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METHODOLOGICAL APPROACH TO THE OPTIMIZATION OF PRACTICAL LESSONS IN LABOUR PROTECTION FOR TRAINING OF PROSPECTIVE TEACHERS OF TECHNOLOGIES

Summary: The article highlights the current state of teachers of technologies training in the field of labour protection. The methods of situational and problem-based teaching, the possibilities of their using in labour protection practical classes are described. It is demonstrated that the organization of labour protection practical training of prospective teachers of technologies with described above methods enables the optimization of the process.

Key words: methods of teaching, labour protection, training of teachers of technologies, problem teaching, situational teaching.

Introduction. The overall level of health and working capacity of the child population is directly dependent on a comprehensive capacity development of country in general. In addition, the current period is characterized by rapid development and introduction of new informational, communicative and technological means of production to meet the needs of innovative global development strategy. It should be noted that in such circumstances human life conditions change rapidly, and this in turn requires a reassessment of views on maintaining the health and working capacity of the younger generation. The technological preparation of students, the purpose of which is the younger generation competitive existence competencies formation in the modern highly developed, technological, informational environment is appropriate in such circumstances. The role of the teacher of technologies, formerly teacher of labour training undergone significant revaluation. This is due to the social order, the requirements of which is the formation of a new modern generation of society. Under these conditions, labour training does not provide the necessary training of student youth for life in the modern world. It should be noted that the elaboration

of safe conditions for the educational process does not cover the full activity of the technologies teacher in direction of labour protection. The modern teacher should ensure development of students' skills of safe using of technological equipment, awareness of the value of their own lives and working capacity. This problem situation requires appropriate professional and pedagogical training of prospective teachers of technologies. Studying of labour protection allows ensuring the formation of competencies of health and working capacity preservation of students, that is why this area of training of prospective technologies teachers should be paid much attention.

Analysis of recent researches. Training of prospective technologies teachers (labour training) appeared to the subject of researches of V. Andriyashyn, P. Atutov, J. Batyshev, A. Vyhrusch, O. Hedvilo, V. Hetga, R. Gurevych, V. Gusev, P. Dmytrenko, N. Kardash, O. Kobernyk, V. Kuzmenko, V. Kurok, V. Madzihon, L. Orshansky, V. Polyakov, G. Razumna, V. Sydorenko, M. Skatkin, V. Steshenko, G. Tereshchuk, V. Tytarenko, O. Torubara, D. Thorzhevsky, V. Harlamenko. A large number of scientific and educational researches were given to the improvement of general technical, graphical, design, technology teacher training, the formation of a technical mindset, work culture, skills of using of information and communication technologies, implementation of career guidance, but the issue of the prospective technology teacher activity in labour protection field wasn’t studied properly. There is no clear methodological approach of teachers training in this area.

The main **aim** of our research is to determine the teaching methods which are necessary to improve organization of labour protection practical lessons in training of prospective teachers of technologies.

The main material of research. At the present stage of modern society development the world scientific community searches pedagogical innovation priorities in education and upbringing of the younger generation. The transformation of the nature and content of work poses serious challenges before society which are associated with the withdrawal of the public education system to

the level of developed leader - countries, reform its conceptual, structural and organizational principles. Development of educational establishments of innovative type, which must meet the requirements of today, causing the search for new organizational forms of education and training, updating content of educative process. The need to increase the level of higher education requires the development of new strategies and techniques.

Search for new methodical approaches in subjects teaching is one of the priorities of modern scientific elite activity. The noted earlier opinion that the activities of teachers of labour protection technologies are essential - requires optimizing the process through the introduction of innovative teaching approaches. Particularly large attention is paid to the training of prospective professionals practical preparation, as its purpose is to ensure the formation of appropriate professional skills.

Labour protection technologies teacher training, as mentioned earlier, is carried out in the study of health and safety (HSE).This branch is treated as a system of legal, social, economic, organizational, technical, sanitary and health care measures and means to preserve life, health and working capacity rights in the process of work. [1, p.4]. The aim of this subject is to develop competencies, to create safe and friendly working environment, and if it considers the technologies teacher it deals with own work and activities of students.

