

Business game as a form of effective labor protection training

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Introduction. The article analyzes the most likely damage from fatal industrial accidents. The analysis revealed the main cause of industrial accidents — violation of safety requirements during the organization of various works and their implementation in practice. A special role in the prevention of accidents is played by the process of employee training, which requires careful preparation. That is why, in order to minimize accidents and erroneous actions of personnel, it is proposed to introduce a new business game "Guardians of labor" into the practice of training.

Problem Statement. The objectives of this research: creating a business game for learning and adapting security requirements at the enterprise; developing and comparing different options for evaluating security solutions; developing information analysis skills; developing the activity of game participants.

Theoretical Part. Training in the form of a business game gives you the opportunity to work out the skills of analyzing information, evaluating and comparing different approaches to solving a problem. The authors of this study created a business game "Guardians of labor". It helps you to strengthen knowledge of occupational safety and health, fire safety, first aid and accident investigation.

Conclusion. The proposed method helps improving the professional qualities of students, develops the ability to reasonably defend their opinions and analyze alternative approaches.

Keywords: business game "Guardians of labor", training, adaptation, labor protection, safety at work, interactive training.

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Introduction. Accidents at work can cause serious damage [1]. In Russia, most fatal industrial accidents are caused by errors in the organization of work processes. One of the problems is the lack of relevant knowledge among employees.

An accident is a result of dangerous conditions and dangerous actions. The organization of training should minimize the number of dangerous erroneous actions of personnel in emergencies [2-4].

Problem Statement. The purpose of this research is to develop a training methodology in the form of a business game that concisely presents and visualizes the security requirements at the enterprise, and will allow you to develop skills in analyzing information that is important for professional activity. In this case, the group of players deepens their knowledge by working out different game situations [5]. As part of this training process, you can, in particular, master the content and application of special documents in production practice: instructions, regulations, etc.

The goal of the game is to get knowledge on labor protection. To achieve this goal, you need to solve a number of tasks:

- to develop the ability to analyze information;
- to develop the ability to assess the practical potential of various proposals;
- to develop students' initiative.

Theoretical Part. Training in the form of a business game allows you to learn information through the interaction of participants. This is the most effective method of perception of information. Due to the physiological features of memory, a person perceives the largest amount of information (up to 90 %) through practice and action. The results in reading and listening are usually much lower (up to 20-30% is absorbed) [6].

Based on these data and the motives of the business games on labor protection "Gold of Alaska" and "Martian Chronicles", the authors have created their own analog — "Guardians of Labor". The new product will increase the effectiveness of studying current standards and requirements in the field of industrial safety, help realize responsibility for organizing safe working conditions, learn to reasonably defend your opinion, and improve teamwork skills. It should be noted, that participation in the game requires knowledge of the relevant theory and some training [7-10].

The proposed game systematizes questions on occupational health, fire safety, first aid, accident investigation, protective equipment and safety signs. Players draw cards with questions (Fig. 1).



Fig. 1. Game cards of the game "Guardians of Labor"

Then the participants move around the entire playing field (Fig. 2) and extinguish ignorance.



Fig. 2. "Guardians of Labor": playing field

At the same time, the team needs to work together. Managers, employees, outsourcers, specialists in the field of labor protection, representatives of training centers, etc. can participate in the game.

Participants start from the "Forward" cell and draw one card from category 4. If the question is answered correctly, the player receives a PPE set (a chance to save himself from one accident). In case of an incorrect answer, the employee misses this chance, the card is returned to the bottom of the deck.

Some cells are marked with special icons. The player performs additional tasks if his chip is in one of the cells listed below.

— "Accident". You had an accident. If you have the "Protection" card, you get a chance to continue the game and roll the dice again. Without this card, you leave the playing field on the 2nd round of the game.

— "SR expertise", "SAWC", "SR Audit". The organization has conducted an examination of safety regulations (SR), a special assessment of working conditions (SAWC), and an audit of SR. Take an additional card from category 1 (occupational health and safety cards).

— "Fire". There was a fire at the facility. To increase the level of security, take an additional card from category 5 (security signs).

— "Get a bonus". When you pass the corner cell, you will receive an additional token.

— "Workwear" cell. You were given a new set of special clothing. Take a card from category 4 (PPE).

— "Imprisonment". For gross violation of labor protection requirements, you miss a move.

— "Medical". You need to pass a medical examination. Make an extra move.

— "Certification". You must pass the certification. Take one card from each category.

Participants can consult with each other and offer game solutions. For each correct answer, the team receives a point (token), and for an incorrect answer — zero points. The winner is the group that gets the most number of points [11, 12].

Conclusion. Thus, the proposed business game increases the effectiveness of studying labor protection requirements at enterprises. The solution allows you to develop the skills necessary for industrial safety specialists. The focus of players' attention moves from theory (terms, current regulations and requirements in the field of industrial safety) to the practice of formulating and protecting their own decisions, as well as analyzing the opinions of other team members.

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Contribution of the authors:

N. Kh. Abdrakhmanov — formation of the structure of the article, critical analysis, editing; A. V. Fedosov — scientific guidance, formulation of the main goal of the study, development of research methods, processing of the initial observations, text editing; I. R. Danieva — development of the basic research concept; A. S. Tikhonova — statement of the problem, participation in the study; R. R. Valeeva — collection and analysis of literature data.