antistress Recovery», concluded with pleasant demonstrations of personal recovery states and renewed energy, energizing everyone for further collaborative daily activities. During these sessions, the rescuers familiarized themselves with techniques of breathing, recovery, muscle relaxation, autogenic training, meditation, and based on these techniques, they released muscle tensions and stress. They mastered techniques that help foster self-belief and cultivate a positive mindset in risk situations.

The eighth session, «My Future Professional Activity», concluded with the implementation of V. Morosanov's behavior self-regulation style methodology, yielding the following results (Figure 4):

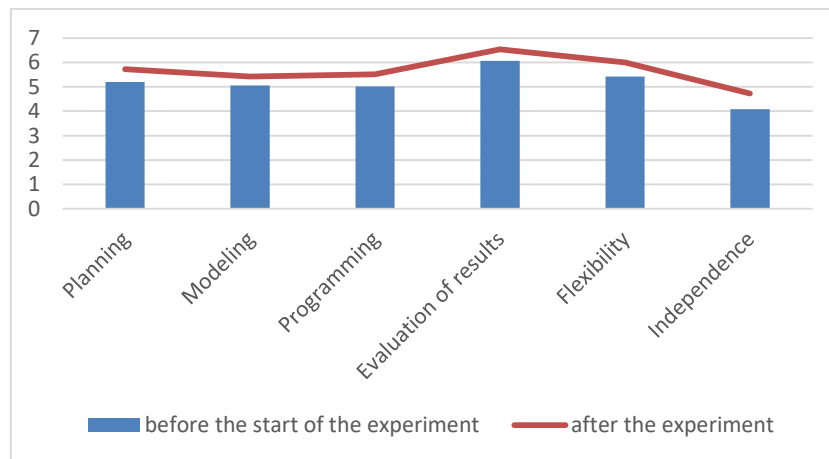


Figure 4. Comparison of V. Morosanov's Behavior Self-Regulation Style

In Figure 4, a comparison of V. Morosanov's behavior self-regulation style indicates that all indicators depicted in the line graph increased after the session compared to before the session (columns). The most significant changes were observed in the self-reliance scale. During the «My Future Professional Activity» session, the rescuers familiarized themselves with their future professional activities, learned to work under conditions of deprivation, and rallied around a shared goal.

During the reflection on the final ninth session, «Summary of Collaborative Activities», an initial diagnosis was conducted using the author's

«Psychological Readiness Questionnaire», and the following results were obtained:

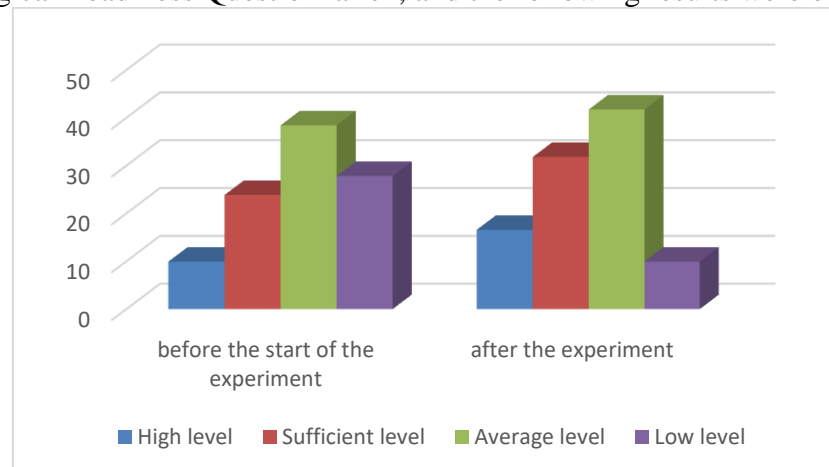


Figure 5. Dynamics of Formation of Professional Readiness of Rescuers Before and After Training Sessions

As seen in Figure 6, after participating in the training, the cadets' indicators of high-level psychological readiness increased by 6.63%, sufficient-level readiness increased by 7.95%, and moderate-level readiness increased by 3.31%. However, indicators of low-level readiness decreased by 17.89%. The statistical significance of the results was verified using the χ^2 criterion, which allowed us to identify significant differences in the indicators at the end of the experiment with a high level of confidence (95%). Additionally, at the end of the last session, feedback was obtained, during which all participants expressed positive and emotional feedback regarding the training we developed and conducted.

Conclusions and prospects for further research. Thus, the training on psychological readiness of future rescuers to operate in extreme conditions, developed and conducted by us, along with the empirical-statistical data obtained before and after its implementation, allows us to conclude the effectiveness of such an educational approach. The combination of these findings with the specifics of training in the State Emergency Service of Ukraine contributes to the formation of psychological readiness among cadets in the field of human safety.

A prospect for further research is the development of training sessions for future police officers of the Ministry of Internal Affairs of Ukraine, which would further enhance the content of their professional preparation.

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ВИКОРИСТАННЯ ТРЕНІНГОВИХ ТЕХНОЛОГІЙ У ПРОЦЕСІ ПРОФЕСІЙНОЇ ПІДГОТОВКИ МАЙБУТНІХ РЯТУВАЛЬНИКІВ У ЗАКЛАДАХ ВИЩОЇ ОСВІТИ

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