The current state of labour protection studying by prospective experts in technological education is characterized by not matching the content of the training requirements with their future job duties and the using of outdated imperfect methods. As we know the traditional system of educational process in higher education is of lecture-practical type. The peculiarity of this system is to obtain a theoretical lecture material and detail its absorption in the practical activity. Workshop is a form of organization which includes analysis, expansion, deepening and consolidation, application and control of the assimilation of information which was received while training (in lectures and during independent work) under the supervision of university lecturers [2]. In most cases, the current conditions of the

practical work are reduced to deeper reproduction of theoretical material. Taking into account importance of teachers of labour protection technology activity, workshops in this subject can not be based on retransmission approach. Reckless studying of theoretical material and losing connection with the requirements of the professional duties of teachers of technologies is not permitted. We believe that it would be best to conduct classes on labour protection, using teaching methods that would allow reproducing the conditions of future vocational and educational activities of the teacher as accurate as possible.

These methods include situational and problem teaching which feature is the increased activation of teaching and learning activities, and the assimilation of knowledge.

A case control study in modern terms is an effective tool for improving the quality of training of all sectors of the economy. For the first time this technology has been used at Harvard Business School (School of Business Administration, Harvard University, Boston, USA). The popularity of it in the CIS countries was only in early 1970's. This technology can be used independently and as part of traditional teaching methods or business games and training [3].

Designing tools of situational learning methods for the organization of practical work on labour protection, we should consider the following pedagogical decisions. Performance of professional duties of prospective labour protection teachers of technology is accompanied by a large number of regulatory support, tools, manufacturing equipment. Thus occurrence of accidents is possible requiring precise algorithm of teacher actions in such situations. Practical classes that allow teachers to consider the particular action in case of accidents are hold in the form of seminars, which are based on learning to investigate the accident which occurred to the employee. It should be noted that the holding of classes in this form is not valid, because reasons and issues of teacher actions in accidents, giving first aid, prevention of such incidents are not demonstrated. Under such circumstances method of situational learning – "incident" is reasonable.

The essence of this method is to search for information to make a decision by the student and teaching him/her the necessary information, its collecting and systematic analysis. Positive aspects of using this method of study conclude that instead of a detailed description of the situation conditions, students receive only a summary of the incident. The theoretical material in lectures or during independent work is being absorbed in active form. That is, if the simulated incident - an accident that occurred with an apprentice students contains brief facts that describe the conditions of the event. The theoretical material in lectures or during independent work is absorbed in active form. That is, if the simulated incident is an accident that occurred with pupil, students have a number of facts that describe the conditions of the event. In addition, it is obligatory to use the job description, standards, legislation which regulates the activities of employees of educational institutions. Model of the incident is being prepared in advance, and then is given to the students in some part, which is the basis of the production situation. After that, students begin to analyze the incident: establishing the causes of the accident, identification of documents which regulates the legal side of this event, reasoning optimal methods of providing assistance to victims, identify the organizational and technical measures to prevent further accidents. It is advisable to carry out such practical training in small groups of 3-5 people. This is because of using method of the incident with the whole group will cause a superficial analysis of situations and making decisions based on incomplete information, as well as all full employment of the academic group members under these conditions is not possible. The organization of practical work in small groups will ensure their implementation in terms of involving all subjects of the educational process, competition, and this, in turn, will increase the level of learning and formation of labour protection competencies. For improving the efficiency of the method of the incident it should be modified by method "Role-playing", which allows you to use the most credible management or psychological-production situation. The feature of this method is the staging duties of technology teacher in the sphere of labour protection. It is

advisable that each group gives an objective assessment of activities and decisions of another group.

We consider it is appropriate that a more profound evaluation of existing teacher's labour protection competencies technologies could be implemented by asking questions which are not true in advance. This type of "provocative approach" in training ensures a high level of awareness of educational material and forms a clear idea of their professional and educational activities.

It also must be noted that the method of the incident should be used in situations of critical nature, but such problems of labour protection as microclimate, sanitation and hygiene facilities, the study of the structure and principles of the use of fire-fighting are not of acutely problematic nature, so we consider it is appropriate to use case-study method in the organization of practical training. One of the first researchers C. Hariad believes that the problem of implementing the method of case-study in the practice of higher education nowadays is quite relevant, because of two trends:

- the first follows from the general thrust of education, its orientation is not as much to obtain specific knowledge as to the formation of professional competence and skills of mental activity, personality development skills, with particular emphasis on the ability to learn, change of paradigm thinking, the ability to process huge amounts of information;
- the second follows from development of quality requirements for professional who, in addition to satisfying the requirements of the first trend, should also have the ability of optimal behavior in different situations, to differ by systematic and efficient actions in a crisis situation [4, p.93].

Application of case-study methods in the teaching of labour protection to prospective technologies teachers:

• improve cognitive interest in the subjects which are taught;

• improve understanding of own labour protection activities;

• promotes creative, innovative, research, communication and creative skills in making important decisions [5, p.94].

For example, when studying for providing microclimate parameters in training and production facilities prospective teachers are allowed to analyze the order of the event entirely. An important feature in this situation is that information on this issue isn't complete. The presence of methods of dispute, debate, argumentation in the structure of case-study method trains participants, teaches them to respect the norms and rules of communication. Teachers should be quite emotional throughout the learning process, to allow and prevent conflicts, create atmosphere of cooperation and competition at the same time, observe the individual rights of the student. The overall structure of problem construction and case-study method using has the following algorithm:

- Formulation of the problem and plan of studying of material of the case; Phased task to perform;
- Discussion issues;
- Requirements for presentation of the results of the case performance;
- Description of the situation;
- References;

When designing such an algorithm for the practical sessions on labour protection case method formulation of the problem is reduced to the industrial nature (this the technology teacher could potentially meet in the workplace), reporting peculiarities of practical laboratory analysis presentation and a detailed description of the situation by teacher. In addition, taking into account the specifics of labour protection, it is necessary to provide students with relevant legal documentation, the content of which clearly corresponds to the content of practical classes.

In general, such methods which are mentioned above as "incident", "role playing simulation", "case studies" are problematic in their structure. Most domestic scholars believe that the methods of situational and problem-based teaching are the same, in turn, British, American and most of the European scientific and pedagogical schools consider these methods similar in nature. We

believe that in the organization of practical training on labour protection in the preparation of prospective teachers of technology these methods must be synthesized necessarily and appropriately, namely problem-focused professionally oriented tasks based on production environments must be used.

Modeling problems that recreates the production situation of the professional activity of future technology teacher gives students an approximate understanding of the production difficulties and possible solutions. This form of modification of the above described methods can use this approach at any stage of training. We believe that the methodological approaches of optimization of practical training on labour protection in the preparation of prospective technologies specialists have the following structure (Figure 1.).

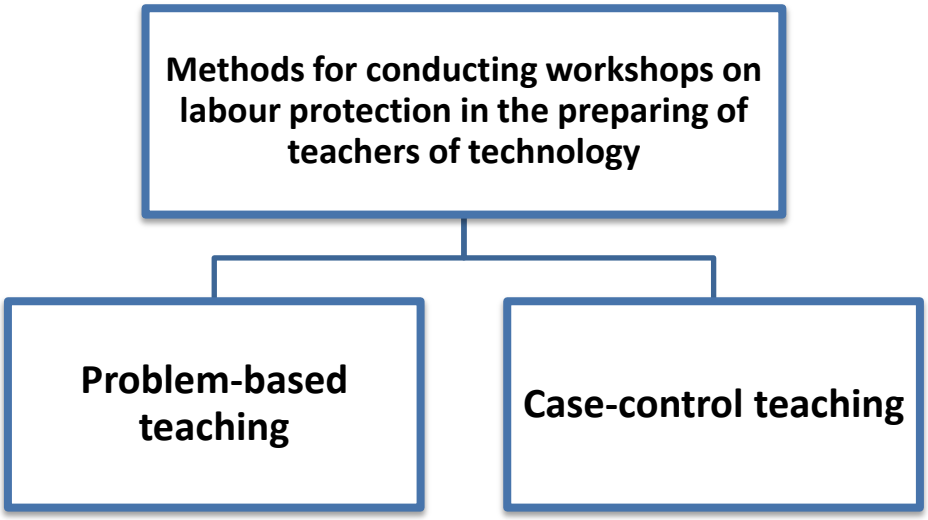

Figure 1. Methods for conducting workshops on labour protection

The result of synthesis of above described methods of situational and problem-based teaching are teaching and production situations. The specificity of this method is to reproduce accurately the conditions and the specific work of the teacher as well as the creation of the problem situation of industrial nature and finding ways to solve it.

Summary. The choice of these methods is not unreasonable they are aimed at providing high quality of both practical and theoretical training of prospective teachers. Problem-search, situational principles of organization of practical training

on labour protection can provide high-quality comprehensive training of each component of the professional activity of technology teacher which are based on real, as accurate as possible conditions of his/her future work.

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